IDEAS AND RESOURCES FOR COVID-TIME

from the Marshall Memo – Updated December 5, 2020

During the pandemic, millions of students have been unable to go to school, with teachers stretched thin attending to students' needs, in many cases while taking care of their own children. Below is a collection of Marshall Memo items that may be helpful. Be strong and be safe!

QUOTES ABOUT THE PANDEMIC

"The logistical gymnastics necessary to balance work and school when all the crucial resources – time, physical space, Internet bandwidth, emotional reserves – are limited have pushed many to the point of despair."

Erika Christakis in "School Wasn't So Great Before Covid, Either" in *The Atlantic*, December 2020 (Vol. 326, #5, pp. 17-22)

"I have to become better at forgiving myself. As a perfectionist, the unknown nature of the school year scares me, but I have to find ways to allow myself to feel okay about not being the one in control. I am going to make a concerted effort to keep things in perspective. There are simply greater forces at work here, and as long as I am doing my best, my best will have to be good enough."

Wendy Price in "Self-Care as a Priority" in *Communiqué*, Dec. 2020 (Vol. 49, #4, p. 2)

"I make it very clear, if I had to pick between an amazing teacher or amazing technology for myself or my own kids or anyone's kids, I'd pick the amazing teacher, in person, any day."

Salman Khan

"Nearly everything about teaching has changed for teachers over the past few months except the fact that students need us. And so it's incumbent upon us as a profession to learn new methods to reach then as quickly and effectively as possible."

Doug Lemov in *Teaching in the Online Classroom: Surviving and Thriving in the New Normal* (Jossey-Bass, 2020), with chapters on synchronous and asynchronous learning, making students feel more connected, dealing with distractions, building in "pause

points" for active engagement, checking for understanding, procedures and routines, and effective use of technology platforms and tools.

"If there is a silver lining to the heavy emphasis on remote and hybrid instruction during the pandemic, it is this: students are getting more opportunities to work independently and at their own pace – and in the process, they are becoming better problem-solvers."
Madeline Will

"There are some students who really thrive working on their own, and some who struggle a bit more and lack the skillset."
Gavin Schiffres

"Students who know they are safe and cared for by their community will be more comfortable having their cameras on."
Liz Byron Loya

"The pandemic and protests of the past several months have shone an especially bright light on persistent inequities in our public school systems and generated a broad consensus that school districts must not return to business as usual."
Meredith Honig and Lydia Rainey

"Teachers need support, not scores. Now is not the time to be thinking about how to evaluate teacher performance in a new and fluid context. This moment compels us to pause and engage in a thoughtful reset on our approaches to teacher support."
A guide to using the Danielson framework in remote instruction

"For too long teachers have thought about attention as the norm, and distraction as the deviation from the norm. Both history and biology teach us that the opposite is true. Periods of sustained attention are like islands rising from the ocean of distraction in which we spend most of our time swimming… It's very difficult for people to pay laser-focused attention to someone who asks them to do hard thinking. We have to be empathetic to ourselves and to students."
James Lang (Assumption College), quoted in "The New Rules of Engagement" by Beth McMurtrie in *Chronicle of Higher Education*, October16, 2020 (Vol. 67, #4, pp. 22-27)

"When in doubt, dial it up to an 11. Better to be unhinged than boring."
Michigan college professor Collin Bailey Jonkman (quoted in item #5)

"One of the biggest complaints about online school is the zombie-like after-effects of spending too much time focused on a screen."
Kathy Swan, Andrew Danner, Meghan Hawkins, S.G. Grant, & John Lee

"It will take two things to bring this virus under control: hygienic measures and a vaccine."
Paul Offit (quoted in item #1)

"Remote learning is stressful at first but very easy to get used to."
A Massachusetts high-school student's exit ticket at the end of a Zoom class last week (personal communication from the student's teacher)

"I learned that if you actually pay attention, the class goes by faster."
(another student, *ibid*.)

"I also learned that even though we are remote, we can still take care of each other."

(a third student, *ibid*.)

"Consider teaching in a post-Covid world the most massive project-in-Beta ever. It's going to be messy, but that's how humans learn and grow and adapt. Continue to experiment, fall apart on the days when it's your turn (because everyone seems to need a turn every now and then), ask students and parents for feedback, observe other teachers when you can, and most importantly, keep giving yourself and your students grace. We're getting through this."

Jennifer Gonzalez (see item #1)

"Make your voice more expressive, your eyes more expressive, your gestures more expressive. I would slow down my speech as a teacher, particularly when interacting with younger ones, so kids can pick up more from the auditory channel."

Kang Lee (quoted in item #2)

"Maybe this is a nerdy-history-teacher way to frame this, but I was a nerdy history teacher. We have a choice between the Hoover path and the F.D.R. path. The Hoover path is the continued dismantling of public-sector responsibilities. It's cutting resources for schools, doing less, hoping for less. In contrast, the F.D.R. approach would recognize how deeply interconnected we all are and make our investments accordingly."

John King, Jr. in "Will This Be a Lost Year for America's Children?" in *The New York Times Magazine*, September 13, 2020

"To have a job without a workplace, you must build an office of the mind. Structure, routine, focus, socialization, networking, stress relief – their creation is almost entirely up to you, alone in a spare bedroom or on your couch, where your laptop might vie for attention at any given moment with your pets or kids. If the coffee pot runs dry, there is no one to blame but yourself."

Amanda Mull in "A Cubicle Never Looked So Good" in *The Atlantic*, October 2020 (Vol. 326, #3, pp. 30-32)

"Completing isn't the same as learning."

Ryan Steinbach, "How to Help Middle-School Students Learn to Work Independently" in *Edutopia*, September 15, 2020

"Lessons drive the tech, not vice-versa."

Jon Saphier in "Preparing for Virtual Learning" in RBT newsletter, September 16, 2020

"So if you've felt guilty that you're spending your days slinging Chromebooks and fixing logins, don't. That's exactly what students and teachers need from you right now."

Justin Baeder in a Principal Center e-mail, September 14, 2020

"The spring of 2020 will forever be known as the season when tens of millions of American families took a crash course in homeschooling."

Michael Petrilli

"In ordinary times, teaching is a never-ending struggle to decide what to say and what not to say, when to push and when to back off, when to continue a lesson and when to move on. But how, in our present world, does one make such judgments? How does one read the body language, facial expressions, and social cues of children wearing masks and sitting six feet apart, or peering through laptop computers? There's no guidebook for teaching in a pandemic. This will be a year of dizzying uncertainties, and teachers will need all the resources and supports we can give them."

Rafael Heller in "How Will Teachers Manage to Teach This Year?" in *Phi Delta Kappan*, September 2020 (Vol. 102, #1, p. 4)

"We have no choice but to get better, faster, and fairer at remote learning for the sake of the 'Covid Generation.'"

Michael Petrilli

"Now's the time to finally face the reality that not every academic standard is equal."

Douglas Reeves

"Experience is a hard teacher. She gives the test first, the lesson afterward."

Vernon Law

"If you can smell what I had for lunch, you're getting my air, and you can be getting virus particles as well."

Julian Tang, respiratory sciences professor, University of Leicester, United Kingdom, in "Study Finds Evidence Virus Can Float in Air for Minutes Longer" by Benedict Carey and James Glanz in *The New York Times*, July 31, 2020

"Children will need a trusted adult with whom to share their troubles. Research on previous disasters shows that a teacher is most likely that trusted adult, but whether that teacher's response is supportive determines whether students' well-being improves."

Micere Keels in "Preparing Educators for the Challenge Ahead" in *Education Update*, August 2020 (Vol. 62, #8, pp. 1, 4)

"Conversations about technology tend to get at the *how* and *where* of instruction, but *what* is taught remains paramount."

Eric Hirsch and Courtney Allison in "Do Your Materials Measure Up?" in *The Learning Professional,* August 2020 (Vol. 41, #4, pp. 28-31)

"There's a limit to how good a lesson can be when you're trying to interact with your students through a keyhole in the door."

Doug Lemov

"I have taken good online classes and bad online classes. What determines their quality has little to do with the format itself and everything to do with the teacher's pedagogy, their grasp of the technology, and their ability to design a course around that."

Shalon van Tine

"The Covid-19 pandemic is giving us a hard lesson in the importance of science for all Americans, not just those preparing to become scientists."

Robert Slavin

"It's a mistake to spend class time doing things that can be done just as well remotely."

Rick Hess

"The key is to develop a coherent vision of what gets done where and why."

Rick Hess

"This virtual environment has provided us the opportunity to break down those walls, to break down those silos. Our schedules and time constraints that we may have had before will come down. We may have more opportunity to partner with people that we didn't have the time or the space to be able to do before."

Melanie Kitchen

"The pandemic is one season in our lives; it will end. It will be remembered as an extraordinarily difficult time. But the slow process of returning to a new normal – of naming our grief, helping one another reach acceptance, and finding meaning – will continue."

David Kessler

"People are understandably concerned about academic backslide. But before we rush to catch students up to pre-quarantine goals, we need to understand what's happened and where it leaves our students… Instead of succumbing to pressure to 'catch up' quickly, students will need us to help them regain some of what they've lost: community, meaningful experiences beyond their homes, interactions with peers, and a chance to belong. As teachers, we're in a uniquely strong position to recover those important things."

Ariel Sacks in "Teaching in the Fall: Get Ready to Meet Students Where They Are" in *Education Week Teacher*, June 23, 2020

"Not so fast."

Superintendents and assessment experts on buying commercial diagnostic assessments

"Meaningful bonds just cannot be made over Zoom."

Daniel Dolgicer in a letter to *The New York Times*, June 7, 2020, one of eight responding to the question, Does Working from Home Work?

"If we do not take steps to actively shape our virtual school climate, it will be shaped for us."

Jessica Hoffman, Marc Brackett, and Scott Levy in "How to Foster a Positive School Climate in a Virtual World" in *EdSurge News*, May 21, 2020; the authors are at jessica.hoffman@yale.edu, marc.brackett@yale.edu, and scott.r.levy@yale.edu.

"It's hard because as a teacher, you're not a therapist, you're not a social worker, you're not a doctor or a nurse – but those are all roles we take on when we become a teacher."

Evin Shinn, Seattle high-school teacher, quoted in "'Teachers Cannot Be Silent': How Educators Are Showing Up for Black Students Following Protests" by Madeline Will in *Education Week Teacher*, June 1, 2020

"Trying to interact with other humans without being able to smile is the facial equivalent of communicating via text message; it's easy to be misunderstood."

Belinda Luscombe in "When in Doubt, Just Assume I'm Smiling" in *Time*, June 1-8, 2020, (Vol. 125, #20-21, p. 24)

"To all ed companies, PD providers, and anyone else who has a product, PLEASE STOP. JUST STOP. Believe me, we know how to reach you, and I will if I need you. Otherwise JUST STOP."

Twitter message from a frustrated principal, April 2020

"Endurance is patience. It is shortening your time horizon so you just have to get through this day. Endurance is living with unpleasantness. In fact, it is finding you can adapt and turn the strangest circumstances into routine. Endurance is fortifying. It is discovering you can get socked in the nose and take it. Above all, endurance is living with uncertainty. Sometimes it's remaining quiet in the face of uncertainty because no conjecture will really tell you what is coming. Endurance is the knowledge that the only way out is through and whatever must be borne will be borne."

David Brooks in "The People Are Leading the Leaders" in *The New York Times*, May

"I think my role shifts completely into this symbolic keeper of hope. My role in this family is to make sure that we know that we are trying to get them whatever they need, having staff members feeling like we care about them as humans and as families, and all of the details of their professional lives will get resolved."

Paul Kelly, principal of Elk Grove High School in Illinois, quoted in "'There Is No Guidebook': Being the Principal in the Age of Coronavirus" by Denisa Superville in *Education Week*, March 18, 2020, https://bit.ly/33FCVZT

"We're not medical experts, we're not city planners. This is a time for simplicity and being careful not to throw in too many bells and whistles."

New York City educator Eva Moskowitz (see item #1k, Memo 829)

"I want to send a message to parents, and in particular to working moms, who will inevitably take on most of this home labor along with working remotely: This is going to be messy and that is OK."

Jennie Weiner (University of Connecticut) in "I Refuse to Run a Home School" in *The New York Times*, March 20, 2020, https://nyti.ms/33U1mmq

"Typing LOL is not the same as actually laughing out loud."

Alana Semuels, "Does Remote Work Actually Work?" in *Time*, April 6/13, 2020, p. 46

"This is my 16th year teaching, and I feel like I'm a first-year teacher. The amount of work and new things that I'm encountering on a daily basis is astounding."

Gloria Nicodemi, New York City high-school science teacher, quoted in "Teachers' Herculean Task: Moving 1.1 Million Children to Online School" by David Chen in *The New York Times*, March 30, 2020, https://nyti.ms/3bUfe2R

"When hurricanes, wildfires, and now the coronavirus upend our way of life, they call for everybody, literally every individual, to step into the breach. Not just first responders or caregivers, not only state governors or national leaders, but all of us… In good times, we can rely more on our boss or others to get things done, but that's no longer enough. It is our own leadership moment, too. We are all in charge."

Michael Useem, University of Pennsylvania Wharton School, in "It's Our Leadership Moment" in *Knowledge Wharton*, March 30, 2020, https://whr.tn/3dW7X4p

"Don't worry if you are not the perfect homeschooling parent; don't worry if you are torn between working at home and helping your kids. Don't let your kids spend nine hours a day doing schoolwork online – cut them off and tell the teacher it was too much. Don't let these days be joyless for your kids."

Jennifer Gallagher, Long Beach, NY school superintendent, in a message to parents, quoted in "How Much Home Teaching Is Too Much? Schools Differ in Demands on Parents" by Christina Samuels in *Education Week*, April 2, 2020, https://bit.ly/2Xcyfti

"Trust me on this: There's a good chance that, years from now, you will feel a bit sentimental for these weeks spent in social isolation. We're built for challenging times. We are writing the stories we will tell our children and grandchildren. Driving down a suburban street waving to elementary school children may not have the historical gravity of landing on Omaha Beach or working on a wartime assembly line. But when the children of the pandemic are old and gray, they will reminisce about the time their teachers paraded past their house because all the schools

were closed. It will be a warm memory, even though so many people got sick, lost their jobs, and were afraid. They don't have the vocabulary today to describe it, but the lessons will stick and become clearer in the retelling. It's about social cohesion, love and loyalty, and how good people step up when we need them to."

Robert Pondiscio in "The Lessons That Last in the Time of Pandemic" in *Education Gadfly*, April 8, 2020, https://bit.ly/2V20dX8

"Sending home worksheet after worksheet is unlikely to result in fruitful learning that will stick."

Paul France (see item #1, Memo 832)

"All over social media, teachers are sharing stories tinged with both frustration and fear for students who haven't logged into learning platforms, participated in threaded discussions, completed an assignment, or returned texts and e-mails… The informal check-ins that schools typically rely on – a teacher, coach, bus driver, or cafeteria worker who would normally be alert to a child in distress – have been disrupted. There are just fewer eyes on children right now."

Stephen Sawchuk and Christina Samuels in "Where Are They? Students Go Missing in Shift to Remote Classes" in *Education Week*, April 10, 2020, https://bit.ly/2wT5jMh

"We're about to see what happens when we turn up the volume on families and turn it down on schools."

Paul von Hippel (quoted in item #3, Memo 833)

"Imagine you just got your driver's license. You're starting to date. Your team finally clinched the playoffs. Prom is right around the corner. But now you're stuck all day at home, within 100 feet of your parents, for conceivably months on end… Although adolescents are not considered high risk from a medical perspective, they are still facing very real social and emotional challenges… It is essential that we all look out for adolescents, be sympathetic to their frustrations, and make sure that they have the resources and supports in place for optimal development."

Leah Lessard and Hannah Schacter in "Why the Coronavirus Crisis Hits Teenagers Particularly Hard: Developmental Scientists Explain" in *Education Week,* April 15, 2020, https://bit.ly/2yyAzjV; Schacter is at hannah.schacter@wayne.edu.

"Life without school is much more boring than I thought it would be."

Una, 14 years old (see item #1, Memo 834)

"Treasure the fact that some kids are escaping from hours of test preparation each day."

Andy Hargreaves in "A Complete List of What to Do – and Not to Do – for Everyone Teaching Kids at Home During the Coronavirus Crisis" in the *Washington Post*, April 7, 2020, https://wapo.st/3bK9zNg

"If sitting is the new smoking, some are up to three packs a day."

Dan Rockwell in "7 Ways to Fuel Energy During a Pandemic" in *Leadership Freak*, April 24, 2020, https://bit.ly/2ySmG07

"There is a reason that homeschooling is rare."

Robert Slavin

"Some students are not connecting because they felt invisible while they were in the physical classroom, so they feel that they will not be missed in the virtual one."

Peter DeWitt

"Distance learning requires us to be humans in an inhuman situation. We can't simply provide lessons and assessments; we have to bridge this digital gap and carry some sense of humor and goodwill and community through the cold wiring. If we've succeeded in even a modicum of that task, we owe that to the success in the months prior when we created something special. A school family. A community that could rely on itself, that could flourish even in isolation."

Daniel Parsons in "I See Education and Humanity in 'Full Bloom' in My Covid-19 Classroom" in *Education Gadfly*, April 24, 2020, https://bit.ly/3aZe7Or

"Without preparation or permission, we're participating in the greatest social science experiment of all time."

Andy Markowitz

"Districts must hold teachers harmless from the challenges unique to the coronavirus environment, but they also have a public obligation to make sure students are being taught as effectively as is practical to expect."

Kency Nittler and Patricia Saenz-Armstrong in "Teacher Evaluations and Support During Covid-19 Closures," National Council on Teacher Quality, May 1, 2020, https://bit.ly/3biaCTr

Kids' Comments on Doing School at Home

"Life without school is much more boring than I thought it would be. Without the summerlike feeling of no work and being able to see friends, it's actually very depressing."

Una, age 14, Beacon, NY

"It's really easy to get distracted at home. I like going to school and using the time at school to do schoolwork. Now all schoolwork is done at home, so my brain thinks there's more homework because my brain hasn't adjusted to staying home the whole day. Learning is difficult because before you were jogging and now you are crawling."

Juny, age 14, San Francisco, CA

"It's hell. My teachers think that a responsible amount of work to be assigning is 40 minutes (about a class period) plus half an hour plus of homework. This is from EVERY teacher, so it adds up real fast. Over the last few days, I've had more work than I would usually have if schools weren't closed – and I have to do it sitting in the same spot for hours."

Jasper, age 17, Brooklyn, NY

"I'm doing online learning through Google Classroom, and sometimes it's difficult. My math problems won't attach, the file didn't save properly. But we have to work through that, and it's necessary to help others."

Eleanor, age 14, Wales, MA

"I like our video morning meeting every day with my teachers and friends. It makes me feel like I'm still in school. My baby sister won't leave me alone, so I decided to let her join."

Ella, age 6, Manhattan, NY

"It's harder to focus at home as there's no one to discipline you for playing on your phone or talking to a friend. It's harder to grasp certain concepts, specifically those that are more hands-on. It's harder to ask questions since there's no way to virtually raise your hand. And it's harder to keep a smile on my face, because I don't know if or when I'll see my teachers and classmates in person again."

Josephine, age 18, Woodstock, CT

"My phone is right next to me, so it's so easy to pick up my phone and text my friend, who I see on the screen, or check the newest post on Instagram and TikTok."

Daniella, age 17, Burlington, NJ

"There are days where I don't want to do any work, and it's really easy to just not do it. Learning at school definitely helps motivate me to get my work done, because I'm in the environment to do work and there's really nothing else I can do. At home I have the liberty to literally do anything other than schoolwork."

Valeria, age 16, Riverdale Park, MD

"Every day I take a walk around my neighborhood with my parents and when I see my friends, I'm told I have to stay six feet away. I get really sad I can't be with them. I'm also scared they'll never find a cure and I'll never get to play close with my friends again. I'm hoping that things will be back to normal someday."

Sasha, age 9, Los Angeles, CA

"I'm in my last year of middle school, and I will probably have to finish it from home. I wonder about the students next year, students who I'll spend the next four years with, whose family died because of this, whose parents died because of this. I wonder about my family. Are they going to get sick? I wonder about the children who'll die. I wonder if I'll be one of them. If my family will be the one this virus reaches next. I start high school next year, and I wonder how."

Louisa, age 13, Jacksonville, FL

"My little brother asks every morning if the germs went away yet – he really misses school like me."

Tessa, age 7, Montclair, NJ

"Online school is the equivalent of no school. The one-on-one time, the accountability, the schedule and routine are all gone. No parent is perfect, and no parent can effectively replace seven to eight teachers, all with different subjects. The issue is the loss of many factors for success. Isolation, no routine, even just the lack of repercussions for not doing work. All of this leads to a decline."

Pres, age 17, Fayetteville, AR

"Thousands of juniors (including myself) have selected rigorous courses for our last full year before our apps are due. Many of us are taking five or six A.P. classes and finally getting leadership positions for the clubs and activities we dedicated so much time to. As I sit at home, I feel that the edge that I have been working so long for is slipping away. I was ready to make this last full semester count."

Fahad, age 17, Northborough, MA

"Most schools in America have senior prom, Senior Ditch Day, senior prank, senior banquets, and most important, graduation. No one signed a contract giving me the right to any of that, but then again, I feel entitled to my senior year. When I walked out of school on March 11, I didn't expect that to be the last time I would see the people and the places that helped me mature into the person that I am today. Now when people ask what high school taught me, I can honestly say that I learned something outside of math and science. Nothing in life is promised."

Rachel, age 18, San Jose, CA

"Polling Our Littlest: 'I Can't Believe I Am Going to Say This, but I Would Rather Be in School'" by Henry Dodd in *The New York Times*, April 15, 2020, https://nyti.ms/35lmT8B

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UNDERSTANDING THE PANDEMIC

Psychological Approach to Correcting Misconceptions About Covid-19

In this article in *Educational Researcher*, Greg Trevors and Melissa Duffy (University of South Carolina/Columbia) report on their study of how people respond to arguments about what they should be doing during the pandemic (it was conducted in May 2020). Trevors and Duffy believe that disabusing people of incorrect beliefs about the coronavirus is an urgent matter. "Compounding the public health challenges posed by the Covid-19 pandemic," they say, "is the *infodemic* of misinformation regarding risks, prevention, and treatments, which may lead to serious and irreversible harm to individuals and communities."

What intrigued the researchers was how difficult it is for people to hear a rational argument when it conflicts with their moral priorities and beliefs. Trevors and Duffy started by posing the following question to a sample of 518 U.S. adults chosen from states where a majority favored immediately returning to normal economic activity: *Is it most important to provide for the vulnerable, show loyalty to one's social circle, or protect personal liberties?*
Responses allowed the researchers to group people into three moral belief systems:

- Individualizing – focused on well-being and justice for individuals;
- Group cohesion – focused on protecting their group and the social order;

- Libertarian – focused on protecting autonomous exercise of personal liberties.

The researchers then presented people with 19 misconceptions about Covid-19 (for example, *The seasonal flu is just as bad if not worse than the new coronavirus*), asked them to read information refuting the incorrect statement, asked for their emotional response, whether the counterargument conflicted with their personal views and/or the views of their community, and whether they were persuaded. The result:

- Those with an individualizing belief system were more likely to update their prior incorrect beliefs.
- Those with a group cohesion or libertarian belief system were more likely to reject the corrective information.

It appears that arguments for mask wearing, social distancing, school closures, and stay-at-home orders were seen by the second and third groups as undermining valued social ties and personal autonomy, while the same arguments were seen by the first group as supporting individual and collective well-being.

Trevors and Duffy's takeaway is that when presenting arguments to people on a contentious issue like the pandemic, it's not enough to present a logical, factual case. You have to adapt your counterargument to the person's belief system "to mitigate negative emotional and cognitive reactions." For example, to persuade people about the importance of wearing masks, an effective argument for someone with a group cohesion orientation might be to stress obeying authority, defending purity from infections, and demonstrating patriotism. For someone with libertarian beliefs, the best argument would be self-protection. And for someone oriented around individual well-being and justice, the argument should be around fairness and preventing individual suffering.

"Correcting Covid-19 Misconceptions Requires Caution" by Greg Trevors and Melissa Duffy in *Educational Researcher*, October 2020 (Vol. 49, #7, pp. 538-542); the authors can be reached at trevorsg@mailbox.sc.edu and duffy3@mailbox.sc.edu and

A History of Pandemics Starting with the Bubonic Plague

In this animated article, the BBC News Visual Journalism Team gives key facts on pandemics over the millennia (click on the link below for dynamic features):

• Bubonic plague

- The earliest recorded outbreak was in 541 CE, 60 generations ago.
- The Black Death of 1346-1353 was the deadliest outbreak.
- The plague has killed up to 200 million people over 2,000 years.
- It is caused by the bacteria *yersinia pestis* and spread by fleas on rats and via respiratory droplets from infected people.
- It was finally brought under control by improved understanding of how it was transmitted, strict quarantines, and improved sanitation.
- There are still outbreaks (including in Inner Mongolia this year), but they can be treated with antibiotics and few people die of this disease today.

• Smallpox

- It was first recorded in 1520, 20 generations ago.
- It is caused by the virus *variola minor* and spread via droplets from an infected person's nose or mouth or via their sores; it has no animal host.
- It has killed at least 350 million people.
- Thanks to a vaccine developed in 1796 by Edward Jenner, and follow-up by scientists over two centuries, smallpox has been completely eradicated – an accomplishment that one scientist compared with landing a man on the moon.

• Cholera
- Various outbreaks, including a major pandemic in 1817, eight generations ago.
- It is caused by the bacteria *vibrio cholerae* found in contaminated water or food.
- It kills 100,000-140,000 people a year.
- Improved hygiene and sanitation have removed the threat of cholera in developed nations, but it is endemic in poorer parts of the world.

• Influenza
- Various pandemics from 1800 to 2010, with the 1918 Spanish flu being the deadliest, killing 50-100 million people.
- The Hong Kong flu of 1968 killed one million people and still circulates.
- The Swine flu infected about 21 percent of the world's population in 2009.
- The H1N1 virus caused the Spanish flu pandemic.
- A more-benign version of the Spanish flu still circulates every year.
- Seasonal flus return annually, killing hundreds of thousands.

• HIV/AIDS
- It started in 1981, three generations ago, and is still a major problem today.
- It is caused by the Human Immunodeficiency Virus, transmitted through bodily fluids, and attacks the human immune system.
- It's particularly insidious because people are infectious before symptoms appear.
- It has killed more than 32 million people so far, including 690,000 in 2019.
- Advances in diagnostic techniques, the availability of antiretroviral drugs, and changes in human behavior have mitigated the impact of the disease.

• SARS (Severe Acute Respiratory Syndrome) & MERS (Middle East Respiratory Syndrome)
- 2002-2003 and 2012-present.
- SARS killed more than 800 people in 2002-2003, but no new cases are reported.
- MERS has killed 912 people.
- The risk of these diseases is low in most countries.

• Covid-19
- 2019-present.
- SARS-Cov-2 (the novel coronavirus) is an evolved version of the 2003 SARS virus.
- It is highly transmissible, including by people with no symptoms.
- More than 1 million people have died so far, with the death toll likely to be much higher.

- Vaccines are under development. The endgame of Covid-19 will come in a few years from increased knowledge about transmission, compliance with preventive measures, new treatments, and vaccines.

"How Do Pandemics End?" by the Visual Journalism Team at BBC News, October 7, 2020

The Pandemic's Impact on Schools and Universities

"Covid-19 has changed everything. We are seeing the challenges to learning all too clearly now" says the lead paragraph of this *New York Times* special section. Eight essays comment on how remote instruction is shaping teaching, learning, and college sports:

• *Innovation will be endless* – "Addressing the effects of the pandemic on all levels of education has taken more than a village," say Alina Tugend, Phyllis Jordan, and Mark Stein. "It's required ingenuity from teachers, school districts, colleges, local and federal governments, communities, business, and nonprofits." Teachers have found numerous ways to teach remotely, more students have been connected to their teachers and the Internet, and educators have improvised to connect across schools, districts, and nations. But there are major concerns about those who aren't connected, social isolation in general, and the attendant mental health issues.

• *It doesn't matter where you live*. Laura Pappano visited Lawrence County, Tennessee and was impressed by the community's ingenuity setting up an early-warning system for tornadoes as well as complying with mask-wearing, social distancing, and sanitizing (despite contrary advice from the state's governor), while greatly improving Internet access across the 618-square-mile school district.

• *Perspectives vary widely*. Students, parents, and teachers are finding ways to cope with the pandemic as the school year begins. "My second graders went outside as 'Nature Detectives' with plastic magnifying glasses and explored their yards for 20 minutes," said Laura Avolio of Grand Rapids, Michigan. "I go to a lake near my house to watch a blue heron each week," said a New Jersey kindergartener. "My brain is breaking just trying to track their schedules, portals, login information, device access, and so on," says Jeanine Malec, Minneapolis mother of three. "When in doubt, dial it up to an 11," says Collin Bailey Jonkman, a Michigan college professor. "Better to be unhinged than boring."

• *Schooling may be (much) smaller*. Learning pods have sprung up across the country, reports Eilene Zimmerman, providing small-group, differentiated instruction to clusters of families. While there are concerns about instructional quality, socializing with a narrow circle of children, and equity, pods have planted an idea in some parents' minds about what school will look like after the pandemic.

• *Kitchen-table small, that is*. Long-time home schoolers are offering advice on how to make remote learning work, reports Laura van Straaten. She reports on children who have been home-schooled, one of whom is now adjusting well to an elite boarding school.

• *Little ones will learn in new ways*. " Those who study and work with the youngest children are concerned about the effects on learning and school readiness," says Laura van Straaten. Experts anticipate that without the experience of preschools and playgrounds – and the

opportunity for adults to get early warning of learning and behavioral problems – there will be a lag in academic skills and the executive-function skills that allow children to handle the classroom experience. On the other hand, young children are spending more time with their parents, which could boost language skills and vocabulary.

• *Colleges are considering the full picture*. Jeffrey Selingo, an expert on college admissions, says hundreds of thousands of SAT and ACT tests have been canceled and more than 500 colleges and universities have adopted test-optional policies. This year, if a student doesn't have scores, it won't hurt their chance of getting into college or getting financial aid. In addition, he says, deferring admission till 2021 won't hurt students' chances, although nationwide only about 2.5 percent have done so (Harvard's 20 percent deferral rate is not the norm).

• *College athletes will muddle through*. "Since March, college sports on every level have been fundamentally disrupted by the pandemic," says Liz Robbins. "Some fall sports are competing, but that varies by region, by community, by politics, by division, by conference, and even by team." Division III teams have been hit especially hard. But students and athletic programs are adapting, and some believe they will come out of the year stronger.

"8 Ways That Remote Learning Will Shape the Future" by Alina Tugend, Phyllis Jordan, Mark Stein, Laura Pappano, Eilene Zimmerman, Laura van Straaten, Jeffrey Selingo, and Liz Robbins in *The New York Times*, October 18, 2020

The Pandemic's Likely Trajectory

In this article in *Politico Magazine*, Elizabeth Ralph reports on her interviews with a number of experts on how they believe the coronavirus pandemic will end in the U.S. and around the world. "It will take two things to bring this virus under control," says Paul Offit, director of the Vaccine Education Center and an attending physician in the Division of Infectious Diseases at Children's Hospital, Philadelphia: "hygienic measures and a vaccine." Here is Ralph's synthesis of the sequence predicted by the experts she consulted:

- The virus continues to spread and cause significant illness and death, except in areas with widespread mask-wearing, social distancing, and hand-washing. "Masks and distance really work," says Emily Landon, chief infectious disease epidemiologist at University of Chicago Medicine.
- If rapid antigen tests are perfected, approved, and widely distributed, it will be easier to identify cases, trace contacts, and isolate those who are infectious.
- Approval of at least one effective vaccine is expected in early 2021.
- Vaccination begins with essential workers and high-risk populations.
- Vaccine production and distribution ramps up, overcoming formidable logistical challenges, and more people are vaccinated.
- Vaccination, combined with continued mask-wearing, social distancing, etc., leads to a steady decline in Covid-19 cases and deaths.

- There continue to be outbreaks, but treatments improve and new case numbers and deaths are fewer, especially in high-compliance areas.
- There are several "known-unknowns": the effectiveness and longevity of vaccines; how many people refuse to be vaccinated; how many agree to have a second vaccination; unexpected mutations in the virus; and continued compliance with hygienic measures.
- By mid-to-late 2021, a high percentage of Americans have been vaccinated at least once.
- By November 2021, most people in the U.S. have received two doses of the vaccine and there is "herd immunity" in the nation, with few new cases and deaths.
- Second-generation vaccines with better effectiveness are introduced, further reducing cases.
- Within two years, as more people develop immunity through vaccination or exposure and as treatments become more effective, Covid-19 is one of a number of other ordinary illnesses people get every winter (with sniffles or flu-like symptoms), and the U.S. is fully back to "normal."
- In many parts of the developing world, this process moves more slowly, and international travel doesn't return to pre-pandemic levels for several years.

"Here's How the Pandemic Finally Ends" by Elizabeth Ralph in *Politico Magazine*, September 25, 2020

More Insights on the Pandemic

In this article in *The Atlantic*, Ed Yong explains nine vulnerabilities in the U.S. that he believes explain our ineffective response to the coronavirus so far. "These conceptual errors," he says, "were not egregious lies or conspiracy theories, but they were still dangerous…They prevented citizens from grasping the scope of the crisis and pushed leaders toward bad policies." The challenge going forward is countering these "errors of intuition" and doing the right things to meet the problem.

• *Magic bullets, one after another* – We've had stay-at-home orders, hand washing, testing, contact tracing, mask-wearing, social distancing, improved ventilation, and more. No single solution is perfect, and none has been fully implemented, but the biggest error has been not realizing that we need to implement a number of not-perfect interventions *together*. A successful response, said one expert, "is never going to be one thing done perfectly. It'll be a lot of different things, done well enough."

• *False dichotomies* – Throughout the pandemic, there have been misleading either-or polarities:

- People either have mild symptoms or get seriously ill and may die.
- We either save lives or open the economy.
- We either do another lockdown or let the virus run free.
- Before a vaccine things are bad, post-vaccine the problem is solved.

With each of these, the reality is somewhere in between: some infected people develop long-term problems; the economy can't open fully until the virus is brought under control; selective

closures (e.g., bars, gyms, and large gatherings), combined with other measures, can be more effective than a full lockdown; and after vaccines are introduced, things will still be messy because they will take a while to be distributed and won't prevent every infection.

• *The comfort of theatricality* – "Showiness is often mistaken for effectiveness," says Yong. That can breed complacency "because solutions that can be seen are not always the best." There's been "hygiene theater" (scrubbing and bleaching), porous and inefficient travel bans, and temperature checks (which are not highly accurate).

• *Personal blame over systemic causes* – There are a number of systemic reasons for the inequitable spread of Covid-19: understaffing in nursing homes and prisons; overstretched hospitals and public-health departments; people of color financially and geographically disconnected from health care; a lack of paid sick leave for many essential workers, and more. "But tattered safety nets are less visible than crowded bars," says Yong. "Pushing for universal health care is harder than shaming an unmasked stranger." Colleges forced to close down after an outbreak blame students for irresponsible behavior, ignoring the fact that opening the way many did was a setup for failure.

• *The normality trap* – People crave a return to the way things were before, but, says Yong, "The powerful desire to recreate an old world can obscure the trade-offs necessary for surviving the new one… A world with Covid-19 is fundamentally different from one without it, and the former simply cannot include all the trappings of the latter." If opening schools really is the priority, that must take precedence over opening bars, casinos, and tattoo parlors.

• *Magical thinking* – This has included the notion that hot summer weather would cause the virus to wither, despite the fact that it raged in tropical countries. Then there's the idea that some people are naturally resistant and that we're approaching herd immunity. These ideas and others have been convenient excuses for inaction.

• *The complacency of inexperience* – Countries that have experienced pandemics in the past were much quicker to respond aggressively to Covid-19. The U.S., which has dodged the bullet more than once, couldn't imagine what was about to happen and didn't make (or maintain) adequate preparations.

• *A reactive rut* – Having fallen behind from the outset, we have constantly played catch-up. Exponential growth is counterintuitive, says Yong, and we don't understand that things seem fine just before they're not. In addition, this coronavirus has an insidious way of spreading quickly but being slow to reveal itself; there can be months between initial infection and a spike in hospitalizations and deaths. "Pandemic data are like the light of distant stars," says Yong, "recording past events instead of present ones. This lag separates actions from their consequences by enough time to break our intuition for cause and effect… This reactive rut also precludes long-term planning."

• *The habituation of horror* – There's evidence that many people are becoming numb to the situation, have stopped watching the news, and regard close to 200,000 deaths as acceptable. "The desire for normality might render the unthinkable normal," says Yong. "Like poverty and racism, school shootings and police brutality, mass incarceration and sexual harassment,

widespread extinctions and changing climate, Covid-19 might become yet another unacceptable thing that America comes to accept."

"America Is Trapped in a Pandemic Spiral" by Ed Yong in *The Atlantic*, September 9, 2020

Will We Ever Get Out of the Woods?

In a *Boston Globe* article (originally published in STAT), Helen Branswell reports on what she learned from interviews with experts on infectious diseases. Here are their educated guesses as to how the coronavirus pandemic will ultimately play out:

• *Sterilizing immunity* – Measles is a "once-and-done" disease; if you've had it, you're virtually assured of not getting it again. But Covid-19 doesn't appear to act that way.

• *Functional immunity* – The evidence so far is that once people have had Covid-19, or been vaccinated, they develop antibody defenses. A second infection may occur, but it's likely to be milder and not land them in an ICU. Researchers think this is the most likely scenario. Of course people who have never had Covid-19 and aren't vaccinated could get a serious case of the disease. And billions of people around the world who haven't been exposed will need to be vaccinated, which may take years.

• *Waning immunity* – This is a variation on functional immunity, with the body's defenses getting weaker over time. But reinfections are likely to be less severe, perhaps with no symptoms. This has been the pathway of the four coronaviruses that cause about 15 percent of common colds.

• *Lost immunity* – Under this scenario, people who have had Covid-19 lose immunity after a period of time. None of the experts Branswell interviewed thought this would happen. If they are correct, the threat of the coronavirus will wane over time. "Our immune systems will know how to deal with it," she says. "It could become the fifth human coronavirus to cause common colds."

"Four Scenarios for Covid-19 Immunity" by Helen Branswell in *The Boston Globe*, August 30, 2020

Visualizing Virus Transmission

This 3-minute video filmed in the Sacred Hearts Hospital Laboratory makes graphically clear how respiratory droplets containing bacteria or a virus can spread from one person to another – and what prevents spread.

"KHQ Teams with Providence to Test Mask Effectiveness," Dr. Rich Davis, KHQ, Washington, July 6, 2020

Video Showing How a Virus Can Spread in a Classroom

This video makes virus spread visible: https://www.youtube.com/watch?v=I5-dI74zxPg&feature=youtu.be

"How to See Germs Spread" by Mark Rober, March 18, 2020, spotted in *The Educator's Notebook*, March 29, 2020

The Best Graphic on Virus Transmission

This *New York Times* graphic by Jonathan Corum https://nyti.ms/33Epzgo does an excellent job showing how one fewer human-to-human contact drastically reduces the exponential spread of the coronavirus.

"You Can Help Break the Chain of Transmission" by Siobhan Roberts in *The New York Times*, March 19, 2020

Animated Graphics on a Virus's Exponential Spread

This *Washington Post* article by Harry Stevens https://wapo.st/3dZbdfj has several animated graphics that show how a virus spreads exponentially.

"Why Outbreaks Like Coronavirus Spread Exponentially, and How to 'Flatten the Curve'" by Harry Stevens in *The Washington Post*, March 14, 2020

Details on Virus Transmission

In this online article, Erin Bromage (University of Massachusetts/Dartmouth) presents some key facts about Covid-19:

• *How this very infectious virus moves from person to person* – For Covid-19 to take hold in your body, you need to be exposed to an infectious dose – estimated to be at least 1,000 viral particles – and that can take place over time; the key variables are virus particles and exposure time. You can ingest 1,000 particles in a single breath, or by inhaling 100 particles in 10 breaths, or by inhaling 10 particles in 100 breaths. To get a sense of how many viral particles might be floating around, consider these statistics:

- A cough releases about 3,000 droplets traveling at 50 miles an hour. Most fall to the ground, but some can stay in the air and travel across a room in a few seconds.
- A sneeze releases about 30,000 droplets traveling at 200 miles an hour and can easily get across a room, as well as falling on surfaces (as can cough droplets).
- The droplets in an infected person's cough or sneeze may disperse as many as 200 million virus particles into the surrounding air.
- Talking releases about 200 virus particles per minute.
- Breathing out through one's mouth releases fewer droplets because they're not coming from the lower respiratory tract. Most move at low velocity and fall quickly to the ground. Breathing out through one's nose releases even fewer droplets.

The bottom line: sneezing and coughing are highly efficient ways to infect people nearby. You can enter a room where a person sneezed a few minutes earlier and quickly inhale the viral load needed to get Covid-19. If you are talking face to face with an infected person, it takes longer to get to the 1,000-particle level – roughly 5 to 10 minutes.

These figures are the reasons for mask wearing, physical distancing, adequate testing, and contact tracing – and why infected people need to quarantine themselves.

• *Asymptomatic transmission* – At least 44 percent of all infections come from people who don't yet have active symptoms, with increasing viral shedding as they get closer to being symptomatic. A person can be spreading the virus into the environment up to five days before symptoms appear.

• *Risks of infection* – The worst environments for transmission, says Bromage, are prisons, workplaces where people work shoulder to shoulder (meat packing plants, call centers), religious ceremonies, weddings, funerals, birthday parties, and face-to-face business meetings. In one restaurant (see the diagram in the link below), an asymptomatic person breathed out low levels of the virus during a 90-minute dinner and infected half of the people at that table, three-quarters of the people at tables downwind (the air conditioning system moved air across the room), and two people upwind (probably due to turbulence in the flow of air). Nobody at two other tables out of the airflow were infected. Workplaces can carry similar risks as viral particles spread through an office or cubicle area. Choirs are particularly risky since energetic singing releases more droplets from the lower respiratory tract. Energetic indoor sporting events are similar.

The key principle is viral exposure, even if the viral load is low but there are droplets in the air for an extended time – and even if you are 50 feet away from an infected person.

• *What's less risky* – All the transmissions described above were indoors. And indeed, 90 percent of documented infections happened at home, in workplaces, on public transportation, and in social gatherings and restaurants. In countries that have done rigorous contact tracing, only one infection took place outdoors. "The effects of sunlight, heat, and humidity on viral survival all serve to minimize the risk to everyone outside," says Bromage. Outdoors, there's not enough time to achieve an infectious viral load, even walking, jogging, or biking near an infected person. The risk of infection is also low in a well-ventilated indoor space with few people nearby.

• *Shopping* – With masks and social distancing, grocery stores and malls are not very risky because of low density of people, high air volume, and limited time in the indoor space (for store workers, it's a different story). Shopping has accounted for only 3-5 percent of infections.

• *Surfaces* – These are an issue, of course, because infected droplets land on them. This makes it important to wear gloves, not touch your eyes, mouth, or nose, and wash your hands frequently.

"The Risks – Know Them – Avoid Them" by Erin Bromage, May 6, 2020, https://bit.ly/2WGYiaa; Bromage can be reached at ebromage@umassd.edu.

Putting the Pandemic in Historical and Epidemiological Perspective

In this *New Yorker* article, Michael Specter describes the scientific events that have shaped the career of Dr. Anthony Fauci. Since 1984, he's been director of the National Institute of Allergy and Infectious Diseases, and he's currently at the epicenter of the coronavirus crisis. Specter's article lists some previous epidemics that wreaked havoc through history:

- In 430 BC, Athens was struck by a plague that killed as many as 2/3 of its residents.
- Beginning in 165 AD, smallpox contributed to the downfall of the Roman Empire.
- In the 14th century, the Black Death killed more than half of Europe's population.

However, by the middle of the 20th century, improvements in antibiotics and sanitary conditions led many scientists to believe it was possible to eradicate, or at least control, infectious diseases. Fauci, who had specialized in this field at the start of his career, worried that he'd chosen an area that was going to become a sideshow.

Then several deadly diseases changed the game. AIDS has killed more than 30 million people, and tuberculosis infects about a quarter of humanity, killing 1.5 million people in 2018 alone. "But the greatest threat that humanity faces, by far," says Specter, "is a global outbreak of a lethal virus for which no treatment has been found." And indeed, COVID-19 has forced billions of people into lockdown, and another pandemic like this will inevitably appear – maybe next year, maybe in a decade, maybe in a century.

"We live in evolutionary competition with microbes – bacteria and viruses," said Nobel Prize-winning molecular biologist Joshua Lederberg. There are countless viruses in animals and humans, most of them harmless. For a virus to pose a worldwide threat, it has to meet three critical conditions:

- It emerges from animals and humans don't have immunity to it.
- The virus sickens and kills humans (the vast majority of viruses don't).
- The virus spreads efficiently – e.g., through coughing, sneezing, or handshakes.

For years, Fauci and others have been concerned about a virus that would punch all three tickets – new, deadly, and infectious – and that's what we have in COVID-19.

For most of human history, a virus with all three characteristics would afflict many people in the community where it emerged, but then stop spreading. But as human mobility increased, pathogens could spread more widely. Nowadays, someone can wake up with an infectious virus in China and fly to America, spreading it intercontinentally the same day. According to one analysis, at least 430,000 people have arrived in the U.S. on direct flights from China since the coronavirus outbreak began.

Lederberg and others have advocated for greatly expanded early-warning systems, particularly in the developing world, as well as stronger measures to respond to microbial threats. Unfortunately their alarm bells were almost completely ignored. In 2004, a year after those recommendations were made, a highly pathogenic form of avian influenza, H_5N_1, leaped from waterfowl to chickens to humans. This time, the world was lucky – it was deadly but not very contagious. Five years later, a new influenza virus, H_1N_1, infected nearly a quarter of the global population before vaccines were developed – but again we were lucky: it was highly contagious

but not nearly as deadly as most strains of influenza. Dodging the bullet twice fostered complacency and made it more difficult for scientists to create a sense of urgency.

A somewhat hopeful development is that genetic engineering has made it possible to respond to an epidemic much more quickly than in the past. After the COVID-19 outbreak began, it took scientists less than a month to sequence the genome of the virus; by the end of February, the instructions were on the Internet and the virus had been recreated in labs around the world so that scientists could seek treatments and vaccines. The problem is that treatments and vaccines will be virus-specific. Each year scientists try to scope out newly-evolving viruses and create vaccines, but it's hit-or-miss: in the 2017-18 flu season, the vaccine worked for only about one-third of the people who received it. And scientists are playing whack-a-mole with each new virus. "We keep trying to develop a vaccine for one thing – usually the last one – and it's a waste of time," says Fauci. "Every time we get hit, it is always something we didn't expect."

Fauci has long advocated for developing a universal influenza vaccine that would provide lasting defense against all strains. "Similar to tetanus," he said, "a universal flu vaccine probably would be given every ten years. And if you get one that is really universal, you can vaccinate just about everyone in the world." This would cost hundreds of millions of dollars to develop and test, and to date, that money hasn't been raised. Perhaps that will change now. "To plan a coherent biological future, rather than simply scramble to contain each new pandemic," Specter concludes, "will require an entirely new kind of political commitment."

"Annals of Medicine: The Good Doctor" by Michael Specter in *The New Yorker*, April 20, 2020, https://bit.ly/2KpmZSB

Why Is Covid-19 Hitting Some Areas Harder Than Others?

In this *New York Times* article, Hannah Beech, Alissa Rubin, Anatoly Kurmanaev, and Ruth MacLean report that the coronavirus has spread to almost every country on the planet, but some areas are faring much worse than others – for example, the Dominican Republic with many more cases than neighboring Haiti, Iran than Iraq, Indonesia than Malaysia, New York City than Bangkok. What explains these seemingly random disparities? Here are scientists' current insights about areas with lower rates of infection:

• *A younger population* – Many of the areas that have done better so far have a more youthful demographic profile – for example, Africa is the world's youngest continent. Young people, say the reporters, have stronger immune systems and "are more likely to contract mild or asymptomatic cases that are less transmissible to others." But there are exceptions, including Japan, which has an older population and relatively lower infection rate.

• *Distancing* – In Thailand and India, person-to-person greetings are done at a distance, with palms joined together, and so far those countries have been hit less hard. Wearing face masks has been quite common in many countries well before this pandemic. And in the developing world, the elderly are more often cared for at home rather than being clustered in nursing homes. In addition, some regions are more isolated by geography and sparse public transportation.

• *Heat and light* – An early theory was that Covid-19 spread most easily in temperate regions like northern Italy and the U.S., but one of the worst outbreaks occurred in the equatorial Amazon region of Brazil. There are advantages to being outdoors (versus in close quarters indoors), and the virus wilts on surfaces exposed to direct sunlight. But the coronavirus appears to be so contagious that it can overpower the slight benefit of a warmer climate if people don't take proper precautions.

• *Lockdowns* – Countries like Vietnam, Senegal, Rwanda, and Greece that immediately implemented strict shelter-in-place policies have been able to contain the virus. Countries that had experienced pandemics in the past – tuberculosis, Ebola, H.I.V. – knew the drill and acted quickly, including the suspension of religious gatherings. Iran is a notable exception.

• *Superspreaders* – Luck has played an important part; in several countries, a single infected person attending a crowded social function was responsible for exponential spread: one passenger infected 634 others on the *Diamond Princess* cruise ship, and one woman in South Korea attended a funeral and spread the disease to hundreds of congregants and then thousands of others. "Because an infected person may not experience symptoms for a week or more, if at all," say Beech, Rubin, Kurmanaev, and MacLean, "the disease spreads under the radar, exponentially and seemingly at random."

There's a broader caveat, says Dr. Ashish Jah of the Harvard Global Health Research Institute: "We are really early in this disease. If this were a baseball game, it would be the second inning, and there's no reason to think that by the ninth inning the rest of the world that looks now like it hasn't been affected won't be like other places."

"Virus Batters Some Areas. Why Does It Spare Others?" by Hannah Beech, Alissa Rubin, Anatoly Kurmanaev, and Ruth MacLean in *The New York Times*, May 4, 2020, https://nyti.ms/2WkSSCD

How Cognitive Biases Affect the Way We Assess Risk

In this *New York Times* article, A.C. Shilton says that as Covid-19 lockdowns are eased, people are figuring out how bold and how cautious to be. The problem, say social psychologists, is that we're not very good at assessing risk – especially our own. Here's why:

• *Optimism bias* – People tend to believe their own risk is less than that of others. We eat bacon knowing there's a correlation between processed meats and colon cancer, but believe it won't happen to us. This bias is strongest in individualistic societies like the U.S.

• *A false sense of control* – We feel safer at the wheel of a car than sitting passively in an airplane – even though driving is far riskier than flying. During the pandemic, we feel good about washing our hands and wearing a mask, but just as important is social distancing, which is trickier to control.

• *Mixed cues* – Unlike the dangers of smoking, about which there are almost unanimous cultural messages from all sides, cautionary information about Covid-19 has been far less clear.

• *Confirmation bias* – The answer we get if we Google *Is it safe to dine outdoors during the pandemic?* will produce information confirming the tilt of the question. To get the full range of opinion, we should also Google *Dangers of dining outdoors during the pandemic*.

• *Exposure therapy* – Living with coronavirus month after month wears down our anxiety and can make us overconfident. "What is also playing into our psychology," says Shilton, "is simply our deep desire to have a sliver of normalcy back in our lives." This can lead us to take risks that we wouldn't have taken back in March, even though the risks could be greater now.

"Humans Fail the Math of Risk Assessment" by A.C. Shilton in *The New York Times*, July 6, 2020

Teachable Moments During the Crisis

In this *Edutopia* article, Sarah Gonser says COVID-19 "offers teachers the unique instructional opportunity to tap into students' innate curiosity about the virus and deliver lessons that are timely, prompt kids to dig deep, and – ideally – provide a modicum of comfort during a time of alarming headlines and copious misinformation." Gonser suggests six possible areas and highlights the work of teachers in each one (see the link below for details):

- The math behind pandemics – Rates of change, including exponential growth, calculus, and modeling;
- Virology and biology – How a virus affects the human body, especially the lungs;
- Journalism – Teaching students to find and compellingly relate their unique stories of the pandemic;
- Makers of history – Journaling as a powerful tool and an outlet for students as they create a daily first-person account of their lives as history unfolds around them;
- Asking hard ethical questions – For upper-grade students, this is a time for empathy, self-reflection, critical thinking, and debate about moral choices and next steps;
- Media literacy – Discerning what's true and what isn't with online information (see the Ad Fontes Media Bias Chart linked below).

"Innovative Ways to Make Coronavirus a Teachable Moment" by Sarah Gonser in *Edutopia*, April 3, 2020, https://edut.to/3as4XtE

Is Now the Time to Bring Back "Current Events"?

In this *Education Gadfly* article, Robert Pondiscio says that the taken-for-granted body of general knowledge and key vocabulary necessary for literate discourse is constantly evolving. For example, a few months ago, the terms *coronavirus* and *social distancing* would have been unfamiliar even to the well-educated, but now they're on everyone's lips. That demonstrates the importance of keeping abreast of current events in school. "But at a time when it's never been more important to be well-informed and literate," says Pondiscio, "children have never been less likely to pay close attention." A recent report found that only 48 percent of children follow the

news, current events are not a regular part of classroom discussions, and when civics knowledge is tested, the performance of U.S. students is worse than it is for any other subject.

Pondiscio remembers that almost every day in his working-class school on Long Island, a different student would have the job of reporting the day's news. There would be an international, national, and local story, then sports and the weather. "Not the most sophisticated pedagogical approach, perhaps," he says, "but it normalized the idea of paying attention to what's going on in the world." This was reinforced at home, where a morning and afternoon newspaper was delivered every day and his parents gave him a subscription to *Time* when he was in seventh grade. "Being informed was just a basic part of everyday life."

In the midst of the current crisis, with many parents "dragooned into service as *ad hoc* teachers," says Pondiscio, "the juiciest bit of low-hanging educational fruit might be cultivating children's interest in news and reviving current events… And it's a habit, once formed, that can continue as a significant value-add once life and school resume their normal shape, contributing to literacy and language proficiency, as well as cultivating a disposition of civic-mindedness."

But shouldn't the young be shielded from disturbing news? Appropriate filtering, yes, says Pondiscio, but he notes that his generation came of age in a divided, violent nation with airline hijackings, assassinations, riots, domestic bombings, and a disturbing body count from several wars. "The idea that children should be shielded from the news might seem odder still to our parents," he says, "who came of age during the Great Depression and World War II." Common Sense Media suggests that seven-year-olds are old enough to watch and make sense of the news. Pondiscio suggests ABC, CBS, and NBC network newscasts rather than "the fire hose of social media and cable news." And there are news outlets created specifically for young people, including *Time for Kids, The Week for Kids,* and Newsela.

"Keep Kids Learning While School Is Out: Bring Back 'Current Events'" by Robert Pondiscio in *The Education Gadfly*, March 25, 2020, https://bit.ly/3bDUKLL

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THE HUMAN SIDE OF ONLINE TEACHING

Jennifer Gonzalez on Building Student Connections in Remote Classes

In this *Cult of Pedagogy* article, Jennifer Gonzalez says that her own children, whose Kentucky middle and high schools are hybrid, don't want to go to school on the two in-person days each week. "They talk about the drudgery of sitting still all day," says Gonzalez, "the feeling of not knowing anyone in any of their classes, and the anxiety around speaking up or getting things wrong in front of peers." Despite educators' hard work in these schools, relationship-building among students has been hampered by safety protocols, masks, and social distancing. Gonzalez shares her own thoughts, and those gathered from her online contacts, on

what schools can do in the critically important social-emotional domain, whether in-person or remote.

• *Maximize fun and interaction*. Students can play games (Pictionary with whiteboards), interview each other and report on what they've learned, replace physical movement with manipulating avatars in a virtual space, and hold class discussions on high-interest topics. Some schools are setting aside time for virtual lunch or recess, performances, special events, video postcards, and for students to play interactive social games like Among Us, Minecraft, and Roblox. Kahoot, Quizizz, and Gimkit can be used for non-academic purposes. "No, it won't be exactly the same," says Gonzalez, "and not being able to see the bottom half of anyone's face limits our ability to communicate, but again, something is better than nothing."

• *Make good use of breakout rooms*. Through trial and error, teachers have learned that small-group virtual interactions flounder without structure and purpose:

- Roles – It's best for the teacher to assign the job each person will be responsible for and explain it up front: a group leader to kick off the discussion and keep everyone on task; a timekeeper; someone to share their screen to view materials; and a spokesperson to report for the group when the full class reconvenes. It's also helpful to set up a quick, fun conversation in breakout rooms by assigning the role of leader (for example) to the student with the smallest shoe size.
- Grouping – Three or four is the number most frequently considered ideal for breakout rooms – small enough for good interactions, but not too small that it's impossible for the teacher to visit multiple rooms. Gonzalez suggests keeping the groups consistent for a while so students can reach a comfort level. Teachers might also consider student requests when forming groups, as things go more smoothly when students know their groupmates. Icebreaker activities are helpful when groups are first formed.
- Technology – Breakouts get off to a quicker start if all students turn on their cameras and unmute themselves before leaving the main meeting room. They should know that using the "Ask for help" button will quickly get the teacher's attention. Teachers might use two devices: one to monitor the main meeting room, the other for the breakout rooms.
- Tasks – Clear and specific instructions are essential, as is making them accessible to students once they're in their rooms. Groups are more productive when they are asked to work on a meaningful collaborative project and know they'll be reporting on it to the full class.
- Show an exemplar – Students benefit from viewing a video in which the teacher models the behaviors and practices expected in breakout rooms.
- Time limits – Gonzalez suggests keeping breakouts short at first, then gradually increasing the time as students become more proficient at sustaining discussions.
- Monitoring – When a class is first using breakout rooms, the teacher might recruit one or two additional adults to visit groups so students get the support and prodding they need. A great way to monitor the work of all groups is to have a single Google Slides presentation with a different slide assigned for each group to record its work. "Doing this allows the teacher to just scroll through the slides to monitor work in all groups at once,"

says Gonzalez, "rather than toggling between files." The teacher can get a bird's-eye view, seeing thumbnails of all slides at once, by choosing Grid View in the View menu. Classkick, Formative, and Pear Deck also make it possible to see more than one screen of student work at a time.

- Selective share-out calling – Not every room needs to report out when the class reconvenes. Pick a few, keep track, and call on the others in a future class.
- Breakout rooms for individual work – This allows the teacher to circulate and give individual feedback and support.

• *Increase participation in whole-group discussions.* If you're hearing crickets, or only a few students participate in all-class virtual discussions, it may be because students are intimidated by the format or unclear about what's expected. Some ideas:

- Specify the type of response you want. For example, "In a minute, I'm going to ask a question. What I want you to do first is think quietly about your answer. Then I'm going to ask for three volunteers to share their answer with the class."
- Establish a response protocol. Do students just unmute and start talking? Raise their hands? Type something in the chat first?
- Ask for an all-class response first. Rather than, "How was everyone's weekend?" ask, "How many people watched a sporting event this weekend?"
- Call on individual students. This works better than posing a question to the whole class and asking for volunteers.
- Allow time for processing. When a teacher's all-class question is followed by silence, it's hard to know whether students are confused, pondering, or shy about speaking up. "But one thing that's certain," says Gonzalez, "is that many people need a bit of time to think before responding to a question." You might tell the class they'll have 30 seconds to reflect and jot an answer, and then you'll call on someone.
- It's not a good idea to spend a lot of time correcting and punishing students for behaviors like not looking at the camera or doing distracting things. Gonzalez asks for input from readers on dealing with these issues.

• *Use the best collaboration and discussion apps*. Microsoft Teams allows students to send individual or group messages and create topic-specific subgroups. Slack and Discord offer similar spaces but don't have as many structures for student use. Voxer is a good tool for asynchronous voice communication. Trello, Kanbanchi, and Basecamp give users a place to assign tasks, plan timelines, write discussion ideas, and keep track of important documents. And Kialo and Parlay offer frameworks for written discussions, including suggestions for all-class topics.

"Connecting Students in a Disconnected World" by Jennifer Gonzalez in *Cult of Pedagogy*, November 23, 2020

Persuading Reluctant Students to Turn on Their Cameras

In this *Edutopia* article, Boston teacher Liz Byron Loya says we can't force students to turn on their cameras during synchronous remote classes. The option to have the camera off should always be there, she says, giving students a sense of control and autonomy. But there are ways to persuade more students to show their faces. Words matter, says Loya, and "communication with our students needs to be rooted in *community, not compliance*." Her suggestions:

• *Build trusting relationships*. This applies teacher-to-student and student-to-student. "Students who know they are safe and cared for by their community will be more comfortable having their cameras on," she says.

• *Survey students*. Give them the opportunity, one-on-one or in a Google form, to say what's inhibiting them from being on camera during classes – and what would make them more comfortable.

• *Use icebreakers*. For example, what's the biggest yellow thing in your house that you can safely bring to the camera? Loya also suggests the YouTube videos *Within Reach* and *Pass the Pen* (see links below).

• *Play games*. One that works well in a remote setting is Rock-Paper-Scissors; so do Pictionary and Charades. See the link below to *25 Games to Play on Zoom*.

• *Use visual votes*. Check for understanding of a concept or topic with a thumbs up or down or Fist of Five.

• *Encourage popular students to be on camera*. Those with a high level of social capital may encourage others. You can identify those students by polling the class on which three classmates they'd most like to be in a breakout room with, or join in a group project.

• *Show empathy*. Share times when you, the teacher, haven't wanted to use your camera, and talk about how you prepare yourself for synchronous classes, even when you're not in the mood. "If you're self-conscious about looking prepared or about multitasking while on camera," says Loya, "talk about it. Sharing will bring out your humanness."

• *Greet students*. It's a good idea to arrive at classes five minutes early and greet students individually as you admit them, perhaps checking in about camera use.

• *Use the "Ask to Start Video" option*. As the host, teachers can click on a student's black screen, then click the horizontal "…" and select "Ask to Start Video." You can also send a private message via Chat encouraging students to turn their cameras on.

• *Encourage virtual backgrounds*. This is important for students who are self-conscious about what's in the background in their homes.

• *Provide no-face camera options*. Some students are very self-conscious showing their faces, and might be given the option of showing something else to "dip their toe" into using their camera.

• *Use activities where being visible is a criterion*. Perhaps a relevant element in a rubric involves being seen, and if it's known up front, students might be comfortable turning on their

camera. “To avoid forced compliance,” Loya suggests, “consider providing options for students to create their own rubric based on the objective.”

• *Provide a video alternative*. The option of submitting a pre-recorded video demonstrating mastery of a skill or concept gives students more control over how they are seen, and can be kept private to the teacher. Students might also use TikTok, Vimeo, a private YouTube channel, or Instagram.

“Strategies to Encourage Students to Turn Their Cameras On” by Liz Byron Loya in *Edutopia*, November 9, 2020

How Teenagers Are Dealing with the Current Crisis

In this article in *The Atlantic*, Jean Twenge (San Diego State University) reports on a study of the pandemic’s effect on U.S. teens. In May, June, and July this year, Twenge and her colleagues surveyed a national sample on their life satisfaction, happiness, symptoms of depression, and loneliness, comparing the data with identical questions posed to teens in 2018. The pandemic had a clear impact on their lives:

- 63 percent were concerned about being infected with Covid-19.
- Two-thirds were concerned about not being able to see their friends.
- 29 percent knew someone who had been diagnosed with the coronavirus.
- 27 percent said a parent had lost a job.
- 25 percent worried about their family not having enough to eat.

Family financial distress and food insecurity had the biggest impact on the incidence of teen depression; 33 percent who worried about food insecurity reported being depressed, versus 14 percent of those who did not have that concern.

Despite all this, says Twenge, “teens’ mental health did not collectively suffer during the pandemic when the two surveys are compared.” Depression was slightly lower in 2020, unhappiness and life dissatisfaction only slightly higher. What accounts for this surprisingly positive finding? Twenge believes it’s because of three factors:

• *Sleep* – In the study done two years ago, only 55 percent of teens said they were getting enough sleep before school days (seven or more hours); during the pandemic, 84 percent said they were. Studies have shown that sleep is a significant factor in teens’ mental health.

• *Family time* – With most parents and other adults unable to go to work, 68 percent of teens said they felt closer to their families – eating meals with parents and siblings, having more-frequent conversations, playing games as a family, and going outside together. Research has found that positive family time is closely associated with children’s mental health.

• *Use of technology* – Twenge and her team found that during the pandemic, teens were spending more time than before video-chatting with friends and watching videos, movies, and TV, and less time gaming, texting, and using social media. Given that heavy use of social media is associated with mental health problems, this is an interesting finding. Rather than silently scrolling through social media posts and texting with friends (activities that are done surreptitiously and privately in school), teens at home could engage in more-active

communication with friends and fill the long hours in quarantine by using technology to connect with others and entertain themselves.

Twenge notes that YouTube is used in a highly interactive way by many teens as they create and post videos, receive "response" videos, and comment on what they view. Snapchat, Instagram, and Facebook are also active platforms for connecting with friends and passing time. "Previous research," says Twenge, "has found that using social media in more active, connective ways can be protective for mental health." Teens reported using technology during the pandemic to bond with friends and manage their anxiety – both about economic worries and the protests on racial injustice and police misconduct.

"Overall," Twenge concludes, "teens during the pandemic appear to have managed the challenges of 2020 with resilience, taking comfort in their families and the slower pace of life. Indeed, 53 percent of teens said that the experience made them feel stronger and more resilient… And yet, depression, loneliness, and unhappiness are still at unacceptably high levels among American teens. Although the pandemic did not appear to worsen these trends, many teens are still in need of mental-health services, and the pandemic has not changed that reality."

"Teens Did Surprisingly Well in Quarantine" by Jean Twenge in *The Atlantic*, October 13, 2020; Twenge can be reached at jtwenge@sdsu.edu.

Adapting to Mask-Wearing

In this *New York Times* article, pediatrician/author Perri Klass asks whether adults wearing masks will interfere with children's development in the crucial areas of speech, language, and social interactions. Klass interviewed Kang Lee (University of Toronto), who studies the development of facial recognition skills in children. Lee said there are three areas of concern with masks:

- Children under 12 focus on individual features and may have difficulty recognizing people.
- Masks cover some facial musculature, and that's where a significant amount of emotional information is conveyed.
- Children may have problems recognizing speech because a good deal of verbal information is conveyed visually. Studies show that from the time they are babies, people look to speakers' mouths to pick up cues about what's being said.

Given that mask-wearing is essential to mitigating infection during the pandemic, how can parents and educators communicate effectively with children – and children with adults? Klass interviewed several other experts. Some insights:

• We need to give children credit for adaptability. "Being covered for a few hours every day isn't going to make them less able to recognize social expressions," says Eva Chen of Hong Kong University. Watching other people's mouths is "by far not the only cue children have to communicate and to learn."

• Children will adapt, says Sarah Gaither of Duke University. They'll get better at reading people's eyes and tone of voice.

• At the same time, says Gaither, adults should be more explicitly verbal when expressing emotions, and frequently check in on what young people are feeling.

• At home, when masks are not worn, families should maximize face-to-face verbal interaction so children get continued practice at picking up visual cues. Kids should also be encouraged to use more gestures when they talk.

• In school, consistency helps with students quickly recognizing people and tuning in to their individual style. Each educator might consider wearing the same eyeglasses, the same hairstyle, and the same personalized mask every day.

• Kang Lee adds this advice: "Make your voice more expressive, your eyes more expressive, your gestures more expressive. I would slow down my speech as a teacher, particularly when interacting with younger ones, so kids can pick up more from the auditory channel."

• Children with neurodevelopmental issues (e.g., autism) will need special consideration.

"Class, Can You Hear Me Through This Mask?" by Perri Klass in *The New York Times*, September 14, 2020

Humanizing Online Instruction

In this article in *Edutopia*, Youki Terada reports some ways that teachers can reduce the psychological and emotional distance with their students during remote instruction:

• *Use several approaches to establish a strong teaching presence*. In real classrooms, teachers employ facial expressions and voice inflection to hook and hold students. In remote lessons, additional tools are necessary, including e-mails, announcements, assignments, protocols, and the overall organization of lessons. "The digital tools that you use become extensions of your teaching," says Terada, "…blurring the line between your physical and virtual personae." Students appreciate a quick way to reach their teachers if they have a burning question, and a reasonably quick response time means a lot.

• *Be organized*. "Struggling to find files, links, or browser tabs can cause your stress level to rise, which students will feel and mirror," says Vermont educator Annie O'Shaughnessy. "Close any programs that you won't be using, and print out your agenda so that you don't need to frantically search for it on your screen." Doing a dry run helps smooth things out.

• *Be clear*. It's more than clarity of verbal communication; students need to know how to navigate the learning management system (it helps to have a central hub where resources are gathered), where to submit assignments and ask questions, and how to use the class's suite of tools.

• *Regularly collect student feedback*. Students need to know teachers are listening and that students' opinions matter. Some possible survey questions:

- *From 1 to 5, how comfortable are you with the technology in our virtual classroom?*
- *Can you easily find what you need?*
- *Have you encountered any technical issues, e.g., Internet connection, audibility?*
- *On a 1-to-5 scale, how well-organized are my lessons?*
- *On a 1-to-5 scale, how clear are my assignments?*

- *Do you feel your voice is heard?*
- *What can I do to improve our online classroom?*

The teacher's humble posture is important, communicating that you're on a learning curve.

• *Focus on surfacing connections and building relationships*. Beyond academic connections, students want to feel the teacher is personally interested and invested in them. This can be done in a synchronous check-in (for example, students share an appreciation, apology, or aha! moment), or using a platform like Seesaw to record and share video greetings, with students responding on their own time.

"5 Research-Backed Tips to Improve Your Online Teaching Presence" by Youki Terada in *Edutopia*, September 4, 2020

Principles and Practices for Successful Online Learning

In this online article, Michigan teacher/writer Dave Stuart Jr. says he sorely misses the "human-ness" of his in-person high-school classes and suggests ways that educators can humanize schools and classrooms conducted at a distance. First, Stuart offers some observations about making a human connection with students in any instructional setting:

• Human beings are mostly hidden. It's impossible to see most of the "invisible thoughts and feelings and intentions and social relationships" that exist within each person's physical body.

• In a humane environment, we feel safe, less of us is hidden, and we don't need to hide. Students in a humane classroom "feel warmly seen," says Stuart, "like they are known, valued, respected… In such an environment, our students are far more likely to be eager to learn and to persist in learning."

• It's tricky to humanize a school because there's a lot that educators don't control. For example, some students who walk into a classroom may have been insulted by a classmate in the previous class period, may have had negative experiences or been put off the subject by a previous teacher, may feel stereotype threat because of perceived beliefs about their race or gender, may not live in an emotionally or physically safe home, or may not have had a good meal recently.

• In addition, there's wide variation in what makes people feel valued, known, respected, and safe. "Some are introverted and prefer less personal attention from the instructor," says Stuart; "others are extroverted and would take 100 percent of the instructor's attention if they could get it… Some like to be called on; others are terrified by it…"

Considering these four truths about human connections, it's challenging to humanize instruction when students are physically present. What about online schooling, which is going to be the reality for many schools this fall? Humanizing instruction is "completely possible," says Stuart, and teachers don't have to work 22 hours a day and go crazy. Here's some advice from Michelle Pacansky-Brock, who works with community college instructors to humanize online learning and reach all students:

• *Tell your story.* Make a brief, friendly introductory video telling how you became a teacher, where you grew up, what college was like, and what you love about your job (see the link below for a few samples).

• *Use brief instructional videos featuring you as the teacher*. These don't have to be polished and professional – in fact, somewhat amateurish videos help humanize the teacher. "Accept your imperfections," advises Stuart (see samples in the article link).

• *Send "video postcards" to students*. These might be a sunset filmed on your phone while taking a walk or something that made you think of your students. These show your non-academic side and make you a real person.

• *When possible, provide voice or video feedback on students' work*. Researchers have found that students far preferred audio and video feedback and were more likely to follow up on it. This can be done in learning platforms like Canvas, Google Classroom, D2L/ Brightspace, and Schoology.

• *Identify high-opportunity students*. Time is short, so it makes sense to focus on students for whom individualized, high-touch communication will make the biggest difference. These students can be identified with a short survey at the beginning of the school year. Some possible questions:

- What name would you like me to use? Pronunciation tips?
- What is the best way to teach you? What do you know about how you learn? What has worked in the past? What hasn't?
- Will you mainly use your phone, a laptop, a computer, or something else?
- How long have you attended this school?
- I may leave you voice or video feedback on your work. Does that work for you, or would you prefer written feedback?
- In one word, describe how you are feeling about this class right now.
- Please share one thing that may interfere with your success in this course.
- Is there anything else you'd like to share at this point?

Students should have the option to respond via audio or video.

• *Be a warm demander*. The basic idea of this time-honored approach is high challenge and high support – push students to push themselves and grow from dependent to independent learners. Here's a message Stuart sent to one of his students during the Covid shutdown: "Anita, are you all right? I noticed you haven't completed the last two assignments. How are things with your living situation? Are you still watching your siblings for six hours a day? Please reply with an update so that I can help you get back on track with the course. I know you can do this! I believe in you and want to see you succeed."

"How to Humanize Your Classroom or School When You're Teaching from a Distance: Principles and Practices" by Dave Stuart Jr., July 29, 2020; Stuart can be reached at dave@davestuartjr.com.

Mapping Students' Support Networks in Preparation for the Fall

"Despite educators' valiant efforts this past spring, too many students still struggled to connect to their peers, teachers, and counselors," say Mahnaz Charania and Julia Freeland Fisher (Clayton Christensen Institute) in this article in *The 74*. In some cases, especially at the middle- and high-school level, this stemmed from "a troubling lack of people to turn to for academic and emotional help." Given the uncertainties of the coming school year, Charania and Fisher believe three things are essential: (a) that all students have a well-connected support network at school and at home; (b) that each student is surrounded by "an interconnected web of positive relationships;" and (c) that every student has at least one "person on the ground" – a mentor, tutor, parent, or neighbor who is physically present to offer support if needed.

To ensure that students have these vital connections, it's wise for schools to gather reliable information on students' links at school, in their communities, and at home. To map relationships in school, Charania and Fisher suggest the Relationship Mapping Strategy developed by Harvard's Making Caring Common Project. On a list of students sorted by grade, teachers and other staff members are asked to put an X by the name of students who they believe would approach them if they had a personal problem, and another mark by students they believe are at risk, either personally or academically. This exercise reveals students who get lots of Xs and those who don't have a single strong connection in the school and/or have serious challenges. A good follow-up is to ask students to identify the adults with whom they feel connected and then compare the adult and student lists. "Armed with that set of data," say Charania and Fisher, "schools can then consider how best to ensure that every student has at least one strong connection."

The next step is to use social network mapping to gather information on students' relationships outside of school – siblings, extended family, friends, neighbors, members of their faith community, and others. This gives educators a better picture of where students can turn for academic and emotional support, and whom the school might contact in a moment of need. Older students can learn to identify and keep track of their own support networks. iCouldBe https://www.icouldbe.org is a free virtual mentoring portal that guides adolescent students through activities to build relationships at school and in their community, based on their academic and career interests.

"Schools that understand the quantity and quality of relationships at their students' disposal," conclude Charania and Fisher, "will be well positioned to sustain their well-being and academic progress in the coming year, whether campuses open or remain closed… Districts can't have a complete back-to-school road map without a relationship map. Students' success depends on it."

"Analysis: Mapping Students' Support Networks Is Key to Supporting Their Remote Learning Success. How Schools Can Make That Happen" by Mahnaz Charania and Julia Freeland Fisher in *The 74*, July 14, 2020

Building Relationships in an Online World

In this article, teacher/author Dave Stuart Jr. says a big challenge this fall will be building relationships with students who haven't been met in person. "Before the hyperventilation kicks in," he says, "let's center on a few grounding principles:"

• *Do the things you always do to build relationships at the beginning of the school year*. Memorize all students' names within a week; create a brief "moment of genuine connection" with each and every student within the first week (by office hours, videos, or phone calls) and systematically track them; survey students on their interests outside of school and the kinds of people they want to become; project a warm, authoritative, trustworthy presence; and start a regular routine of 3-5 positive parent phone calls a week.

• *Relationships are fun and affirming and surprising and beautiful*. The bonds teachers create in the opening weeks of school "will stoke the fires that keep us going," says Stuart, and "will be helpful as we help our students stoke the fires that keep them going."

• *Relationships can be nurtured online*. The work will be different remotely, and a little harder, but it's not impossible, says Stuart. The key is to "remotify" what works in person and then make sure you ask for needed technology and pedagogical support with specific questions in mind. "This is a way of training yourself to become a pro in an area of teaching that you're currently a novice at."

• *Relationships are about motivation, engagement, and productivity*. Motivation is turbocharged by positive relationships; engagement can mean students getting "lost in the joy or thrill or peace or fulfillment of learning," says Stuart. And the end product is academic and character mastery.

• *Do it right*. Stuart shares several ideas from *The Distance Learning Playbook* by John Hattie, Doug Fisher, and Nancy Frey:

- Dress and groom professionally.
- Project an optimistic demeanor about your students and about you.
- Weave what you've learned about kids into your lessons.
- Begin lessons with a positive affirmation like a favorite quote, a silly joke, or a short video.
- Ask questions that draw on students' thinking (versus leading questions).

"How to Build Strong Relationships with Students if You're Starting the Year Online: Principles and Practices" by David Stuart Jr., July 21, 2020; Stuart can be reached at dave@davestuartjr.com.

Cheerleading Won't Help Someone Fearful of Covid-19

In this *New York Times* article, Anna Goldfarb says that trying to cheer up people who have serious worries about the pandemic is well-intentioned but unproductive. Some examples:

- *Everything is going to be okay.*
- *At least you didn't lose your job.*
- *Think happy thoughts!*

- *Be grateful you can use this time to explore a new hobby.*
- *This won't last forever, and you're resourceful; you'll come out on top.*

Statements like these often make the other person feel "unheard, frustrated, unsupported, and alone," says psychotherapist Nicolle Osequeda. Goldfarb summarizes advice from several experts on how to short-circuit this all-too-common tendency:

• *Don't minimize*. Citing reassuring statistics or saying the vast majority of people make a complete recovery from the virus doesn't help someone manage very real fears.

• *Avoid problem-solving*. Statements that begin, *You just need to…* or *All you need to do is…* come across as dismissing fears about finances, safety, and health. Similarly, it's a good idea to avoid the word "should" – for example, *You should just practice self-care*.

• *Don't give unsolicited advice*. "Most likely, people are just looking for an ear," says clinician Ayanna Abrams. "They're looking for a heart, somebody who can meet them in the experience and then they can better figure it out on their own."

• *Reflect, validate, and ask*. "The antidote to dismissive positivity is just to really listen to what someone is experiencing," says Abrams: mirror the emotion; affirm that it's real; and show curiosity about how the person is doing:

- *I can't imagine how this must feel for you, and I'm here to listen.*
- *Ugh, that sounds really hard.*
- *Having to work full throttle amid all of this is really challenging.*
- *It is hard to not know what's next.*
- *Tell me more about what's going on.*
- *What aspect of the coronavirus worries you the most?*

The important thing is for a fearful person to feel normal about being afraid – that their emotions are valid.

• *If you mess up, you can have a do-over*. Having slipped into dismissive positivity, it's possible to try again – for example: "Hey, I noticed when we were talking earlier, it didn't seem like you were connecting with what I was saying. I realize I slipped into cheerleader mode too quickly. Can we try again?"

• *Ask directly what will be helpful*. "Recruit them as an ally so you can face the issue together," concludes Goldfarb.

"People Fearful About Coronavirus Don't Need Cheering Up" by Anna Goldfarb in *The New York Times*, July 6, 2020

Toward a Saner and More Equitable College Admission Process

In this collective statement from over 330 colleges admissions deans released by the Making Caring Common project at the Harvard Graduate School of Education, Rick Weissbourd, Trisha Ross Anderson, and Brennan Barnard present these colleges' admissions priorities during the pandemic:

• *Self-care* – "We encourage all students to be gentle with themselves during this time," says the statement.

• *Academic work* – Understanding the extraordinary circumstances many students are currently facing, applicants will be assessed mainly on performance before and after the pandemic.

• *Service and contributions to others* – The deans encourage students to contribute to others if they are in a position to do so. "This pandemic has created a huge array of needs," says the statement, "whether for tutoring, contact tracing, support for senior citizens, or assistance with food delivery… We also value forms of contribution that are unrelated to this pandemic, such as working to register voters, protect the environment, combat racial injustice and inequities or stop online harassment among peers."

• *Family contributions* – "Many students may be supervising younger sibling, for example, or caring for sick relatives or working to provide family income," says the statement, "and we recognize that these responsibilities may have increased during these times." The statement underscores that it's vital for students to report these responsibilities and other challenges they're facing in their applications. Admissions deans want to know this information and it will only positively affect the review of applications.

• *Extracurricular and summer activities* – It's understood that many of these activities have been curtailed by the pandemic and students won't be disadvantaged by not engaging in them.

"Care Counts in Crisis: College Admissions Deans Respond to Covid-19" by Rick Weissbourd, Trisha Ross Anderson, and Brennan Barnard, Making Caring Common, June 2020; Weissbourd can be reached at richard_weissbourd@gse.harvard.edu.

Nurturing School Climate in a Virtual World

"Although leaders, teachers, and students are not together physically, the climate and culture of the school community continue to exist," say Jessica Hoffman, Marc Brackett, and Scott Levy (Yale Center for Emotional Intelligence) in this article in *EdSurge News*. "If we do not take steps to actively shape our virtual school climate, it will be shaped for us… Now more than ever, a positive school climate is necessary to help us maintain a school community that supports the wellbeing of faculty, staff, and students and the continuation of high-quality instruction that is paramount to achieving educational goals."

An organization's culture is often defined as "the way we do things around here." In a school, this includes norms and values, the quality of relationships, respect and trust, supportive leadership, celebration of diversity, physical and emotional safety, and effective teaching practices. "You may feel like you have too much on your plate to worry about school climate right now," say the authors. "But the truth is, school climate *is the plate*. More than 25 years of research tells us that the climate of a school matters; it literally guides how well almost everything gets done." Schools with a positive culture have better academic and non-academic results.

The pandemic has taken a major physical and emotional toll on educators and students, with anxiety the most frequently mentioned emotion. A positive culture is like a healthy immune

system, mitigating the harm that occurs. Negative external forces may expose pre-existing weaknesses in a school's culture. Given the uncertainty of the months ahead, it's vital to understand weak points in the culture and build on strengths so adults and students can thrive and be stronger by the time schools reopen. Hoffman, Brackett, and Levy offer these suggestions in several school culture areas:

• Physical and emotional safety:
  - Require password protection for online communities.
  - Promulgate a code of conduct for remote learning, including chat boxes and screenshots of meetings.
  - Regularly check in with students before launching into academic content.
  - Suggest using virtual backgrounds for student and staff privacy.
  - Give students easy access to counselors and psychologists.
• Respect for diversity, equity, and inclusion:
  - Understand that students' work environments will vary widely.
  - Be sensitive to financial and health disparities, including Covid-19 cases.
  - Pace academic work to avoid overload.
  - Assign work in a variety of formats.
  - Leverage individual students' tech and design skills.
  - Reach out to family and community resources to enrich the curriculum.
• Relationships:
  - Regularly use synchronous learning to maintain group culture.
  - Orchestrate regular group learning time.
  - Facilitate communication among students' friendship groups.
  - Continue virtual department and faculty meetings and maximize participation in decision making.
  - Do individual check-ins to stay connected with students and colleagues.
• Supportive teaching practices:
  - Set realistic expectations and model patience and compassion.
  - Support educators with PD on remote learning.
  - Give students choice and voice in their learning assignments.
  - Have the curriculum include empathy, responsible decision-making, emotional regulation, conflict resolution, ethics, and citizenship.
• Sense of community:
  - Maintain rituals and routines like morning announcements and a weekly newsletter.
  - Encourage students to share films, speeches, and performances.
  - Use social media to highlight exemplary work by students and staff.
  - Actively communicate with families.

"How to Foster a Positive School Climate in a Virtual World" by Jessica Hoffman, Marc Brackett, and Scott Levy in *EdSurge News*, May 21, 2020; the authors are at jessica.hoffman@yale.edu, marc.brackett@yale.edu, and scott.r.levy@yale.edu.

Maintaining Relationships with Students While Physically Separated

In this *Edutopia* article, Sarah Gonser reports on strategies she curated from interviews with teachers about how they stay connected with their students during school closures:

• *Frequently saying hello* – Several teachers emphasized the importance of communicating, by video if possible, that you're thinking of students, care for them, and miss them. For students without video access, a phone call is a good substitute.

• *Maintaining morning meetings* – This might be a video of announcements and daily content, with students chiming in, or a recorded meeting that students can watch asynchronously.

• *"Temperature" checks* – One high-school teacher is using Schoology to have his students report on their state of mind: thumb up, thumb sideways (meh), or thumb down. As part of homework, another teacher asks students to check in on a classmate and report back to her by e-mail, text, or Skype. Other teachers are using forms like the one developed by the Association for Middle Level Educators https://bit.ly/2yvRUdl.

• *Snail-mail pen pals, phone pals, or virtual turn and talk* – One third-grade teacher uses the Zoom breakout room feature to have students discuss a question in small groups and follows up with one-on-one sessions with students, having them read aloud for a few minutes. At the low-tech end of the spectrum, some teachers are encouraging students to call each other on a rotating basis, or sending home paper, envelopes, and stamps for students to write letters to each other.

• *Creating virtual "tables"* – A North Carolina eighth-grade English teacher is using Google Classroom to get groups of 4-5 students (randomly assigned) discussing assignments, asking each other questions, and staying connected.

• *Including parents* – This same teacher checks in with parents via e-mail every day with questions like "How are you?" and "Do you need anything?" Another teacher connects with parents with the messaging platform Remind or, for parents who don't have text messaging, a dedicated Google Voice phone line.

• *Naming and processing emotions* – Social isolation, cabin fever, and disrupted routines may be freaking out students, and many teachers are providing avenues for kids to express and explore their thoughts, feelings, and worries – individually or with classmates. As students share, teachers watch for those who are having the most difficulty and following up with individual dialogue and perhaps a counseling referral.

"7 Ways to Maintain Relationships During Your School Closure" by Sarah Gonser in *Edutopia*, March 25, 2020, https://edut.to/2JKmLW4

Teaching Social-Emotional Skills At a Distance

In this article in *Education Week*, Arianna Prothero says homebound students "now more than ever need strong coping skills to adjust to this new reality that will likely, for many, extend through the end of the school year and beyond." The uncertainty and lack of control over the

future makes social-emotional learning especially important – but how can educators accomplish that at a distance? Prothero interviewed several SEL experts for their ideas:

• *Psychological distancing* – Ask students to think about helping another young person: "Well, what would I do to support my best friend who was telling me they were really worried about the coronavirus? What would I say to them?" suggests Marc Bracket (Yale University). This gets students out of their own heads, being empathetic and compassionate with another person – which might surface ideas they could apply to themselves. Students could also be asked to examine their own self-talk and think about whether it's helpful.

• *Literature* – For younger students, reading stories aloud (synchronously or asynchronously) and discussing the feelings and motivations of characters can be helpful.

• *Current events* – Older students might be asked to reflect on the social-emotional attributes on display among political leaders – self-awareness, self-management, social awareness, responsible decision-making – and discussing how and whether these are helping the U.S. through this crisis.

• *Rituals* – It's a good idea to maintain cherished traditions like spirit week – for example, having students wear crazy socks and sending in photos of them. Journaling is another ritual, with teachers sending prompts to get students reflecting and writing about their feelings. For students without Internet access, cell phones can be the medium.

• *Setting limits* – It's important to talk about what's going on in the world, but teachers and families need to avoid overwhelming young people with too much about the pandemic. One step: suggesting to parents that they not have cable news on all the time.

"Teaching SEL When Students Are Home" by Arianna Prothero in *Education Week*, April 8, 2020 (Vol. 39, #29, pp. 14-15), https://bit.ly/34xNkXX

Trust and Boundaries

In this paper in *One Trusted Adult*, consultants Brooklyn Raney and Ryan Donaher suggest guidelines for working online with middle- and high-school students in ways that build trust and maintain boundaries. Some excerpts, directly quoted as noted:

• *Clarify intent*. "I care about your health, happiness, safety, and success, and our inability to meet in person doesn't change that. I believe a routine and a sense of normalcy will help us during this unprecedented time."

• *Set up for success*. This includes having a daily routine with students, dressing like you're going to school, sitting at a table, and asking students how you can help them.

• *Build a safe virtual space*. "Do not assume your students will automatically bring classroom norms with them into this venue. Take time to reiterate all of the rules that still apply, and any additional ones that need to be set up in order to protect the safe space needed to learn. Ask for their contributions and feedback to the list."

• *Be fully present*. "What students will notice more than anything is whether or not you are really with them." That means not being visibly distracted by phones and other events.

• *Model vulnerability*. "There is no need to pretend you know what you are doing. Ask for their patience and understanding, request their help, and model learning something new at a rapid pace and delivering it before it is fully tested."

• *Create opportunities to contribute*. "Seek opportunities for them to lead, teach, inspire, and support each other virtually."

• *Provide structure and predictability*. "Beyond your curriculum and content, consider the fringe moments, the intentional and unintentional connectors that happen in your classroom, that can be creatively translated to your online space."

• *Reassure and encourage*. "Try to say every name of each of your students every day. Let them hear their name in a positive way, whether as a greeting or being called upon to share. Allow your students an opportunity to be seen, heard, valued, reassured, and encouraged. And never, ever underestimate your role as a trusted adult, even virtually, in the lives of these young people."

• *Work with two shoulder partners*. "Continue interacting with young people as if their parents are on one of your shoulders, and your direct supervisor is on the other. Then, assume all your virtual interactions are being recorded – would you want this recording to go viral? For your safety and security as an educator, and for the safety of your students, continue building trust with young people through the establishment of boundaries, and create educational moments you would be proud to share."

"Tips for Maintaining Trust and Boundaries with Virtual Students" by Brooklyn Raney and Ryan Donaher in *One Trusted Adult*, March 2020; Donaher can be reached at ryan.donaher@gmail.com.

Making Remote Learning Human

"In an era of social distancing, we're all searching for some form of social closeness right now," says elementary teacher Paul France in this *Edutopia* article. When he previously worked with an ed tech company and a network of micro-schools, France learned that "many digital tools have dehumanizing effects: they chip away at human connection, limit opportunities for heterogeneous groupings and cross-ability collaboration, and have kids turning toward screens instead of their teachers and fellow learners."

Now that he and most other teachers have no choice but to use digital pedagogy, he has three suggestions for overcoming some of its disadvantages:

• *Embrace authentic tasks*. The temptation now is to take advantage of the convenience of commercial curriculum products, says France. But he believes this is an excellent time "to leverage open-ended tasks, complex instruction, and journaling, allowing students to post pictures of their journal entries through Seesaw or Google Drive." How about providing a math task with multiple solutions and challenging students to journal about their solutions, or respond to prompts in a reader's notebook? After students have had time to work on their own, the teacher might host an online class for sharing and discussion.

• *Create opportunities for dialogue and discourse*. "True, deep learning happens not on a

worksheet or through a series of decontextualized videos and closed-ended questions," says France. "Learning is a conversation; it requires connection and interaction." He urges regular video class meetings for this reason, as well as for social interaction and connection.

• *Build in opportunities for self-reflection*. "Sending home worksheet after worksheet is unlikely to result in fruitful learning that will stick," says France. "The current crisis is allowing all of us – educators and parents included – to reflect on what it truly means to learn." He's asking his students to think about their learning, and sends them videos of him thinking aloud as he solves math problems and responds to readings. He asks students to make a video of their responses to questions like:

- What went well for you with that task?
- What will you do differently next time?
- How has your thinking changed?

"All of these remind students that learning neither starts nor ends with the activity they've completed," he says. "It can – and will – be connected to future activities, and by taking them through the process of reflecting on the task, I create the expectation that they will need to apply new learnings to future tasks."

"3 Tips for Humanizing Digital Pedagogy" by Paul France in *Edutopia*, April 1, 2020, https://edut.to/2JYT183

Why Teaching in a Virtual Space is Draining

In this *National Geographic* article, Julia Sklar reports that many K-12 and university teachers are finding remote instruction more exhausting than in-person teaching. Cognitive scientists say that virtual interactions are more taxing on the brain – because we're trying to make up for the copious information we get, without knowing it, during face-to-face interactions.

When we're physically with others, we're listening to the words, but also picking up dozens of non-verbal cues – facial expressions, whether the person's body is facing us or slightly turned away, their fidgeting, perhaps a quick inhalation as a prelude to an interruption. "These cues help paint a holistic picture of what is being conveyed and what's expected in response from the listener," says Sklar. "Since humans evolved as social animals, perceiving these cues comes naturally to most of us, takes little conscious effort to parse, and can lay the groundwork for emotional intimacy."

During a video call, seeing people from the shoulders up, very few of these cues can be perceived, which puts much more cognitive load on listening to what's being said. We search for non-verbal cues that can't be seen, and eye contact on the screen can be disconcerting if held too long, which would seldom be the case in a face-to-face conversation.

"Multi-person screens magnify this exhausting problem," says Sklar. "Gallery view – where all meeting participants appear Brady Bunch-style – challenges the brain's central vision, forcing it to decode so many people at once that no one comes through meaningfully, not even the speaker." One psychologist called this attempt to multitask "continuous partial attention,"

like trying to cook and read at the same time. A regular telephone conversation is much less taxing because we're only expecting the voice and we're not looking for visual cues.

Interestingly, says Sklar, video calls can be a boon for people for whom in-person conversations are challenging – for example, many with autism. However, for others on the spectrum, video calls can be disconcerting because of sensory triggers such as loud noises and bright lights.

It's possible, concludes Sklar, that "Zoom fatigue will abate once people learn to navigate the mental tangle video chatting can cause." In the meantime, one trick is turning off your camera and concentrating just on the words, saving video images for when they're really necessary – or when we want warm fuzzies from a loved one. Another idea is using a phone for a chat and walking around. There's evidence that meetings on the move can improve creativity.

"'Zoom Fatigue' Is Taxing the Brain. Here's Why That Happens" by Julia Sklar in *National Geographic*, April 24, 2020, https://on.natgeo.com/2Wxl0BI

Better Ways of Starting Online Conversations

In this *Quartz* article, Elizabeth Weingarten says that in the early days of the pandemic, she would ask friends and colleagues, "How are you doing right now?" It was an assumption-free way of showing she cared, but people began to respond in predictable ways: *I'm hanging in there… I've got it better than those heroic first responders…* "When we keep asking the same question," says Weingarten, "or no question at all, we lose out on a chance for deeper connections with our conversation partners, who also happen to be the people we care most about. We are tricked into believing we know how they're feeling or what they're thinking, when we haven't even scratched the surface." Here's a selection of her suggested alternatives:

- How are you taking care of yourself today?
- What's the best thing that happened to you today?
- What's the most generous act you've seen recently?
- What's giving you hope right now?
- What's a story – from a book, movie, article, conversation – that you've been gripped by recently? Why did it capture you?
- What habit have you started, or broken, during the quarantine?
- Which specific place in your neighborhood are you most looking forward to visiting when this is all over?
- What are some things you've realized you don't really need?
- What's something you miss that surprises you? What's something you don't miss that surprises you?
- What's the latest thing you experienced that made you laugh, or cry?
- How do you want this experience to change you? How do you think it will?
- What do you hope we all learn or take away from this experience?

"20 Questions to Ask Instead of 'How Are You Doing Right Now?'" by Elizabeth Weingarten in *Quartz*, April 10, 2020, https://bit.ly/2YzXpmu

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PEDAGOGICAL ISSUES WITH ONLINE TEACHING

Kwame Anthony Appiah on Academic Dishonesty

In this *New York Times* Ethicist column, Kwame Anthony Appiah (New York University) says there are four ways teachers can appeal to students to be honest with online academic work:

• *Character* – "You don't want to be the kind of person who cheats," says Appiah. "Dishonesty is a vice. So is intellectual laziness, which can make cheating appealing as a substitute for effort, and so is the vanity that may make you seek a better grade than you deserve."

• *Duty* – Passing off someone else's work as your own, or inflating your level of competence, is a betrayal of teachers' trust. In addition, it's unfair to rule-following students when the grading curve is distorted in your favor.

• *Data* – An important purpose of assignments, quizzes, and exams is providing feedback to address misconceptions and fix learning problems. When you cheat, the grades and teachers' comments you receive are much less helpful. "If you don't care about how you're doing," asks Appiah, "why take the course?"

• *Consequences* – If you're caught, cheating and plagiarism can have serious consequences, especially at the university level.

"To students who cheat routinely, all this will seem naïve or sentimental or irrelevant," says Appiah. "They want the best grades they can secure because good grades will help them get ahead and land the kind of job they want." But the chickens will come home to roost in the real world, where competence is what counts. "Ethics is about living well," Appiah concludes. "Preparing for exams can help you develop skills that are useful later in life. All of which is to say that the person you're letting down when you don't do the work is you."

"As An Instructor, How Do I Deal with Cheating in the Age of Zoom?" by Kwame Anthony Appiah in *The New York Times*, November 22, 2020; Appiah is at Anthony.Appiah@nyu.edu.

5. One Way to Deal with Online Cheating

In this *New York Times* article, philosophy professor Christian Miller (Wake Forest University) says he's hesitant to give exams while his courses are remote – there's too much

temptation for students to cheat by looking at crib notes, getting help from friends, or going online. So how can teachers at all levels check on students' learning?

Remote proctoring is one option: students are video-recorded as they take an exam, allowing the teacher to spot any suspicious web searches or communication. But Miller believes active surveillance conveys mistrust, and there are also concerns about privacy and racial bias.

A better option, he believes, is honor pledges. Handled well, these have been surprisingly effective: "Students who abide by them refrain from cheating not because they can't," says Miller, "but because they choose not to."

What does "handled well" mean? Just promising to abide by the school's honor code at the beginning of the year is not enough. "As we know from both ordinary life and recent experimental findings," says Miller, "most of us are willing to cheat to some extent if we think it would be rewarding and we can get away with it. At the same time, we also want to think of ourselves as honest people and genuinely believe that cheating is wrong. But our more-honorable intentions can be pushed to one side in our minds when tempting opportunities arise to come out ahead, even if by cheating."

That's why an explicit pledge just before an important assignment or test is effective; it serves as a "moral reminder" of the school's culture of honesty. Miller believes this can work in a remote as well as an in-person environment.

Honor codes won't eliminate all cheating. "Deeply dishonest students will not be deterred," he says. "But fortunately, the research confirms what experience suggests: most students are not deeply dishonest."

"How Dishonest Are Students?" by Christian Miller in *The New York Times*, November 15, 2020; Miller can be reached at millerc@wfu.edu.

6. Rotating Learning Stations with Hybrid Learning

In this *Edutopia* article, New Jersey ELA supervisor Kara Douma says the trickiest part of hybrid instruction (some students in the classroom, some at home) is synchronous teaching. Teachers haven't been trained for this scenario! The first step, says Douma, is knowing the goals of the lesson and how learning will be assessed. With those in place, one viable strategy is station rotation – students moving through learning activities on a fixed schedule.

The idea is to create a set of activities aligned with the learning goal, break the class into small groups, and closely monitor progress as students move from station to station actively engaging with the content. Douma suggests setting up four stations, with students rotating among them about every 15 minutes, with a one-minute get-up-and-stretch break between each one:

• A teacher-led station – Students work directly with the teacher, who is observing and providing immediate feedback. "The teacher-led station is highly coveted instructional time," says Douma. "It's when connections are made, and teachers get to know how kids learn to better plan for and support their progress."

• A collaborative station – Here, students work on an assignment or project, building confidence, trust, and relationships. Students may all be in-person, facing each other six feet apart, or in virtual groups for students at home, or a combination. The teacher might take a quick break from their teacher-led station to check in on the collaborative groups.

• An online station for independent practice – This one uses a web-based learning platform on which students practice skills and get immediate feedback (the teacher receives data as well).

• An offline, no-tech station for independent practice – In this time block students are off their computers (which cuts down on screen fatigue) and work with books, notebooks, graphic organizers, and manipulatives. One activity at this station might be journaling and keeping track of their work at all the stations.

"How to Make Station Rotation Work During Hybrid Learning" by Kara Douma in *Edutopia*, September 29, 2020

7. Helping Students with ADHD Cope with Remote Instruction

In this article in *Edutopia*, journalist Katy Reckdahl says that parents of children with attention-deficit/hyperactivity disorder (there are about 6.1 million children with ADHD in the U.S.) are finding that remote learning often produces tears and tantrums. "Without the usual support from teachers or the familiarity of classroom rules and structure," says Reckdahl, "the struggle to stay organized and keep up with lessons and homework has suddenly become overwhelming… In the physical classroom, teachers can generally see when students with ADHD are confused, fidgety, and in need of a quick refocus prompt – but many of these signals are lost in translation during Zoom instruction. And because learning from home is generally more independent, it requires more focus and organization, two qualities that are often in short supply for students with ADHD."

Reckdahl interviewed a number of teachers and gathered the following pointers for supporting these students during Covid-time:

• *Accommodate kids' learning preferences.* Extended teacher talk that requires sustained mental effort by students is particularly unfriendly for those with ADHD. Chunking instruction and introducing choice is helpful, as well as introducing physical movement (standing up every few minutes), using white noise in the background, regularly doing individual check-ins, and having students keep their hands busy with objects that don't make noise (pipe cleaners, rubber bands, a small handball). One student found it helpful to tune in to his classes on a smartphone as he walked around his house and yard.

• *Support ways to keep track of time and schedules*. This might include timers that signal the start and end of classes and times when assignments are due (using a kitchen timer or prompts on the student's computer or smartphone). The Pomodoro technique is also helpful – working for 25 minutes and then taking a five-minute break. It's important to post the schedule in the same place every day, and have log-in ID and password information at students' fingertips.

"If any child starts off class in a panic," says New Orleans educator Sari Levy, "they won't do well in class. Nobody should feel that way."

• *Start with the big picture*. This helps develop executive function (which one professor describes as "goal-directed problem-solving, and goal-directed persistence"), using a mental map to guide behavior. During remote instruction, it's especially important for students with ADHD to have the big idea, a clear picture of where they're going, and then a step-by-step progression for getting there – with plenty of scaffolding.

• *Use effective online strategies*. Students with ADHD tend to skim when they read on a screen, which taxes their working memory. The trick is to slow them down, get them reading closely, and then summarize each paragraph. It also helps to number paragraphs and have students jot the main idea – or perhaps create a hashtag – for each one.

• *Build in brain and body breaks*. All students benefit from these, but they're especially helpful for students with ADHD. One teacher makes a point of a get-up-and-do-something-different break every half hour – gathering materials, getting a drink, visiting the bathroom, goofing around, chatting with peers or family members. After a break, doing a breathing exercise helps students refocus on learning.

"5 Ways to Support Kids with ADHD During Remote Instruction" by Katy Reckdahl in *Edutopia*, November 12, 2020

Salman Khan on Effective Hybrid Instruction

In this interview in *The Verge*, Nilay Patel and Sophie Erickson speak with Salman Khan, the founder and chief content provider of Khan Academy. This free online learning platform https://www.khanacademy.org, running on a philanthropy-provided budget similar to that of a U.S. high school, is used by almost 100 million students a year in more than 190 countries and 46 languages. Predictably, the traffic for its lessons has increased this year as the demand for online content skyrocketed. Here are some excerpts from the interview.

Khan says his short online video lessons are "suboptimal" – suitable for practice, feedback, and learning on students' own time as a *supplement* in-person instruction. "I make it very clear," he says, "if I had to pick between an amazing teacher or amazing technology for myself or my own kids or anyone's kids, I'd pick the amazing teacher, in person, any day." Once the pandemic hit, schools had to scramble, and many are doing their best – but at best it's 80-90 percent of regular instruction.

"When you and I were in school," says Khan, "it was kind of like, 'Teacher, what do I do next? All right. Now, what do I do? Is that going to be on the test?'… which is a very passive mentality. You're really not taking ownership. You're letting stuff happen to you." This doesn't prepare students for a job and other realms of life (like marriage) where they're going to have to figure things out for themselves. Khan founded a school (which his three children attend) shaped by a philosophy of student agency, with students at the center of their own learning and the

curriculum not bounded by time or space. In the Khan Lab School, students decide on things they passionately want to learn and work with teachers to set goals and timelines.

"I am a capitalist at heart," says Khan. "I believe the free market innovates. It allocates resources effectively, as long as there aren't distortions in it." But he says there are two sectors where this doesn't work as well: health care and education. That's where government and the not-for-profit sector can achieve the mission of first-class health care and education for all – and in schools, make sure all students have access to devices and the Internet.

Asked about his lessons on U.S. history, Khan says he learned a lot from the 1619 Project and is aware of the danger in trying to provide "balance" when one side is simply not true. He wants Khan lessons to cover standards, add material that might not be covered by standards, and provide an honest account of the good and the bad in history. "You can serve the truth," he says, " but that doesn't mean that you have to not still take pride in aspects of your country's history. There should be shame and guilt in some aspects, but there should be pride in others." He believes online humanities lessons can bring students up to speed on the "fact base" and open up synchronous classes (remote or in-person) to robust discussion and interaction.

Khan says that 100-300-student college classes are inherently dehumanizing; at the end of a semester, you might know only 20-30 people. But electronic polling can provide instant data, allowing the instructor to orchestrate breakout rooms that facilitate powerful small-group interactions, allowing students to form relationships with a much broader segment of a large class. "And we're just learning," he says. "Everyone's still getting their sea legs on this. Who knows, there might be a world where, classrooms of the future, you're there in person, but then you're actually hybrid while you're there in person because it might even be too much time to walk across the other side of the lecture hall. You go into your laptop and you start talking, but then you get the benefit when you leave, you met each other, and then when you leave the lecture hall, you're like, 'Hey, that was a really cool point, you want to go grab lunch?' Stuff like that."

On content mastery and credentialing, Khan believes performance tasks are the ultimate test of learning: "You film yourself and then a peer community validates that, yeah, you ran that lab or you wrote that piece of code the way you said you would, and you would be able to explain it and it's peer-reviewed. And then the ultimate performance task is, can you teach it?... If you're a highly rated tutor of calculus, you know your calculus, more than any test score could ever prove. And not only do you know that, but you can communicate, you have empathy; that's the kid I want to hire."

"Those of us who have been fortunate to go to a school that has a quad and people are throwing Frisbees, that's not the norm for most kids," says Khan. "Most kids are going to commuter college. They ideally would be able to support their families in some way, shape, or form. They're not having this kind of high-minded debate about philosophy, and [the] ivy-covered dorm rooms type of thing. They're just trying to get through their college algebra so they can get their associate's degree and hopefully get a job. And so, I think there need to be new pathways."

"Remote Learning Is Here to Stay – Can We Make It Better? An Interview with Sal Khan, Founder of Khan Academy" by Nilay Paten and Sophie Erickson in *The Verge*, November 17, 2020; Patel can be reached at nilay@theverge.com.

Successfully Blending Face-to-Face with Online Learning Experiences

(Originally titled "5 Components of Face-to-Face and Online Learning Experiences")

In *Education Update*, Kristina Doubet and Eric Carbaugh (James Madison University) suggest ideas for five stages of a curriculum unit:

• *Launch/hook* – Possibilities: puzzles, challenges, connection, essential questions. In synchronous classes, students make a prediction from a partial data set. In asynchronous, students comment on video clips, memes, comics, or optical illusions.

• *New content and skills* – The teacher's presentation models skills and chunks content, with time for students to process. In synchronous, students answer questions, share examples, or use response cards. In remote, there are pause-and-post opportunities.

• *Formative assessments* – Frequently check on confusion, misconceptions, and what's making sense. In synchronous classes, use whiteboards, discussions, and exit slips. In remote, GoFormative or Padlet.

• *Processing with peers* – Students must collaboratively practice and apply skills. In synchronous, student groups chat or use Google Docs or Slides, then present to the whole class. Asynchronously, students post thoughts on the learning management system or Flipgrid and comment on classmates' posts.

• *Authentic experiences* – Ideally, students investigate real-world issues with personal connections. In synchronous, maximize opportunities for questions and help students master tools like Piktochart, Canva, and Anchor. Online, keep students in touch with peers through Google Docs or chats, provide a place to post questions and works-in-progress, and schedule time to interact with mentors in the community and beyond.

"5 Components of Face-to-Face and Online Learning Experiences" by Kristina Doubet and Eric Carbaugh in *Education Update*, November 2020 (Vol. 62, #11, p. 4), from their *Principles and Practices for Effective Blended Learning Quick Reference Guide* (ASCD, 2020); the authors can be reached at doubetkj@jmu.edu and carbauem@jmu.edu.

School Leadership During Covid-Time

In this *EdSurge* article, former principal Simon Rodberg says that with remote instruction, it's more difficult for school leaders to project the kind of confidence and presence they did before the pandemic – looking their best, stopping by a classroom, having chance encounters with teachers and parents around the campus. Rodberg has several suggestions from his interviews with principals around the U.S.:

• *Be intentional*. Adapting to the new realities, one Washington, D.C. principal is scheduling 10-minute wellness check-ins with teachers throughout the week. A Colorado principal hosts an office hour every Thursday where teachers can come with concerns, feedback,

or questions.

• *Model your expectations*. The D.C. principal teaches virtual classes, opening himself to his good and bad moments, and reflecting on them with teachers. A Kansas principal says "My whole approach is servant leadership and being right there, side by side," creating instructional maps and modeling how to break down lesson timing. The Colorado principal does informal drop-ins to lessons and breakout rooms.

• *Communicate to connect*. Being upbeat and energetic is important in both in-person and remote schooling, but Rodberg believes humility is also key. Colleagues should know that you make mistakes and learn from them, just the way they do. One principal has colleagues do breathing exercises in staff meetings. Another picks up the phone more often, realizing that people are Zoomed and e-mailed out. Yet another drives to a few students' homes, calls from the car, and says, "Hey, I know this is crazy, and we've still got your back," and then listens for concerns and gathers important information.

• *Tell your truths*. "Nobody is going to read the inspirational quotations in the stairways," says Rodberg. "In remote schooling, you need other ways to communicate the core values of your school. And you need to do it more explicitly, more frequently, and more creatively than you ever have before." One principal starts Monday meetings with stories and successes about students and shout-outs for colleagues. Another reviews the school's mission, vision, and goal statements in staff and parent council meetings. A middle-school principal in New York City joined the sourdough challenge and shared a video of her unsuccessful, misshapen first effort with staff, students, and families. "We're all being asked to do so many things that we really don't know how to do," she said. "We're not always getting it right. It's messy and confusing. It's not what we hoped it might have been. But going through it is a way to learn from it."

This principal eventually made some successful sourdough, but sharing her interim step showed real leadership, says Rodberg. "You can build connections among people, even when they can't be together, so that they can work and build the future side by side."

"What Highly Effective School Leadership Really Looks like in a Pandemic" by Simon Rodberg in *EdSurge*, November 16, 2020

Personalizing Learning During Covid-Time

"If there is a silver lining to the heavy emphasis on remote and hybrid instruction during the pandemic, it is this," says Madeline Will in *Education Week*: "students are getting more opportunities to work independently and at their own pace – and in the process, they are becoming better problem-solvers." This is especially true in schools that focused on personalized instruction before Covid-19. From her conversations with a number of these K-12 educators, Will lists these takeaways:

• *A premium on flexibility* – Many teachers are learning to nimbly adapt to students' varied situations at home, provide choice in the ways students demonstrate learning, and be prepared to shift from in-person to hybrid to remote instruction and back.

• *Flipped learning* – There are clear advantages to making short instructional videos that students can view on their own time, sometimes more than once. Flipped instruction makes kids less dependent on teacher support.

• *Targeted help* – At the same time, teachers zero in on students who need extra support with specific skills and content, providing small-group instruction, supervised work time, and virtual lunch groups.

• *Coaching on time management and completing assignments* – One school whose teachers, pre-Covid, acted as executive function coaches, now assigns those staff members to check in with their ten students every day – for example, "Let's set some goals. Do you know how to log in?" Coaching also includes channeling students' interests into academic projects.

• *Project-based learning* – Some hands-on projects aren't possible in remote mode, but schools have adapted, taking advantage of community resources that weren't tapped before. In some schools, parent volunteers deliver project supplies to students – markers, paint, poster boards, popsicle sticks.

• *Opportunities to converse and collaborate* – Even when students are physically back in classrooms, there are safety constraints on group work, even on a quick turn-and-talk. Older students can get into virtual breakout rooms; at the primary level, some students are bringing in their favorite stuffed animal and making it a study buddy.

• *Fostering independence* – "There are some students who really thrive working on their own, and some who struggle a bit more and lack the skillset," said Gavin Schiffres of the Kairos Schools. Pandemic instruction has pushed all students to get better at self-directed learning.

"6 Lessons Learned About Better Teaching During the Pandemic" by Madeline Will in *Education Week*, November 13, 2020

Addressing Concerns About Student Screen Time

In this *Education Week* article, Catherine Gewertz quotes a New York tenth grader on the amount of time she's spending on her laptop for her school's remote instruction: "I hate it. It gets me so tired. I never really leave the screen all day except for lunch break. I wish we had more assignments that were off the screen." Gewertz consulted teachers and experts around the U.S. and compiled these suggestions:

• *Not all screen time is equal*. A lively class discussion of *Song of Solomon* is much more valuable than solo computer games, the key factors being intellectual engagement and connection with peers and teachers.

• *Some technology is suboptimal*. Teachers may feel pressured to overuse screen time because colleagues are trying new things. Teachers need to be critical consumers of technology and above all be regularly "within reach" of students – perhaps by phone.

• *Start with purpose*. "Think first about your learning goal," says a New Jersey kindergarten teacher. "What experiences do you want to provide? And then consider your options. The screen is only one option."

• *Use choice board grids*. These lay out a menu of learning options – for example, doing math with pieces of pasta, making a comic strip based on a newspaper article, exercising for five minutes – providing structure and giving students agency for parts of their day.

• *Have chunks of non-screen time during live sessions*. A teacher might introduce a new topic, give students time to work on it away from their screens (with the teacher still online to provide support), and then regroup for questions and reflections.

• *Have students listen to audiobooks, podcasts, and recorded read-alouds*. Students can color or relax as they hear high-quality resources like "The Imagine Neighborhood," "Tinkercast," "Brains Out!" "Forever Ago," "The Past and the Curious," and a recording of Joy Hakim's *The History of US*.

• *Go low-tech hands-on*. Students can spend time reading print books and other texts, writing in physical notebooks, and using manipulatives that are available in their homes (or can be delivered by the school).

• *Have students write the old-fashioned way*. During class presentations, demonstrations, and activities, students can take pen or pencil notes and then share them via photos. This breaks up screen time and takes advantage of the cognitive advantages of handwriting versus keyboarding.

"Teacher Tips: How to Reduce Screen Time When School is Online" by Catherine Gewertz in *Education Week*, October 21, 2020 (Vol. 40, #10, p. 13)

Rethinking Homework During Remote and Hybrid Instruction

(Originally titled "What Is Homework's Purpose in a Pandemic?")

In this article in *Education Update*, Hawaii English teacher Christina Torres says distance learning has highlighted equity issues, especially in what students are asked to do outside of the school day. At the same time, the daily blend of synchronous and asynchronous work has blurred the distinction between in-class and out-of-class activities. Torres has these suggestions for making homework purposeful and productive:

• *Setting the table for success* – Her middle school has agreed that teachers should not assign more than 90 minutes of homework a night and should share their instructional calendars so students don't experience a pileup of different teachers' assignments, projects, and tests.

• *Having a worthy purpose for the work students are asked to do* – "If I assign two chapters of reading with some questions, what am I hoping my students get out of it?" asks Torres. Is it mindless stamina-building, or is it to prepare for substantive discussion in class?

• *Connecting homework to students' world and to unfamiliar cultures* – During a unit on *Romeo and Juliet*, Torres's students interviewed a trusted adult on their views on love and relationships and then compared what they said with mores on romantic love in another culture.

• *Giving students voice and choice* – When her class finished *Romeo and Juliet*, students chose how to show their mastery of the play, including through writing, art, and performance. Getting students involved in creating rubrics, self-assessing, and navigating due dates prepares them to succeed on their own.

• *Using students' time well* – "Copious amounts of homework often strip students of time to just be kids," says Torres. "If you believe homework is necessary, be prepared to share your rationale (and respond to student feedback)."

"What Is Homework's Purpose in a Pandemic?" by Christina Torres in *Education Update*, October 2020 (Vol. 62, #10, p. 1, 4)

6. The Best Mindset for Addressing Students' Unfinished Learning

In this article in *Mathematics Teacher: Learning and Teaching PK-12*, Cathy Martin (Denver Public Schools) says many students have entered the 2020-21 school year with "unfinished learning" from interrupted instruction in the spring – "prerequisite skills and concepts that are essential for student engagement in grade-level content that students do not have *yet*."

Some parts of in the previous year's curriculum are more important to success this year than others. Martin believes the best mindset for addressing the 2020-21 school year is not remediation but *accelerating unfinished learning*. There's a key difference between the two, she says: "Remediation is based on a mistaken belief that students need to master everything they missed before they are able to engage in grade-level content. Thus, remediation focuses on students' learning gaps from a deficit-based mindset and then drills students on isolated skills and topics that have little connection with current grade-level content." This backwards-looking approach results in deceleration and widening achievement gaps.

Acceleration, by contrast, "prepares students for success in the present – *this* week on *this* content," addressing incomplete understanding in the context of the current grade's standards and treating students with an asset-based mindset. The two key steps: first, selecting "just in time" skills and concepts relevant to current units, with clear connections between the previous year's curriculum and 2020-21 content and skills. Second, giving informal, teacher-created just-in-time assessment tasks that tell how far instruction has to "back up" to fill in gaps in skills and knowledge. Then teachers can launch instruction that catches students up and prepares them for successful grade-level work.

"Accelerating Unfinished Learning" by Cathy Martin in *Mathematics Teacher: Learning and Teaching PK-12*, October 2020 (Vol. 113, #10, pp. 774-76); Martin is at cathymartin90@gmail.com.

Tweaking the Danielson Framework for Remote Instruction

Charlotte Danielson's organization recently released suggestions for implementing her teacher-evaluation rubric (the Framework for Teaching) in schools using remote or hybrid instruction. The link below (free after registration) spells out the following changes:

• *Updated language* – This includes detailed suggestions to schools on priorities, where to begin, and strategies for synchronous and asynchronous instruction.

• *No 4-3-2-1 rubric scoring* – Each component is described at only one level, representing the top two levels of the original four-level framework. "Teachers need support, not scores," says the guide. "Now is not the time to be thinking about how to evaluate teacher performance in a new and fluid context. This moment compels us to pause and engage in a thoughtful reset on our approaches to teacher support."

• *Reducing from 22 to 8 components* – The guide also suggests a different sequence that prioritizes student wellbeing, equity, and racial justice. "Without a deep understanding of students' identities and lives in the midst of these crises," it says, "we have little chance of meeting their needs." Here are the eight components with some descriptors (quoted directly):

Demonstrating knowledge of students **(**1b) – Teachers know and value their students' identities, as well as their academic, social, and emotional strengths and needs. Teachers build on students' assets and support the development of identity, intellect, and character. Teachers apply their knowledge of students to advocate boldly on their behalf and foster student assumption of responsibility for learning and personal development.

Engaging families and communities (4c) – Teachers communicate respectfully with families and community members to further the academic and personal success of students. Teachers engage families and communities, demonstrating a clear value for the role they play in student learning and personal development within school. Students' families and community members are key decision makers and active participants in the academic life of students and see teachers as allies in their students' development and success.

Creating environments of respect and rapport (2a) – Learning environments are characterized by caring and respectful interactions. Learning environments are characterized by positive developmental relationships that are intentionally nurtured and celebrated. Students play an active role in creating learning environments characterized by a sense of community, where all members feel safe, valued, and connected.

Managing routines and procedures (2c) – Routines and procedures, managed primarily by teachers, support opportunities for student learning and personal development. Routines and procedures, largely student-directed, maximize opportunities for student learning and personal development. Students have voice and play an active role in designing and adjusting classroom routines and procedures to support their learning and personal development.

Using assessment for learning (3d) – Formative assessment supports student learning and development. Teachers and students use formative assessment to elicit understanding, analyze progress, and provide constructive feedback. Students take initiative to analyze their own progress against a clear standard in order to achieve the outcome and identify new opportunities and challenges.

Planning coherent instruction (1e) – Learning opportunities are coherent in structure and suitable for the students in the class. Learning opportunities are specifically tailored to meet the needs of individual students in the class. Learning opportunities prioritize the needs of individual students and support student assumption of responsibility for learning.

Using questioning and discussion techniques (3b) – Questioning and discussion, framed and led by teachers, are used effectively to support student learning and development.

Questioning and discussion, framed or led by teachers and students, support critical thinking, reasoning, and reflection. Students intentionally use questioning and discussion to develop their own and others' thinking, reasoning skills, and habits of reflection.

Engaging students in learning (3c) – Learning experiences engage students intellectually, requiring them to think and collaborate. Learning experiences support curiosity, encourage critical thinking, and include multiple ways for students to engage and represent their ideas. Students take initiative to increase the challenge, complexity, relevance, and rigor of learning experiences.

"The Framework for Remote Teaching" from the Danielson Group, Fall 2020

Empowered Online Teaching

In this *Edutopia* article, Lindsay Mitchell boils more than a decade of her experience teaching online into six strategies for working successfully in a remote setting:

• *Be authentic*. "Attempting to incorporate another teacher's style will not always work," says Mitchell. "You can use approaches that bring you joy as an educator – and if you can find a way to incorporate the interests of your students, the odds of having a successful environment improve."

• *Go with familiar, easy-to-use tools*. It's a good idea to curb your enthusiasm for new online resources to avoid overload. You might poll students on their familiarity with tools like Flipgrid, Google Forms, Padlet, Parley, and others – and which they've used successfully.

• *Keep it simple*. Importantly, this doesn't mean dumbing down curriculum. "Tasks can be technologically simple to complete but still require depth of knowledge," says Mitchell. Lack of complexity is also helpful for students whose Internet bandwidth and devices can't handle complex programs.

• *Build in choice*. This means giving students several options for how to show their understanding – for example, after reading a passage, students can write a bullet-point list, create a timeline, or make a short video.

• *Be organized*. Students (and family members supporting them) benefit from a logical sequence of tasks, a clear rationale, and helpful infographics and charts to reduce the cognitive load of understanding the content. Hyperlinks can then give access to material with more depth and scope.

• *Be concise*. Since students are quite likely to be overloaded with assignments and instructions, the shorter and more bullet-pointed yours are, the better. "When we are with them personally, we can verbally reinforce what needs to be done," says Mitchell, "but this is not always possible in the remote format." Recording a short instructional video might be very helpful.

"6 Strategies for Successful Distance Learning" by Lindsay Mitchell in *Edutopia*, June 19, 2020

A Silver Lining to the Year's Disruptions?

In this *Education Week* article, Sarah Sparks reports on ideas for moving beyond the current crisis and innovating for long-term improvement and equity. She quotes Linda Darling-Hammond (Stanford University), who believes that today's massive disruption in K-12 schools could create something of an education renaissance. "We're in a moment in our country right now where the most important modus operandi is inventing and sharing," she says. "You know people have to invent ways to do things they haven't done before, and then they need to share those things with others and they need to be able to access what others are sharing about their inventions." Some avenues for long-term improvement:

- Close the digital divide.
- Strengthen distance and blended learning.
- Address homelessness, housing instability, and food insecurity.
- Leverage more-adequate and equitable school funding.
- Establish community schools and wraparound supports.
- Provide expanded learning time.
- Redesign schools for stronger relationships.
- Assess students' academic and social-emotional needs.
- Ensure supports for social and emotional learning, including mental health needs.
- Emphasize authentic, culturally responsive learning.
- Prepare educators for reinventing school.

"What Do Schools Need to Be Better After Coronavirus?" by Sarah Sparks in *Education Week*, September 2, 2020

Thomas Guskey on Reducing Cheating in Online Classes

In this *Education Week* article, Thomas Guskey (University of Kentucky) addresses students cheating on assessments, which seems easier during remote instruction. Why do students cheat in any class? Guskey believes it's not because they're lazy or unmotivated; cheating happens mostly because students are uncertain about their level of proficiency and worried about what will happen if they don't do well. "In many instances," he says, "cheating actually requires more effort than determined preparation."

The most common approaches to discouraging cheating are strict supervision during testing (which is more challenging remotely) and/or escalating the consequences for dishonesty (public embarrassment, extra work, a zero). Guskey suggests a different approach: distinguishing the grade book from the report card and making classroom tests more about feedback and learning than accountability. If this is done right, it takes away the reasons for cheating. To make the shift, teachers need to take the following steps:

- Disable the electronic gradebook function that calculates grades, so formative tests don't automatically determine report card grades.

- Change the gradebook function so it doesn't average students' assessment results over a grading period.
- Keep parents informed about formative assessment results so they can monitor progress and provide support, with a clear understanding that these do not determine report card grades.
- The teacher gives summative grades based on the best evidence available when the grading period has ended.

This approach, says Guskey, "allows students to make mistakes along the way and not worry about irreparable consequences. It also gives students the chance to experiment, be creative, try new ideas and new approaches. If something doesn't work, they have opportunities to fix things, to recover, and to improve."

The teacher's role is also changed with lower-stakes assessments during the semester: "Instead of being an assessment constable, concerned with the sanctity of the assessment process, teachers can become learning facilitators, focused on helping students master important learning goals. Instead of worrying about how to detect cheating and how to prevent students from cheating, teachers can concentrate on helping students use assessment results to improve their learning and reach higher levels of achievement."

"What to Do About Cheating on Assessments in Virtual Learning?" by Thomas Guskey in *Education Week*, August 30, 2020; Guskey can be reached at guskey@uky.edu.

Keys to Effective Remote Math Instruction

"Shifting to online teaching can feel overwhelming," says Pennsylvania teacher/ learning design coach Adam Lavallee in this Global Online Academy article. He suggests six ways of changing teaching to make the best use of the remote environment. (The full article, linked below, has lots of detailed examples for math instruction.)

• *Identify the essentials*. A tough-minded assessment of the curriculum is essential, he says, and that means doing triage: What do students need to master, explore, or just be exposed to? Lavallee uses an Algebra 2 textbook that he admires as an example: there's a section he would skip because it's not essential to precalculus, another section he'd have students cover briefly and move on, and a section (functions) to which he would devote considerable time (time saved by cutting back on other sections).

• *Make strategic use of asynchronous and synchronous instruction*. Lavallee suggests using asynchronous videos to deliver content that students can't necessarily discover on their own, with ways for them to ask questions and check for understanding. Synchronous time is best for working on example problems and misconceptions (in small groups if possible). "The key strategy," he says, "is a structure where students know the objectives, and they have the ability to check for their own understanding along the way."

• *Reframe homework*. "Students need practice," says Lavallee. "We need to incentivize authentic practice, so students take that work seriously… Assess students not on their first draft of homework or their final product, but on their revisions and reflections." Online discussion boards can be part of this process.

• *Make feedback immediate, metacognitive, and collaborative*. Lavallee suggests using automation to give students "instantaneous" affirmation or correction, and requiring students to self-assess using a discussion board. Get students supporting each other.

• *Organize strategic check-ins*. "On a video call," says Lavallee, "it's much harder for a student to ask a question or lean to a classmate to make sure they are on the right track. It's much harder for a teacher to 'walk by' and connect with students doing individual practice. Teachers need to intentionally design for interaction in online formats and create structures that empower student voices in online and hybrid classrooms…" An example: Students are given a focus problem each week and create a video explaining the problem to a peer who didn't understand it.

• *Innovate with assessment*. Lavallee suggests a three-fold approach to summative assessment in math:

- Automate some assessments – well-planned multiple-choice questions can assess students' conceptual understanding. A test can be programmed to give each student a random set of 10 problems from a set of 20, making each student's test unique.
- Use student oral exams – students walk through the solution to a multi-step problem for 5-10 minutes, getting probes and support from the teacher.
- Use capstone projects – students explore an authentic application that they choose.

"Six Shifts for Math Teachers Moving Online" by Adam Lavallee in Global Online Academy, July 17, 2020

6. Online Teen-Led Conversations

"This year, many educators face the challenge of building relationships with new students virtually," says Molly Josephs (*This Teenage Life*) in *Edutopia*. "How can they foster a sense of community without the camaraderie and spontaneity of in-person, classroom interactions?" Especially for teens and tweens, Josephs suggests having informal conversations around kids' interests and concerns. Some suggestions:

• *Agree on trust-building norms up front*. A variation on the Hippocratic Oath is helpful: "Do no harm, and never pressure an individual or a particular group to talk about something they don't want to share."

• *Break the ice with something light, funny, and easy*. Initial topics should encourage sharing without making members feel vulnerable – for example, what teens miss about childhood, silly superstitions, and surreal, recurring dreams. "As trust builds," says Josephs, "the group can delve into heavier topics that are more connected to who they are, what they care about, and who they want to be."

• *Follow the energy*. Help students generate a list of topics, prompting them with examples: times they've been scared, times they've gotten in trouble, things they believed as a child but don't anymore, stories about people they admire. Well-chosen topics "create a conversation with momentum where young people are enthusiastically sharing and listening," says Josephs. Oddball topics sometimes work; snacks and breakfast was a hit with one of her groups – nothing deep, but kids laughed and learned about each other. Unexpected tangents can

lead to especially good conversations; in another group, a teen asked, "Have you ever realized that your parents are people too?" and sparked an entirely new line of discussion.

• *Step back*. Josephs suggests not grading students on participation and allowing them to drive the conversation. "By choosing to listen," she says, "adults can give more space for young people to surface their own ideas and share their stories." Some of the conversations might take place in breakout rooms, with the teacher monitoring unobtrusively, watching for active listening and follow-up questions and noticing students who participate by doodling and other creative means.

• *Reflect and follow up*. Josephs suggests reserving the last few minutes to reflect on how the conversation went, whether they followed the norms, what worked and what didn't, and how discussions can improve. If sensitive topics came up, the teacher should steer students to helpful resources.

"Building Community with Student-Driven Conversations" by Molly Josephs in *Edutopia*, August 26, 2020; Josephs can be reached at molly.josephs@gmail.com.

Online Book Clubs

In this *Edutopia* article, Laura Milligan describes the way she's run virtual book clubs over the last few months.

• *Structure* – Groups of 6-8 students usually meet for two weeks, chatting online every two or three days for 30 minutes at the elementary and middle-school levels, just under an hour for older students.

• *Getting students ready*. A few days before a club launches, Milligan sends a reading guide with the schedule for reading assigned pages and a video message (using BombBomb, a free app that allows her to see how many kids have viewed it) to introduce herself and share some expectations – for example, having the book and pencil and paper handy during chats.

• *Get acquainted*. Learning each other's names helps create an online community, as does sharing some not-too-personal information (perhaps a favorite book or board game).

• *Let students take the lead*. "The less the teacher chimes in, the better," says Milligan, but with a shy group she might have students jot answers to a question and then open the discussion.

• *Get everyone involved.* This might be asking shy students to read a line they liked, show their annotations of a section, or display a drawing or character chart they've done.

• *Ask text-to-self questions to encourage self-reflection.* Milligan has used these with success:

- Which character do you think you might be friends with?
- Which character do you think you're most like?
- Would you like to live in the story's setting? Why or why not?
- What are you learning from this story?

"How to Set Up a Virtual Book Club for Students" by Laura Milligan in *Edutopia*, July 10, 2020

Getting Students Writing During the Pandemic

In this *Edutopia* article, literacy specialist/instructional coach Shveta Miller suggests writing assignments that encourage students to express their feelings and observations about what's happening in the world:

- Interviews with seniors in the community – This can be through handwritten letters, phone calls, or video chats
- Creating a "folding story" – Each student writes a sentence or two and sends it to the teacher, who forwards only the last word or phrase to another student, and so on, and the composite story is shared with the whole class.
- Dialogue journals – Student and teacher write back and forth to each other, perhaps on a weekly basis.
- Student-to-student letters – Prompts are given to one-on-one or small-group pen pal groups.
- Writing to authors – A number of authors are available to correspond with students.
- Adapting a text to reflect current conditions – Students are assigned to rewrite a scene from a pre-pandemic story, show, or movie.
- Letters to the editor – Students can be guided through the art of composing a well-crafted letter reacting to a news story.
- Student-created blogs – A starting point is showing strong examples of student journalism as mentor texts.
- "Slow-looking" documentation – This is writing done after prolonged observation of a setting.
- Covid-19 comics – Creating comics can be a good way for students to explore troubling experiences.
- Pandemic journals – Students document their experiences and process their feelings for future generations.

"11 Meaningful Writing Assignments Connected to the Pandemic" by Shveta Miller in *Edutopia*, May 8, 2020

Lessons Learned During the Spring on Effective Remote Instruction

"We have no choice but to get better, faster, and fairer at remote learning for the sake of the 'Covid Generation,'" says Michael Petrilli in his introduction to this Thomas B. Fordham Institute white paper. Gregg Vanourek summarizes key action steps from eight high-performing charter networks:

• *Meet students' social, emotional, and nutritional needs.* "How are you doing?" was the starting point for every conversation in one network. Another did daily individual check-ins with teachers and students, while a third orchestrated a weekly touch-point with advisors. A network in Washington, D.C. modified Maslow's hierarchy of needs as follows:

- Are students safe and fed?
- Do they know they are loved and missed?

- Do they have the coping skills to deal with this crisis?
- Do they have access to materials and tech?
- Are they learning?

One network lightened things up by sharing funny cooking videos and bedtime stories with students.

• *Quickly place technology in the hands of every student and educator.* The pandemic spotlighted a "festering problem of digital inequality," says Vanourek, with many students having to share devices at home and lacking Internet access (or robust-enough access to do their schoolwork). Surveying families and filling gaps was an immediate priority, as was adopting effective platforms and ensuring data security and privacy.

• *Re-create the structure of the regular school day and regular grading.* Some of the key design principles were: simple, consistent routines and schedules; a blend of structure and flexibility; attendance monitoring; clear learning expectations geared to next-grade success; high-quality materials and instructional videos; a grade-appropriate blend of synchronous and asynchronous instruction; monitoring student engagement and learning; educator availability; communicating with families; special attention for students who were struggling; and clear roles for educators and parents on teaching versus support. All but one of the charter networks continued to grade student work.

• *Reach out to individual students and families on a regular basis.* This involved reducing the number of students each educator was responsible for (usually 12-15) and being systematic about connecting on a regular schedule on emotional and academic dimensions, especially for students with IEPs. Communication took place in one-on-one chats, advisory groups, e-mails, texts, social media, newsletters, and larger "town hall" meetings.

• *Embrace a team approach to teaching, with a common curriculum at the center.*

"A key challenge during the crisis," says Vanourek, "was clarifying roles and expectations, not just for students and parents but also for teachers." Teacher teams created common lessons, videos, and assessments to reduce the prep load on individual teachers. There were also cross-functional teams to deal with operations, technology, culture, social media, teacher training, and crises. Some additional recommendations on teaching and learning:

- Take what worked in regular school and use it as the foundation for remote learning.
- Focus on fundamentals – for example, reading as a gateway to learning in all subjects.
- Make sure that lessons get students interacting with materials, instructors, and peers.
- Leverage peer learning and collaboration tools.
- Provide frequent feedback to students.
- Assess frequently, monitor progress, and intervene strategically.
- Encourage educators to maintain a growth and innovation mindset.

"Schooling Covid-19: Lessons from Leading Charter Networks from Their Transition to Remote Learning" by Gregg Vanourek, Thomas B. Fordham Institute, August 2020

Maximizing Student Engagement in Remote Classes

In this *Edutopia* article, Emelina Minero reports on her interviews with educators on how they have been enhancing student participation in a virtual environment.

Synchronous strategies:

• *Spider web discussions* – Before class, students independently answered questions, then shared their responses at the start of a live Google Meet discussion. While students talked, the teacher listened and drew lines on a diagram of the class, tracking student-to-student interactions. At the end of the discussion, the teacher showed the resulting "spider web" via video and asked students to reflect on the experience: who talked, who listened, who built on others' ideas.

• *Using Chat to check for understanding* – One third-grade teacher had students use emojis in Google Chat to show whether they understood what was being presented (one emoji at a time!). A kindergarten teacher had students type T for true and F for false in the Zoom Chat area as she posed questions, which gave her feedback on learning and provided basic keyboarding practice.

• *Flipping* – A high-school math teacher had students listen to a recorded video before class and engage in a couple of online activities. At the start of the live class, students briefly summarized the concepts they had learned, then divided into breakout rooms to solve related problems. This format allowed the teacher to spend less time on formal instruction and tune in when students were struggling.

• *Think-pair-share to Zoom* – Middle-grade students were given a prompt, broke into small groups, and recorded their answers in a shared Google Doc, which kept students accountable. Returning to the whole class, a volunteer from each group shared their answers.

• *Think-write-share* – A secondary teacher had students find an image that showed intergenerational connections and respond independently to the following questions before joining an all-class discussion: *What are we looking at? What makes you say that? What do you notice/see/feel/know? What more can we uncover? What do you wonder?*

Asynchronous strategies:

• *Online forums* – A high-school English teacher used Google Classroom's question feature to get her classes responding to readings and discussion prompts during remote learning time. As students responded, she replied with clarifying questions, creating a back-and-forth dialogue. Students were also asked to respond to at least two of their peers' comments. A fifth-grade teacher used Nearpod Collaborate, a virtual collaboration board, to get students sharing images and writing responses to show what they learned from an article. She added another feature: students used Flipgrid so they could hear their peers' voices, even though they were asynchronous.

• *Virtual gallery walks* – A high-school social studies teacher asked students to present five-minute screencasts on their projects. Classmates toggled through them and provided feedback on at least two using Google Sheets, with these prompts: *What is something new you learned about this topic? What is something that surprised you? What is something you liked about this presentation?*

• *Moving station brainstorming* – A high-school social studies teacher divided students into groups online and created shared Google docs for his prompts and questions. Each group left their thoughts by the deadline and followed up by commenting on the other groups' responses the following day.

"8 Strategies to Improve Participation in Your Virtual Classroom" by Emelina Minero in *Edutopia*, August 21, 2020

A School Shifts to Online Standards-Based Assessments

In this *Better Lesson* article, elementary administrator David Saltzman says that when his school went virtual at the beginning of the pandemic, he and his colleagues found themselves rethinking how they assessed student learning. For one thing, they realized their four-point grading scale (Excellent, Very Good, Good, and Unsatisfactory) was holistic and overly subjective: each grade encompassed students' test performance, homework completion, class participation, and behavior and teachers had their own individual criteria for grading. It also became clear that the school's report card was confusing and inaccurate. In staff meetings, teachers worried about how they were going to assess students authentically and give meaningful grades. In addition, they were concerned about students getting help on tests from family members and peers.

The school decided to shift to standards-based grading, following these steps: identifying specific standards, teaching them, giving an authentic assessment of each standard, and communicating progress to students and parents. This involved two major changes:

• Designing a standards-based report card – Working in weekly Zoom meetings, teacher teams chose 4-5 salient skills for math, reading, and writing, went into breakout rooms to write mastery progression rubrics, and then came back together to review the rubrics. Teachers decided on a three-point scale – Meets Standard, Approaching Standard, and Needs Improvement – and designed a report card and spreadsheet to keep track of each student's most-recent proficiency level for each standard.

• Designing targeted, synchronous assessments – For reading and math, teachers crafted assessments that could be given virtually. For reading, all the grade 1-4 teachers met online with each student for about five minutes gauging their fluency, accuracy, and comprehension with a quick reading assessment tool (these meetings took a week to complete). For math, teachers met with students in small groups in a Zoom breakout room; the teacher assigned a problem, students solved it on small whiteboards, then held theirs up for the teacher to assess. Students orally described how they solved the problem and got feedback from classmates. Each of these groups took 10-15 minutes.

Saltzman reports several positive outcomes from the shift to standards-based assessments and report cards.

- Report cards were aligned with specific skills and were more accessible and more accurate.
- Students and parents had a clearer picture of progress and areas that needed work.

- Collaboration among grade-level teacher teams improved – and bore fruit.
- Teachers saw the benefits of standards-based assessment and grading and decided to continue in the 2020-21 school year.

In the fall, the school intends to continue this process and pursue the long-range goal of empowering students to pace themselves and use rubrics to track their own progress toward mastery. The school will also tackle writing assessments, which are trickier than reading and math.

"Distance Learning Pushed Us to Standards-Based Grading. We'll Keep It" by David Saltzman in *Better Lesson*, July 21, 2020; Saltzman can be reached at dsaltzman@flatbush.org.

Encouraging Kindergarten Play During Remote Learning

In this *Edutopia* article, California teacher Madeleine Rogin says she really misses watching her kindergarten students play. "Play provides opportunities for self-discovery and social connections," she says, "and it allows kids to try out ideas and use what they are learning in their academic subjects in a less-pressured environment… Play is a time when mistakes can be deeply explored, because children are intrinsically motivated to repair a friendship or rebuild a structure." Rogin especially misses hearing statements like, "If you say it without yelling, I can hear you better."

How can young children's play be incorporated in remote learning? Rogin has the following suggestions:

• Tell families that you care as much about unstructured play as academics. Block out time for such activities, just as you do for reading and science. Ask families to share photos of their children playing fantasy games or showing off forts and inventions.

• Schedule one-on-one time with each student and get details about their play activities. "Think about how what this child is saying teaches you something new about them that you could incorporate into a lesson later," says Rogin.

• During synchronous class meetings, enthuse about play and foster a growth mindset. You might ask, "What's one thing you've built at home that you are proud of?" or "What was something you kept trying to do even though it was hard?"

• Incorporate games into online teaching. Rogin has used freeze dance, I Spy, scavenger hunts, and a game where each person tries to make another person smile.

• Share strategies for working through frustrations involving peers and family members. Prime topics for discussion are specific ways of developing emotional regulation: taking a break, running around in circles, or talking it out. Students might have a place to record their difficult moments. All this tells students that even though they're not together in the classroom, they are still part of a community that solves problems together.

"Someday, we will return to our classrooms," Rogin concludes, "and when we do, I hope our students come back having played, taken risks, tried new things, dreamed, and discovered more about themselves and each other."

"Emphasizing the Importance of Play During Distance Learning" by Madeleine Rogin in *Edutopia*, July 6, 2020

Looking Ahead to Online Instruction in the Fall

"It's a pretty safe bet that most teachers will be doing some form of online teaching in the coming year," say Jennifer Gonzalez and Melanie Kitchen in this *Cult of Pedagogy* article. They list what effective teachers will continue to do when they teach remotely, and then suggest nine things we've learned this spring that will maximize learning online.

What should continue:

- Clear and consistent communication;
- Creating explicit and consistent rituals and routines;
- Using research-based instructional strategies;
- Deciding whether digital or non-digital tools are best for a particular assignment;
- Focusing on authentic learning, with students having voice and choice in assignments and creating products that have meaning for them.

"All of those things that we know are really good practices can still be done virtually," says Kitchen. "It just might look a little bit different."

What we've learning about making online instruction effective:

• *Start by building community and digital competency*. Helping students feel emotionally connected to teachers and each other is the number one priority in the opening weeks of school. Equally important is students becoming proficient and confident with the technology they'll be using. Curriculum content will build on this foundation.

• *Improve communication with families*. If parents and other family members are going to be partners in supporting children's learning, messages from the school must be thorough, streamlined, and predictable. Parents need access to tech training and support, as well as knowing where and when to get information, the boundaries, and backup plans for off hours.

• *Teachers need to connect with each other on a regular basis*. All-faculty meetings and team time are vital for checking in on well-being, sharing instructional ideas, and grade-to-grade curriculum connections.

• *Teacher team collaboration is more important than ever*. From the student's viewpoint, will curriculum experiences be coherent and avoid duplication from class to class? One thing we've learned during the pandemic is that collaborating online is often easier and more effective than in-person meetings. "This virtual environment has provided us the opportunity to break down those walls, to break down those silos," says Kitchen. "Our schedules and time constraints that we may have had before will come down. We may have more opportunity to partner with people that we didn't have the time or the space to be able to do before."

• *Synchronous "face-to-face" time should be used for interactive, engaging work*. It's challenging, if not impossible, to corral all 30 students in a class for simultaneous online instruction. Kitchen suggests convening four-student "campfire groups" that meet regularly and stay together over time, which greatly simplifies the logistics. Of course the quality of learning

activities for these groups is vital, says Kitchen: "If we want students showing up, if we want them to know that this is worth their time, it really needs to be something active and engaging for them. Any time they can work with the material, categorize it, organize it, share further thoughts on it, have a discussion, all of those are great things to do in small groups." The full article (linked below) has details on several suggested activities.

• *Content needs to be simplified and slowed down*. Kitchen suggests that teacher teams ask themselves these questions to slim down the curriculum:

- What knowledge and skills have real leverage and staying power for students?
- What do students need to know and be able to do when they move to the next grade?
- Which practices transfer to other content areas? – for example, constructing arguments, analyzing, building knowledge through texts, oral presentation.
- Which tech tools (Padlet, for example) and non-tech tools can serve multiple purposes?

Once the curriculum is pared down, pacing is important. Direct instruction works best with brief asynchronous video lectures and readings with frequent checking for understanding via embedded questions and exit slips.

• *Instructions need to be explicit, easy to find, and multimodal*. Not being in the same classroom with students means that step-by-step guidance and assignments must be in a consistent digital location, at a consistent time, crystal clear, and, if possible, providing students with a choice of written, audio, or video format.

• *Traditional grading should take a backseat to feedback*. When students get a grade for an assignment or task, they may not pay attention to teachers' comments. Platforms like Google Classroom have built-in features that make it easy to give detailed feedback, and tools like Floop can be used to give on-the-spot feedback. The key is avoiding grades for formative work.

• *Summative assessments should focus on creation*. With online instruction, says Kitchen, "there are so many ways that students can cheat, so if we're giving them just the traditional quiz or test, it's really easy for them to be able to just look up that information." The way around this is final assessments that ask students to create videos, podcasts, digital or physical art, essays, comics, and more. What students produce can be scored with a rubric that emphasizes learning goals and is transparent about assessment criteria.

To improve the quality of online assignments, Bill Ferriter suggests what online work should help students accomplish:

- Raising awareness;
- Joining conversations;
- Finding answers to their questions;
- Discovering new questions worth asking;
- Imagining new possibilities;
- Driving change;
- Taking action;
- Making a difference.

"9 Ways Online Teaching Should Be Different from Face-to-Face" by Jennifer Gonzalez and Melanie Kitchen in *Cult of Pedagogy*, July 5, 2020

What's Best Handled Online and What Works Better In Person

In this *Education Week* article, Rick Hess says teachers perform countless tasks every day: "They lecture. They facilitate discussions. They grade quizzes. They fill out forms. They counsel distraught kids." Clearly these don't have equal value, nor do they all lend themselves to "hand-on-shoulder interaction." Hess believes that now more than ever, teachers need to "unpack what they do each day in order to focus energy on the things that matter most."

Why now more than ever? Because remote and hybrid instruction makes it even more important to use each instructional venue thoughtfully and efficiently. "It's a mistake to spend class time doing things that can be done just as well remotely," says Hess. "If teachers only have limited time in classrooms – or in online chats with students – it's vital that the time be used wisely and for things that really benefit from face-to-face intimacy." Two examples:

• Math:
- Assessing a student's mastery of operations can be done remotely;
- Figuring out where a student is stuck requires direct in-person interaction;
- A student who is frustrated learning a tricky concept – again, in-person.

• Language arts:
- Reading a novel can be done remotely;
- Taking a quiz and getting it graded – remote is fine;
- Writing, critiquing, and discussing essays – one-on-one, ideally in-person conversation.

"The key," says Hess, "is to develop a coherent vision of what gets done where and why."

When schools reopen, teachers who are vulnerable to Covid-19 will need to work from home. This suggests a division of labor – for example, higher-risk teachers work as homework coaches while lower-risk teachers do in-person lesson delivery; vulnerable counselors handle scheduling, CTE requirements, and routine paperwork while those with less risk work in person with students dealing with emotional trauma.

"The Key to Getting Hybrid Schooling Right" by Rick Hess in *Education Week*, June 29, 2020

High-Quality Videos for Flipped Lessons

In this article in *Mathematics Teacher: Learning & Teaching PK-12*, Samuel Otten, Wenmin Zhao, and Zandra de Araujo (University of Missouri/Columbia) and Milan Sherman (Drake University) say that during the pandemic, there's been an increase in the use of flipped pedagogy, with students viewing content videos for homework and following up with discussion, collaboration, and individualized support in class. The challenge for teachers is the time it takes to create (or find) good videos. Otten, Zhao, de Araujo, and Sherman suggest what to look for in two types of flipped-lesson videos:

• *Lecture videos* – These are designed to deliver information to students or demonstrate how to solve certain kinds of problems. Some key criteria:

- Mathematical quality – Using conceptually clear and precise language, appropriate to students, acknowledging errors when they occur, and flagging likely misconceptions;
- Multimedia design – Judicious use of relevant graphics, juxtaposing graphics with text, using audio that goes beyond reading material aloud, and maintaining a conversational tone.
- Interactivity – Students interact with virtual manipulatives or solve a problem and submit answers digitally before proceeding. Here's an example of a vertical line test applet created by Irina Boyadzhiev using Geogebra.

Another consideration with videos is appropriate length, which also applies to…

• *Setup videos* – Rather than explaining mathematical ideas, these pose a problem or describe a situation that will intrigue students, creating curiosity about what will happen the next day in class. Some examples:

- A video of a basketball freethrow showing the point of release and the ball's trajectory and asking whether it will go through the hoop;
- A video about Disney cartoon princesses that focuses on the ratio of waistline to head size;
- A video of a music concert setting up a lesson the next day on concert tickets.

The goal of flipped lessons is to begin lessons with students sharing their thoughts about the homework video versus teachers lecturing and explaining concepts. "It also allows students to think individually about how they might approach a problem," say the authors, "leading to greater diversity of solutions than if they were shown worked examples first."

"Evaluating Videos for Flipped Instruction" by Samuel Otten, Wenmin Zhao, Zandra de Araujo, and Milan Sherman in *Mathematics Teacher: Learning & Teaching PK-12*, June 2020 (Vol. 113, #6, pp. 480-486); the authors can be reached at ottensa@missouri.edu, wz2mb@mail.missouri.edu, dearaujoz@missouri.edu, and milan.sherman@drake.edu.

Avenues to Equity Opened by Covid-19

In this article in *The Learning Professional*, consultants Sonia Caus Gleason and Jill Harrison Berg say the pandemic has "revealed to any who might have previously denied it that the work to eliminate educational inequities is far from done." Many educators see that "what seemed to work for most of their students was not good enough." Gleason and Berg believe there are four areas where the current crisis has pushed equity-focused educators to expand on their past efforts:

• *Knowing students and families* – Covid-19 has closed traditional avenues of parent communication (the open house and report card conference) and educators have been spurred to reach out via families' preferred means of communication – e-mail, phone, text – to help them support their children's academic progress. "If we're paying attention," say Gleason and Berg, "we see that this is a new way of learning about the true personalities, living situations, family dynamics, sources of background knowledge, and other individual differences of our students – crucial information to support them effectively." Lacking informal hallway conversations with colleagues that were often a primary source of information, educators are finding more-

systematic ways of sharing insights about students and families. With more information on the table, they can also check on implicit biases and the way the school's traditions might have created cultural barriers for some families.

• *Inquiry-based teaching* – Unable to use the physical classroom environment as a key aspect of teaching, many educators paid more attention to learning goals and sought new pathways for engaging students – projects and experiential learning and exploring online resources. "Museums, zoos, science labs, and many other institutions have opened their virtual doors," say Gleason and Berg, "providing unlimited playgrounds for such inquiry-based learning." In addition, students' homes can also be tapped as learning resources.

• *Student choice and voice* – Remote learning may be physically distant, but it has opened opportunities to engage students who tuned out during classroom instruction. Choice, individual pacing, and innovative materials are all ways to hook and hold all students.

• *Professional collaboration* – Spurred by necessity, educators have reached out to colleagues in Twitter chats, Pinterest boards, and Facebook groups, expanding their repertoires and sharing ideas in a way that wasn't always happening before the pandemic.

"An Opportunity for Equity" by Sonia Caus Gleason and Jill Harrison Berg in *The Learning Professional*, June 2020 (Vol. 41, #3, pp. 18-21); the authors can be reached at sonia@soniacausgleason.org and jhberg@gmail.com.

Insights on Remote Instruction from College Students

In this article in *10X Your Teaching*, Norman Eng (City University of New York) reports what his students found most difficult about online learning this spring:

- Organizing and keeping track of everything – 71%
- Motivating myself to get things done – 62%
- Finding a quiet place to concentrate – 53%
- How often I'm asked to hand in assignments – 47%
- The assignments – 44%
- Tech issues – 18%

It's interesting that self-organization rather than technology was the number one concern. Reflecting on this, Eng's takeaway as a teacher was:

- Keep a routine so students know what to expect.
- Keep everything in one place.
- Keep sending reminders.

It's also important to check in with students – which he did. Some insights from students:

• Clear, prompt communication means everything to students. This includes skillful, explicit instruction, ready access to materials, and always responding to e-mails.

• The quality of lectures and assignments is a key factor in student motivation and focus. "Do not make your assignments boring and long," wrote one student, and others remarked on the distractions and temptations of being at home.

• It takes longer to do things online. Many students said they were in a state of high anxiety and felt burdened by their instructors' demands. Some were pestered by their parents to do chores. "It's so sad that I can't even relax in my own house," said one.

• The debate about synchronous and asynchronous learning continues. Students found synchronous classes difficult to manage, and appreciated the autonomy of doing assignments and listening to recorded lessons on their own schedule. "The downside of having an asynchronous class," said one student, "is that we have to be more responsible for teaching ourselves the content… I believe I'm teaching myself incorrect information if it's all up to me." To teach effectively online, teachers need to provide an appropriate amount of synchronous instruction; hold regular office hours; and respond promptly to e-mails.

"What Frustrates Students Most About Online Classes (Covid-19 Edition)" by Norman Eng in *10X Your Teaching*, May 17, 2020

A Poll of College Educators on Teaching During the Pandemic

In this *Chronicle of Higher Education* article, Audrey Williams June reports on a *Chronicle* poll of how colleges dealt with remote learning this spring. The survey was conducted in mid-May and included 935 professors and other instructors and 595 academic administrators. Some major findings on struggles:

- Students' access to technology or WiFi – 65% of instructors, 77% of administrators
- Juggling work with personal needs – 52% of instructors, 69% of administrators
- Technical obstacles, unfamiliarity - 37% of instructors, 84% of administrators

Instructors' assessment of the quality of their courses during the pandemic:

- Much worse – 10%
- Moderately worse – 49%
- Equivalent – 37%
- Superior – 4%

Instructors' assessment of the remote teaching experience:

- Mostly positive – 27%
- Somewhat positive – 39%
- Somewhat negative – 25%
- Mostly negative – 10%

Instructors' level of confidence about teaching entirely or mostly online this fall:

- Very confident – 27%
- Somewhat confident – 47%
- Not very confident – 19%
- Not at all confident – 8%

Instructors on whether they look forward to returning to in-person teaching in the fall:

- Strongly agree – 47%
- Somewhat agree – 25%
- Somewhat disagree – 14%

- Strongly disagree – 14%

Instructors' confidence in their institution's ability to maintain social-distancing safeguards:

- Very confident – 10%
- Somewhat confident – 34%
- Not very confident – 33%
- Not at all confident – 23%

The biggest struggle: 8 of 10 instructors said "creating a sense of engagement between myself and my students" was very or somewhat challenging. The most important lessons learned? "I need a lot more experience/training to do it again," said one respondent.

"Was Remote Learning a Success?" by Audrey Williams June in *The Chronicle of Higher Education*, June 12, 2020 (Vol. 66, #31, p. 9)

Building All Students' Brainpower During Remote Learning

In this *Mind/Shift* article, Amielle Major draws on the work of Zaretta Hammond to suggest ways educators can meet students' needs during a period of online learning – especially those with disadvantages. For starters, Major broadens the definition of culturally responsive instruction: it's not just teaching multicultural content and addressing historical inequities, she says. At its core, it's about helping students become independent learners, addressing both the affective and cognitive, and building an academic mindset by pushing back on dominant narratives about students who aren't doing as well.

How can teachers accomplish this as schools work remotely? Hammond believes it means borrowing the best practices of Montessori and project-based learning in a way that repositions students as leaders of their own learning. "By giving students more agency," says Major, "the idea is to disrupt old routines around teaching and learning that make the student dependent on the teacher for receiving knowledge." Three specific strategies:

• Deepen background knowledge. Always connect it with students' prior knowledge and interests and have them put new knowledge and skills to work in meaningful projects;

• Cultivate cognitive routines. "Be the personal trainer of their cognitive development," says Hammond, by including a routine set of prompts with each assignment. Possible questions: *How does this part fit into the whole? What are the parts of this whole?*

• Increase word wealth. "Building a student's vocabulary is a key tool in equity strategies for schools," says Major. Students should connect with their interests, engage in word play, and use games like Scrabble, Heads Up, Taboo, and even word searches.

"How to Develop Culturally Responsive Teaching for Distance Learning" by Amielle Major in *Mind/Shift*, May 20, 2020

Using Videos for Remote Teacher Coaching

In this *Learning Forward* article, Laura Baecher (Hunter College/CUNY) suggests that

while instruction is taking place online, lesson videos may be the best way for supervisors to observe and coach teachers. "Video observation may be particularly useful now," she says, "since many educators are on a steep learning curve figuring out new tools, technologies, and techniques for the distance learning context."

But how it's handled is important; being filmed can make teachers feel exposed and vulnerable, and anything that adds to teachers' stress level during the Covid-19 crisis is not helpful. Baecher has the following suggestions:

• *Take advantage of the benefits of video.* When teachers can watch a classroom video with a supervisor or instructional coach, they may notice, comment on, and dissect a lesson in a way that's not possible when they're a passive recipient of the observer's feedback. In addition, the video can be replayed (perhaps more than once) to look more carefully at a teaching move or a student's comment, or to rethink an erroneous impression.

• *Leverage the features of remote learning*. All that's required to record a synchronous lesson is to hit the Record button in the videoconferencing program (compare this to the work of setting up a video camera in an in-person classroom). An added advantage is that recorded lessons can be shared later with students who were absent. Asynchronous slides and thumbnail videos can also be viewed together with supervisors and instructional coaches. It's possible for observers to "drop in" on synchronous lessons with none of the steps involved in a brick-and-mortar school. And observations aren't limited to a school building, says Baecher: "A chemistry teacher in California can peer-observe, coach, or be coached by another chemistry teacher in New York, or even in Vietnam or Brazil."

• *Keep it low-stakes*. Conducting formal observations while teachers navigate uncharted waters can raise the anxiety level. Baecher suggests a more low-key, non-evaluative approach:

- Invite teachers to review a recorded lesson and materials using a self-reflection tool, reflecting on student engagement and whether this might be a model lesson for the 2020-21 school year.
- Invite peers, coaches, and supervisors to reflect. A videoed lesson and accompanying artifacts can be the jumping-off point for an informal discussion of what worked and what might be changed.
- Invite teachers to share their classroom sites. Using tools like Screencastify, teachers can give a virtual tour of their asynchronous materials and invite comments. "In many instances," says Baecher, "teachers who are comfortable and skilled in digital tools are better 'staff developers' than instructional technologists who may not be currently teaching in this stressful period."

"When Learning Online, Leverage the Power of Video Observation to Improve Practice" by Laura Baecher in *Learning Forward*, May 26, 2020; Baecher can be reached at lbaecher@hunter.cuny.edu.

A Veteran Online Teacher Shares What He's Learned

"Ultimately, we want students to take ownership of and lead their learning, and that's even more necessary in a virtual space," says teacher/consultant John McCarthy in this article in *Edutopia*. Here's what McCarthy has learned from years of virtual teaching:

• *Develop a plan for students' asynchronous work*. A great benefit of virtual instruction is that students can choose when and how many times they'll watch videos (including teacher lectures), read texts, answer questions, and submit responses to be viewed by peers and teachers. Communication can be via message boards, e-mail, and instant messaging. Not all students can handle this flexibility at first, so teacher monitoring and guidance are essential. McCarthy suggests:

- Establish structures and milestones to help students manage time and deliverables.
- Provide a variety of assignments and a choice of response formats – definitely not a steady diet of worksheets!
- Make the content relevant to authentic purposes outside school.
- Curate and publish students' work (perhaps in a Google folder) for a target audience, perhaps a community organization (this may require parent permission).

Everything should build students' ability to work independently and take increasing responsibility for managing their time and monitoring their own work.

• *Use synchronous meetings for live support*. This can be all-class meetings (not lectures, which are best conveyed as videos), chats with half the class at a time, small-group tutoring, one-on-one coaching, and office hours. The goals of strategically timed live connections are (a) addressing learning gaps picked up by assessments, and (b) encouraging in-depth learning by addressing core concepts, stimulating real-time discussion, pointing out misconceptions and misunderstandings, encouraging students to speak up about what they know and what they don't understand, and showing models of good thinking and speaking.

• *Give prompt and responsive feedback*. "When students are working on their own, gaps in understanding happen," says McCarthy, "so they really need feedback for revisions." His suggestions:

- Commit to replying to students' e-mails, texts, and instant messages within 30-120 minutes.
- When students are responding to each other's posts, chime in, conveying: *I am supervising what you're posting and I'm interested in your work.*
- Respond to students' submitted assignments within 24-48 hours.

Online learning has the potential, perhaps more than in-school work, for students getting timely, helpful feedback from peers and instructors and continuously improving their work.

• *Make time for relationships*. "Remember that working from home for many students is a more challenging adjustment for them than it is for you," says McCarthy. "We do not know everything that is a stressor at home. Be a supporter, not another obstacle." He suggests checking in with every student every week through offline and real-time conversations, including the all-important question: "How are you doing?"

"4 Key Aspects of Teaching an Online Class" by John McCarthy in *Edutopia*, April 24, 2020

School Closures As an Opportunity for Young Adolescents to Flourish

In this *New York Times* article, author Judith Warner says that early adolescents seem to be hard-wired "to bond with friends, flirt, judge, rank, rebel, and separate into in-group and out-group peer hierarchies… Adults don't tend to much like kids of middle-school age. They roll their eyes at us and snarl. They watch us with a gaze newly awakened to all our hypocrisies and foibles."

But Warner is not convinced that meanness, social drama, and alienation from adults are inevitable for this age group. "Middle school is a time when all sorts of new abilities kick in," she says: "new powers of observation, critical thinking, reason, and reflection. Believe it or not, there's even a new capacity for empathy, and a strong sense of injustice."

And all these latent abilities, Warner believes, can be unleashed during the pandemic. She's hearing about kids who, not long ago, "were accusing parents of trying to ruin their lives by keeping them home," but are now reading, pursuing new interests, researching the history of plagues, taking music lessons, inventing games (including Covidopoly), rediscovering old friends, even talking on the phone. And some middle-schoolers are finding their teachers' online instruction *not bad*.

The key to some kids' good side being unveiled during the pandemic, Warner believes, is less pressure. But not everyone gets that. "Schools need to cut them a break," she says. "Assign less homework. Let kids take classes pass-fail, as many colleges are doing. Make teachers and guidance counselors available for Zoom, Facetime, or even just old-fashioned phone calls for support." Of course some boundaries are needed to keep the negatives under control: for starters, how about schools and parents agreeing on limiting social media to certain times of day?

"Ease the Pressure on Our Middle Schoolers" by Judith Warner in *The New York Times*, May 3, 2020; Warner's new book is *And Then They Stopped Talking to Me: Making Sense of Middle School* (Crown, 2020)

Why Remote Learning Has Been a Boon for Some Students

In this *Edutopia* article, Nora Fleming reports on conversations with dozens of teachers who have been surprised that some students who were not doing well before the pandemic are thriving now: for example, class clowns, students who are hyperactive, shy, or highly creative. "It's been awesome to see some of my kids finally find their niche in education," said a California high-school teacher.

That's clearly not the norm, cautions Fleming. Many students are struggling with remote learning, there are homes without Internet, devices, or both, and it's hard for teachers to replicate in-person dynamics. But a significant number of teachers described reasons that some students were doing better with online learning:

• *Self-pacing* – Learning at home has allowed students to work at a much more leisurely pace, often with a lot of choice in how they organize time – a welcome change from the

relentless, micromanaged schedule of the normal school day. "The reason I enjoy online learning," said one tenth grader in a class survey, "is because of the opportunity to structure my day efficiently. I am able to work out, relax, and complete the work in a timely manner, with no distractions."

• *Fewer activities* – When school is in session, many secondary-school students are overscheduled– club activities during lunch, sports, after-school activities, volunteering, part-time jobs. With almost all of that shut down, there's time to focus on schoolwork – and be less stressed. One high-school teacher called it "an amazing respite for so many students."

• *Lower stakes* – With more-lenient policies on grading and the cancellation of standardized tests, students are under less pressure. Said a Virginia middle-school teacher, "One student told me he likes remote learning better because he no longer feels the extreme pressure of failing. He says that now that the pressure of state testing is off, he feels he can really learn."

• *Less bullying and chatter* – According to one survey taken before the pandemic, at least 20 percent of students report being bullied at school; home learning provides a safe haven from most of that. For many students, socializing can be distracting – the pressure to "look good" and fit in socially. An Alabama psychology teacher said, "The online environment may allow for voices to be heard without the added bit of social anxiety."

• *Sleep* – "I have the time to sleep eight hours a night every night," said a California high-school junior. Enough said.

"Why Are Some Kids Thriving During Remote Learning?" by Nora Fleming in *Edutopia*, April 24, 2020

Why One Middle-School Student Prefers Online Instruction

In this *New York Times* article, eighth grader Veronique Mintz says she isn't missing in-person schooling during the pandemic. Why? Because every day in her New York City middle school, she says that classmates disrespect teachers, blurt out answers during tests, destroy materials, roll around on the floor, and push, kick, and hit one another. Her math teacher seems to spend one-third of every class struggling with discipline. Attending this school for almost three years, Mintz says she's had "only a few teachers who had strong command of their classrooms – enforcing consistent rules, treating students fairly, and earning their respect."

Now that the school has to use distance learning, she says she can work at her own pace, isn't distracted by nonsense, and finds cooperative groups much more productive. Mintz is also enjoying the recorded lessons posted online by teachers, who do better in this medium than in person. Mintz, who admits she struggles with math, can stop, start, and replay sections until she understands. It's so much better to grasp the lesson the day it's taught rather than having to try getting her questions answered by the teacher before school the next day. Weekly office hours are also a boon, especially since there are only two or three other students taking part. The school's experiment with live video teaching, on the other hand, hasn't been very successful for Mintz; "The same teachers who struggle to manage students in the classroom," she says, "also struggle online."

What are the implications for in-person instruction when schools reopen? This forward-thinking student has three suggestions:

- Teachers should video-record all lessons and send them to all students after class.
- Teachers should offer weekly office hours for individual and small-group follow-up.
- Teachers who are good at classroom management should be paid to train colleagues.

"Learning Online Beats School" by Veronique Mintz in *The New York Times*, May 7, 2020, https://nyti.ms/2SYvNDY

Classroom Management When Students Are in Their PJs

In this article in *Education Week Teacher*, Madeline Will reports on how some teachers are dealing with limit-setting in a remote learning environment. "It's a situation where we need to extend grace," said Merisha Leak, a North Carolina educator. "I don't think it's a school's right or a teacher's right to enforce school rules in someone's home."

But many teachers in a survey said it was challenging to keep students focused online. One approach is to lay down the law. "Remember," stated one teacher's Zoom rules, "this is a class, so treat it as such. Find a quiet place, free from distraction (sibling, pets, parents, television). Video needs to remain ON to promote focus. Eye contact should be maintained. Refrain from chewing gum, eating, or drinking in front of the camera." Another teacher said that students who didn't abide by the rules would be removed from the virtual classroom and given a zero.

Somewhere in the middle is Leah Smith, a Connecticut middle-school teacher who believes "the last thing they need is to have somebody be super strict with them." Her guidelines for students: mute your microphone while others are talking, don't purposely distract classmates (no TikTok dance moves on video), and above all be kind and respectful. Smith is tolerant of students munching during classes and being on their beds, as long as they're sitting up. She had students show off their pets in an early class, and when a cat walked across the screen during a class, she said, "Oh, cute cat," and moved on. "To not accept some of those funny moments is not really conducive to teaching middle school," said Smith, "but at the same time, it needs to be harnessed so you can get things done."

Teachers' morale is also taking a hit, and many need some bucking up. "I think we really should remind teachers that they're doing a great job, this is uncharted territory, and we're all figuring this out," said Ryann Fapohunda, a Washington, DC educator. "I would really encourage them to adopt a less-is-more approach. What success may have looked like when they're physically in school will look different now… If students are adhering to guidelines in class – participating and showing up – I'm inclined to not call them out for wearing a hoodie or being in pajama pants."

"Expectations for Online Student Behavior During Coronavirus School Closures" by Madeline Will in *Education Week Teacher*, April 8, 2020, https://bit.ly/2KeqZWl

Teachers' Concerns About Online Instruction

In this article in *Education Week*, Peter DeWitt reports what he's found combing through scores of Facebook pages created by teachers during the pandemic. He's struck by heroic efforts to make teaching work in a new environment, along with humor and mutual support. There's also a lot of venting about how hard this is: many teachers have their own children to contend with, live in studio apartments, have to work in their bedrooms because of roommates, have spotty Internet access, and are new to videoconferencing tools and the whole business of teaching online.

Among the top concerns on the Facebook pages are students not handing in assignments, parents not returning calls, and how to hold students accountable when districts have nixed grading. There's also uncertainty about the required work day, faculty meetings, and supervision by administrators. Teachers clearly miss the accountability tools that go with in-person classrooms, among them physical proximity, the promise of good grades, and the leverage of privileges and other incentives. "There is a lot less 'control' on the part of the teacher right now," says DeWitt, "and that can make us uncomfortable – especially when teachers are being held accountable as teachers."

One of the most frequently mentioned concerns is worry about students who are not signing in and participating in online instruction. DeWitt believes there are at least six reasons:

- No Internet access and/or computer at home;
- No quiet space to work;
- No grade incentives;
- Taking care of siblings while parents work;
- Full-time jobs providing vital income to their families;
- A weak teacher-student relationship: "Some students are not connecting because they felt invisible while they were in the physical classroom, so they feel that they will not be missed in the virtual one," says DeWitt.

The most interesting question he found in the Facebook pages: *Knowing what you know now, would you have done anything differently when the students were in front of you?* This question prompted ideas on how schools might be run differently when they reopen.

"6 Reasons Students Aren't Showing Up for Virtual Learning" by Peter DeWitt in *Education Week*, April 26, 2020, https://bit.ly/3dcM13W

Synchronous versus Asynchronous Instruction

In this article in *Education Week*, Mark Lieberman says teachers across the U.S. are facing a novel question: *When and how often during the school day do my students need to see me?* In other words, how much of daily instruction should be synchronous and how much asynchronous? Lieberman gathered ideas from several experts:

• *Don't waste students' time*. "It doesn't make a lot of sense to do a 15-minute lecture live," says Susan Patrick (Aurora Institute). Asynchronous communication (e-mails, text messages, videos) is efficient for basic instruction, launching a discussion, and setting deadlines.

Synchronous communication (a videoconference) works best for discussions, sharing ideas, brainstorming, and spontaneous conversations. A big advantage of asynchronous lectures is that students can watch at their own pace, rewinding if necessary or watching more than once to fully grasp the content.

• *Don't go overboard with synchronous teaching*. Overly long live classes can be overstimulating for students and maddening for teachers. "Expecting students to be glued to their computers all day is especially unrealistic in households with more children than devices," says Lieberman. "So relying too much on this approach could contribute to equity gaps, with students who have easy access to technology getting an edge over those who don't."

• *Asynchronous learning allows flexible pacing*. Teachers can use a variety of approaches: an interactive game, a practice quiz, a supplementary video. Students can feel a kind of ownership of their learning that's not possible in classroom settings, feeling less rushed by their classmates and able to go over material at their own speed.

• *Give parents clear direction*. There are big differences in how parents should be working with elementary students (lots of structure) and what's appropriate for high-school students who might, for example, choose to do all their English work on Sunday and all their math on Monday.

• *Synchronous learning can be informal*. Teachers might conduct virtual office hours, inviting students to join them between certain times, or arrange for an optional lunch chat. Real-time class meetings or kick-offs for the day are especially helpful for younger students.

• *Choose the best modality for different subjects and lessons*. English might be best taught asynchronously when students are doing a lot of thinking and writing on their own. Math, on the other hand, might lend itself more to synchronous instruction, when students need to ask questions and get real-time help.

• *Asynchronous doesn't mean absent*. Because some students won't take the initiative to get in touch, teachers need to be systematic about setting up individual video or phone check-ins, perhaps several times a month for each student.

• *Teaching is different for the time being*. Effective synchronous teaching can be powerful, but it's often difficult to engage students at the level of in-person classes, and this frustrates teachers. For many, online teaching is more facilitative. "You're not leading through the learning process," says Illinois curriculum director Jennifer Kolar Burden, "you're guiding them, you're pointing them in the right direction, you're letting them explore on their own."

"Virtual Education Dilemma: Scheduled Classroom Instruction vs. Anytime Learning" by Mark Lieberman in *Education Week*, March 30, 2020, https://bit.ly/2VKeJn0

Keeping Track of What's Happening in Online Breakout Rooms

(Originally titled "Practical Tips for Teaching Online Small-Group Discussions")

In this *ASCD Express* article. Rhonda Bondie (Harvard Graduate School of Education) says that in virtual small-group discussions, students sometimes don't remember or stick to the prompt, and teachers find it difficult to monitor what's going on. Bondie has three suggestions:

• *Note-catchers* – Students in each breakout room enter their names in a Google Doc table and one student jots notes as the discussion proceeds. The teacher can monitor these docs, provide real-time written feedback, and if a group seems confused or off task, the teacher can "enter" the room and provide "in-person" support. It's helpful if the discussion prompt is clear upfront, note-catchers have good instructions and an exemplar of what their product should look like, and the teacher lets students know when they're close to the end of breakout time.

• *Pre-assignments* – These might consist of a few slides to prepare students for breakout discussions, prompting them to gather ideas and pose questions to classmates. Students can also add videos, pictures, or text to improve the quality of breakout discussions. Bondie suggests Flipgrid and VoiceThread as helpful tools.

• *Feedback surveys* – "It is very challenging to observe the body language of the whole class throughout an online session," says Bondie, "and it's also hard to know how students felt about the process of the discussion in the breakout rooms." That's why it's important to block out 5-10 minutes right afterward and use the chat function to get immediate feedback.

"Practical Tips for Teaching Online Small-Group Discussions" by Rhonda Bondie in *ASCD Express*, April 23, 2020 (Vol. 15, #16); Bondie is at rhonda_bondie@gse.harvard.edu.

Grading Dilemmas in the Time of Coronavirus

In this article in *Education Week*, Stephen Sawchuk covers the debate on whether students should get grades during school closures. On one hand, there's the unfairness of penalizing students who don't have computers and/or robust Internet access at home; on the other, there's the danger of communicating that students don't have to take school seriously while instruction is online. The current situation forces educators to consider all the reasons for giving grades: to motivate students to apply themselves; to give them feedback on proficient and less-than-proficient work; to report subject-area mastery to parents; for student-to-student comparisons (for college admission, for example); and more. Sawchuk reports on different approaches around the U.S.:

• *Mountain Empire* – This sprawling 1,700-student California district includes three Native American reservations, and there is a wide range of Internet access. Teachers are assigning interdisciplinary projects on topics of interest that students can work on over several days, but because of differences in Internet access, teacher-student interactions vary widely. Because of that, the district is recommending that as long as students participate, they should get the grades they were receiving in each subject before schools closed. Students who want to improve on previous grades have the option to do so.

• *Salem City* – In this small district in Virginia, every student has a Chromebook and virtually all have Internet access, thanks to 200 WiFi hotspots and a local cable company providing access to students whose families qualify for free and reduced-price meals. After spring break, teachers aim to cover the most essential of the remaining state standards for their subject via remote learning, and will give letter grades for students' work. Teachers have been asked to stagger instruction and assignments so students aren't slammed with too much work at

once. At the end of the school year, students will be able to appeal grades they believe don't reflect their achievement, making the case that those grades should be counted as pass/fail and not be part of GPA calculations.

• *Highline* – This Washington district, whose students speak over 100 different languages, will give pass/no credit grades for the period of online learning and will give students who don't pass other opportunities to earn credit in the summer or later. Many colleges appear to be willing to accept pass/fail or pass/no credit reports.

• *Los Angeles* – The second-largest district in the U.S. says teachers should "continue to grade and give timely feedback to students," but officials haven't yet decided what will go on transcripts.

• *New York City* expects teachers to give grades for remote work, but says there is flexibility to adapt if students don't have access to devices or outside learning supports.

• *New York City math teacher Bobson Wong* says, "I feel like the most important thing I want to accomplish right now, is to establish a routine in this environment and a sense of order and progress that we are actually moving forward, and this is not just 13 days of busywork." Wong is finding the pace is slower because of the difficulty of checking for understanding and following up with students who are not getting it. He's leery of giving grades, but believes it's important to give students feedback on their level of mastery. "Grades aren't a judgment of character," he says, but students need to know if they need to do additional work to achieve mastery.

• *Arizona, Idaho, Illinois, Ohio, Oregon, Mississippi, Virginia, and Wisconsin* have waived various graduation requirements, including certain mandated courses, end-of-course exams, and minimum attendance hours. Many states are allowing districts to decide whether students have met graduation requirements. [New York state announced on April 6, 2020 that spring Regents exams have been cancelled.]

• *In Georgia*, more than 70,000 students have signed a petition asking the state to void fourth-quarter GPAs. Says organizer Ellison Gonzalez, "Without the proper help from teachers or having the ability to actively question teachers and receiving rapid responses, students are not truly learning, but rather grabbing the information temporarily."

"Grading Students During the Coronavirus Crisis: What's the Right Call?" by Stephen Sawchuk in *Education Week*, April 1, 2020, https://bit.ly/2UKzQ8a

Douglas Reeves Pushes Back on Pass/Fail Grading in High Schools

(Originally titled "A Dissent on Pass/Fail Grading in Remote Learning")

In this *ASCD Inservice* article, author/consultant Douglas Reeves agrees with much of Joe Feldman's recent article on how to handle grading during the coronavirus crisis: stop averaging grades, grading homework, and using the zero-to-100 scale. Reeves also agrees on using pass/fail grading for students in grades K-8, where feedback is more important than letter grades. But he disagrees with pass/fail for high-school students. Here's why:

• *Equity* – It's been argued that until everyone has access to technology and supports, students should all get the same grade or be graded pass/fail. But Reeves fears that this approach disadvantages students who have achieved academic distinction and are competing for scholarships and college admission. "The students who are hurt worst in this scenario," he says, "are those for whom academic distinction is the only way out of poverty."

• *Resources* – Given the financial straits in which colleges now find themselves, says Reeves, scholarships will be more competitive than ever. Pass/fail grading makes it impossible for higher education officials to distinguish between A work and D work. He advocates a full-court press to deliver instructional material to all students through online learning, public television, e-mail, phone calls, and mailing books, supplies, and other materials. For students who can't be reached, Reeves suggests giving them credit for the latest and best evidence of their work up to the time schools closed.

• *Engagement* – "Grades are surely not the only motivator for students," says Reeves. "Students can be motivated by feedback, learning, and personal relationships with teachers." This can come through sophisticated online learning platforms or good old-fashioned phone calls. But grades remain meaningful goalposts for students.

"A Dissent on Pass/Fail Grading in Remote Learning" by Douglas Reeves in *ASCD Inservice*, April 22, 2020, https://bit.ly/2VGaJUe; Reeves is at douglas.reeves@creativeleadership.net.

A Student Ponders Cheating on an Honor-Code Final Exam

In this *New York Times* column on ethical dilemmas, Kwame Anthony Appiah responds to a college student who's about to take an online final exam. The student is considering breaking the rules and consulting notes, friends, and the Internet because many classmates seem to be doing just that. Appiah disapproves of cheating, even when "everyone else is doing it," but says the best solution is for the professor to give an open-book exam. "Doing this might require changing the test," he says. "But given the circumstances you describe, it may be the only responsible option. If the professor insists on ignoring these realities, however, you should still do the honest thing. Ethics is always, in part, about what kind of person you ought to be."

"The Ethicist: If My Classmates Are Going to Cheat on an Online Exam, Why Can't I?" by Kwame Anthony Appiah in *The New York Times*, April 12, 2020, https://nyti.ms/39ZFqb6

Should We Worry About Kids Getting Too Much Screen Time?

In this *New York Times* article, Andrew Przybylski (University of Oxford) and psychologist/author Pete Etchells say that with most schools closed, children's screen time is going through the roof. That can be a blessing for parents cooped up with their kids 24/7, but wait a minute: isn't this video game binging and smartphone indulging harming young people? In the last few years, say Przybylski and Etchells, we've been hearing that excessive screen time "melts our children's brains, shrinks their attention spans, and weakens their social skills."

Digital abstinence for young children was the message from the American Academy of Pediatrics until quite recently.

Worries like these have a long history, with parents fretting about each new wave of entertainment technology – radio, movies, TV. But is viewing time all that damaging? For starters, say Przybylski and Etchells, "the evidence linking screens to harm is, in reality, paper thin." Recent studies have downplayed negative effects, including on adolescents' sleep. In fact, they say, "a couple of hours of screen-based leisure is associated with improved peer relationships and increased sociality. Gaming meets our fundamental needs for exploration, competence, and social connection. And games often improve rather than undermine our reasoning abilities." As for concerns about kids getting isolated, the Internet "is the world's best tool for distanced socializing."

So parents and educators needn't fret too much during the coronavirus lockdown, conclude Przybylski and Etchells. But they should monitor what kids are watching and playing, sometimes playing and watching with them, and steer kids toward "brainy games," age-appropriate educational videos, documentaries available on streaming services, cooperative and team-oriented video games, and timeless films "that don't just entertain, or distract, but teach ineffable lessons about life, love, and family."

"Screen Time Isn't All That Bad" by Andrew Przybylski and Pete Etchells in *The New York Times*, April 7, 2020, https://nyti.ms/2KkHYGw; Przybylski can be reached at andy.przybylski@oii.ox.ac.uk

Angela Duckworth on Minimizing Screen Time

"It's mind-boggling to imagine how many hours our students are spending on screens," says Angela Duckworth (University of Pennsylvania) in this article in *Education Week*. "The scientific consensus is that more rigorous research is needed to pinpoint the effects of screen time on physical and emotional health. However, we know enough to say with certainty that staring at screens all day and night can strain the eyes and disrupt circadian rhythms, too. And certainly, sitting constantly – as opposed to moving our bodies – is unhealthy for kids and adults alike." Duckworth has three suggestions:

- Consider having students listen to audio versus watching videos, perhaps while taking a safe walk in the neighborhood.
- Encourage notetaking by hand rather than on a computer.
- During an online class, periodically ask students to look away from the screen – for example, "Now, from memory, redraw the figure we discussed last week."

"How to Decrease Screen Time for Students" by Angela Duckworth in *Education Week*, April 24, 2020, https://bit.ly/2Y51kYa; Duckworth can be reached at duckwort@psych.upenn.edu.

Embracing the New Normal in Videoconference Job Interviews

In this *Chronicle of Higher Education* article, search consultant Kim Brettschneider says that virtual interviews have advantages (no travel, for one thing), but she's also seen a number of snafus, including:

- The camera focusing on a candidate's shiny forehead;
- A pet, an unmade bed, or a naked toddler in the background;
- The candidate, thinking he is on mute, shouting at a spouse to be quiet and telling a child to "go pee;"
- Candidates putting on eye makeup, sneezing onto the screen, and summoning kids to manage the technology;
- Committee members, thinking they're on mute, talking about the candidate.

"Some of those mistakes are recoverable and some aren't," says Brettschneider, "yet most are entirely avoidable." Her suggestions:

• *Consider an artificial background*. If an attractive, office-like background or a plain wall isn't available, use a virtual backdrop from your video service. Not a forest or a beach, though, and keep in mind that if a curious pet or a bored spouse gets within two feet of the camera, they will unexpectedly "pop" through the virtual background. It's a good idea to do interviews behind a locked door, or perhaps with a child sitting next to you with "work" and crayons, and introduce him or her at the beginning of your interview.

• *If life happens, roll with it*. "Pick up your toddler, give your dog a bone, and continue with the interview," advises Brettschneider. "Everyone is much more understanding of awkward live moments during this time of quarantine." Such moments may even work to your advantage, making a human connection.

• *Make muting the default*. "Play it safe if you are worried about a sudden meow, bickering children, or loud blenders in the background," says Brettschneider. Mute your sound and have a finger on the unmute button (in Zoom, it's the space bar) so you can speak on cue. In addition, shut down e-mail and online chat programs.

• *Practice like a TV analyst*. It's a good idea to rehearse talking points beforehand, perhaps recording yourself and watching with a critical eye. But for the actual interview, Brettschneider says, "what matters most is to be fully attentive… and ready to improvise based on what you hear. Active listening is even more important in a video interview because you can't take in as many visual cues as you do in a face-to-face conversation."

• *Have your notes on the screen*. Be familiar with how to minimize your image so you can sneak a peek at important lists you've prepared.

• *Make eye contact with the camera*. Center your torso on the screen, look up at where the camera is, and glance only occasionally at notes and the faces of interviewers.

• *Have your own name at the bottom of your screen*. If you're using someone else's computer, be sure to change it in settings, and consider doing a dry run of the interview with a critical friend to pick up any other possible distractions.

• *Be prepared for a connection freeze.* This happens, and if it does, have your cellphone handy (silenced) with the main interviewer's number programmed in so you can make a quick

call while you reboot and reconnect. It's also wise to pause after each answer in case there's an audio lag, giving interviewers a chance to follow up without being interrupted.

• *Smile early and often*. "You are on camera with your future colleagues," Brettschneider concludes. "Smile (naturally), sit up straight, and speak clearly. Enjoy the chance to talk about your proudest moments… In some ways, a flat screen levels the playing field and allows more equal opportunity to shine in an interview setting and demonstrate advantages."

"How to Ace the Virtual Interview" by Kim Brettschneider in *The Chronicle of Higher Education*, May 15, 2020 (Vol. 66, #29, pp. 37-38)

A New York City K-8 School's Mission for Right Now

Franklin Headley shares the mission that his music-themed school in Queens has adopted for the current era (adapted from the goals articulated by principal Steve Evangelista at Harlem Link Charter School):

- Ensure a community of care for all students, families, staff members, and alumni.
- Improve our remote learning environment so that it simulates as much of the regular school day experience as possible, in order to mitigate the loss of learning and community, while carefully instituting a virtual school that will not overwhelm the resources of families and staff.
- Provide targeted supports for at-risk students and families.

VOICE Charter School's Mission for Online Teaching, personal communication from Franklin Headley, April 6, 2020; Headley can be reached at FranklinHeadley@voicecharterschool.org.

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PLANNING FOR SCHOOL REOPENING

Ideas for the 2020-21 School Year

The Rennie Center has compiled an comprehensive blueprint for the coming year, including sections on helping students heal from trauma, rebuilding community, accessing grade-level content, accessing essential services, re-engaging students, remote learning, and postsecondary readiness. The website also has links to webinars on several topics.

"Back-to-School Blueprint: Planning for a Brighter Future After Covid-19" from the Rennie Center, August 2020

With Remote Instruction, Should Teachers Work at Home or in School?

In this *Education Week* article, Mark Lieberman weighs the pros and cons of schools starting with remote instruction, with teachers working from their empty classrooms:

• *Advantages* – In school, teachers have ready access to teaching tools, classroom objects, technology, and a robust Internet connection (no more teaching from the school parking lot or Starbucks). Going to school every day also creates a boundary between work and personal life. Being in the classroom gives teachers a chance to plan how desks and other furniture will be arranged and how instruction will work when in-person schooling resumes. During live video lessons, students will get a sense of normal classroom life versus their teachers' dining rooms. Seeing the classroom every day may be especially helpful for students with disabilities. Finally, having educators in school makes in-person professional meetings possible.

• *Concerns* – Working with other adults in a school building, even with social distancing and meticulous disinfecting, poses a risk of infection; this is especially worrisome for educators who are more vulnerable to Covid-19. One teacher in Arizona died after contracting the coronavirus while teaching in a summer school classroom with two colleagues. Then there's the question of who will take care of teachers' own children if they are learning from home. The Richmond, Virginia schools decided against having teachers work from school and supplied them with a home teaching kit that included a document camera, magnetic whiteboard easel, office supplies, and a virtual background to use in their homes. For teachers whose apartments were too cramped for teaching, the district offered alternative workspaces.

"Teaching in an Empty Classroom During Covid-19: Benefits and Drawbacks" by Mark Lieberman in *Education Week*, August 4, 2020

Back-to-School Surveys

Panorama Education has released a series of free surveys for students, families, and staff. These can be helpful getting data on where people are "at" on important social-emotional dimensions as schools start up for 2020-21.

Principles for Successful School Reopening

In this MIT Teaching Systems Lab report, Justin Reich (Massachusetts Institute of Technology) and Jal Mehta (Harvard Graduate School of Education) draw on extensive outreach to students, teachers, principals, parents, district administrators, state officials, and other stakeholders to suggest seven principles for reopening schools this fall. Reich and Mehta assume that most schools will be operating with a hybrid or remote learning plan for at least the first part of the 2020-21 year.

These principles are not intended to address the all-important planning that's being done to keep students and staff safe. Rather, Reich and Mehta focus on helping schools think through their core values and provide access to the best resources to support work with students and families. Several insights guided their research:

- The coronavirus has created a highly complex and uncertain situation with very few known solutions.
- In situations like this, the best approach is lots of experimentation in the field, with teams looking at the results to figure out what works.

- To avoid incoherence, experimentation must be implemented with shared values so local innovators are rowing in the same direction.
- It's important to decide on a few common structures – for example, a shared technology platform – to facilitate communication and collaboration.
- A culture of trust and inclusion is vital; as Peter Drucker once said, "Culture eats strategy for breakfast."

Here are Reich's and Mehta's design principles, each with a few examples of how it might play out in schools and districts.

• *Find ways to build relationships*. "The trust forged between teachers and students," say Reich and Mehta, "inspires learners to do their work, enables teachers to offer candid feedback and criticism, and helps teachers learn to find the keys that unlock student potential and learning." When the coronavirus disrupted the 2019-20 school year, educators already had six months of interactions under their belts. 2020-21 will be different, making it essential to find ways to build strong relationships.

Ideas: (a) a "call a teacher" button on the school's website that makes it easy for students to ask questions and get help from a staff member (perhaps the librarian) designated to be available all day long; (b) advisories in which small groups of students (perhaps 10) meet regularly with a staff member on Zoom; (c) looping, with the teachers from 2019-20 moving up with their students to the next grade; and (d) eSports and Rec leagues with online games like Valorant.

• *Rethinking instruction with equity in mind*. "Inequity is structurally baked into the system," say Reich and Mehta, "and thus we need to directly address it if it is going to enable all students to succeed." In addition, studies show that average- and lower-achieving students take the biggest hit with remote learning, widening the achievement gap. The implication: schools need to take a hard look at systems, culture, and pedagogy, include stakeholders in decision-making, give children of color and poverty a fair shake, and make classroom experiences "relevant, purposeful, and meaningful for all learners."

Ideas: (a) reaching out to selected students to take part in planning instruction and activities for the 2020-21 school year; (b) designing curriculum units on race, protests, and the pandemic; and (c) building in time with the most vulnerable students, who might be designated to be in school every day.

• *Amplify student agency*. With less direct educator supervision over several months, students have been pushed to become more responsible for their own learning. Schools have tried to replicate the regular structures from afar, but it hasn't always worked. Reich and Mehta believe we'll be more successful if we "lean into students' growing sense of agency, and find ways to build on and amplify it." The more choice and involvement students have with the curriculum, the more motivated and engaged they will be.

Ideas: (a) start the year with a celebration of what students learned in the spring months and special things they created; (b) use school as a "base camp" for virtual trips to explore careers, scientific topics, history, and more; and (c) devote senior year to volunteering – for example, helping out with a first-grade class.

• *Marie-Kondo the curriculum*. This is essential because of lost time during the spring of 2020 and the built-in inefficiencies of remote learning. Schools should retain what creates joy and deprioritize what's non-essential, say Reich and Mehta, "making sure students study a rich array of topics, but they study fewer of them and more deeply."

Ideas: (a) have teacher teams take inventory and decide on essential topics and skills and those that spiral and are sequential and cumulative; (b) develop a competency-based set of assignments, rubrics, and assessments; (c) implement block scheduling to reduce transitions and clutter within each school day; and (d) maximize virtual visitors.

• *Take full advantage of in-person time*. Being in a school building with face-to-face contact with educators will be a scarce and precious resource next year, and schools need to be intentional about what's best done in person and what's better at home.

Ideas: (a) launching clubs, electives, and extracurriculars in the school, so when students attend, they're experiencing something they really enjoy; (b) flipping the curriculum so home is for lecture-type instruction and projects, school for discussion, sharing, and relationships; and (c) home is for projects, school is for tutoring and small-group work.

• *Nurture home and community learning*. "The coronavirus fundamentally shifts the relationship between home and school," say Reich and Mehta. Schools improvised this spring, asking parents to monitor school learning, but for the opening months of the coming school year, educators need to build stronger partnerships with families and communities so students can get their work done away from school. "Whenever possible," say Reich and Mehta, "parents, neighbors, family members, and caregivers need to plan to devote a substantial amount of time next year to providing supervision and learning support to students." Schools play a key role in orchestrating support for students whose families are not able to provide it – for example, if parents are first responders.

Ideas: (a) encourage "family learning victory gardens" – for example, a father who is a Vietnam War buff studying that topic with a teenager during a U.S. history course; (b) support micro-schools – clusters of families that have created a safe bubble and can go to school together; and (c) allow students who thrive with online learning to remain at home.

• *Build in reflection time*. "Continuous learning and improvement is likely to be critical for success," say Reich and Mehta. Some teacher teams quickly figured out virtual collaboration in the spring, but others did not. School leaders need to orchestrate the time, space, and support for grade-level and departmental teams to continuously reflect, learn, and adapt; get teams networking laterally across classrooms, teams, and schools to share emerging ideas and learn from each other; and make organizational changes to translate new insights into regular practice.

Ideas: (a) trading student contact time for teacher collaboration time, following the practice of high-performing Asian schools that have a higher ratio of staff-to-staff time versus staff-to-student time; and (b) empowering teachers to work with students to figure out the best learning configuration – for example, flipping lectures and hands-on time and using high achievers as student tutors.

"Imagining September: Principles and Design Elements for Ambitious Schools During Covid-19" by Justin Reich and Jal Mehta, MIT Teaching Systems Lab, July 2020; the authors can be reached at jreich@mit.edu and jal_mehta@gse.harvard.edu.

The Pandemic and Six Stages of Grief

In this *Harvard Business Review* article, David Kessler (co-author with Elizabeth Kübler-Ross of *On Grief and Grieving*) says that amid the profound disruptions of the Covid-19 crisis there's a lot of grief. People need "to name what they feel," he says, "so they can start to manage it." The emotions that often accompany grief are denial, anger, bargaining, sadness, and acceptance. People won't necessarily experience them in that sequence, and they may not have all five, but the categories are useful in understanding and coming to terms with grief.

"As people go back to work," says Kessler, "or as those who've stayed on the job through the crisis begin to interact with returning workers, many will still be grieving. Not everyone will be at the same stage at the same time… If people seem unusually angry, we should give them space and exercise patience. They are grieving. Someone who questions the pandemic statistics may be in denial – and grieving." We may feel sad and tell ourselves that's not right because others have much more to be sad about. That may be true, says Kessler, but we should go ahead and experience our own sadness. Only by processing grief can we arrive at the fifth stage, acceptance. "There, unsurprisingly, is where the power is," he says, "because we are no longer fighting the truth. This awful thing has happened. Now what?"

Kessler says it's helpful if leaders recognize that colleagues will fall into three groups, and each will need understanding and different kinds of support:

• *The worried well* – These colleagues are healthy and haven't experienced sickness around them, but they're concerned and may be grieving the loss of normalcy, opportunities, projects they were excited about, weddings, graduations, holiday gatherings, vacation trips, and other joys. The worried well may anticipate future losses and deprivations; some are minimizers, playing down the severity of problems, while others are maximizers – the sky is falling. "The truth lies somewhere between the two points of view," says Kessler. "Work helps each group balance their minds."

• *The affected* – They got Covid-19 themselves or know someone who was sick, perhaps still is. "These people haven't just imagined trauma," says Kessler, "they've experienced it. They will benefit from accommodation and validation. Some may need counseling and other support mechanisms."

• *The bereaved* – They're grieving the death of a loved one, are grappling with the stages of grief, and are far from acceptance.

Kessler believes that being aware of these categories is helpful when leaders orchestrate group interactions. It's not a good idea to have a *worried well minimizer* saying, "So we had to work from home for a couple of months – so what?" to colleagues who were sick or experienced a loss. Knowing who is in which category also makes leaders more sensitive as they engage with co-workers. Studies have found that one of the most important variables in people's happiness in a workplace is how they are treated in difficult times: *When my loved one died, my boss did this*

very thoughtful thing. My supervisor invited me into her office and asked, "How are you doing today? How can I support you?"

Kübler-Ross died in 2004 and Kessler carried on their work on the five stages, always with a sense (shared by her) that the fifth stage – *acceptance* – didn't really represent closure. Then in 2016, Kessler's younger son died unexpectedly. Devastated, he stayed home for weeks. "It felt as brutal as I could ever have imagined," he says. Eventually Kessler formulated a sixth stage of grief – *meaning* – and got the approval of Kübler-Ross's family and foundation to add it to the canonical list.

"I'm not talking about finding meaning *in* a terrible event," he says. "Rather, meaning is what you find, and what you make, *after* it. That won't make it seem worth the cost. It will never be worth the cost. But meaning can heal painful memories and help us keep moving forward… I believe that many of us will be looking for this sixth stage in the wake of the pandemic." It might take many forms:

- Remembering joy that something or someone gave you before Covid-19 hit;
- Gratitude – for example, for first responders during the pandemic;
- Turning the loss into something positive for others;
- Moments and actions that heal, if only a little.

"Meaning may take time," says Kessler. "It will be personal (only you can find your own meaning)."

We have a tendency to see loss as a test of our fortitude: can we escape the feelings that it creates? "But loss just happens," says Kessler. "There's no test – there's just grieving. Meaning is what we make happen after." He suspects that with the pandemic, because we're all in it together and it's lasted so long, meaning will come before too long. "If we acknowledge that in this crisis, in our work, something meaningful happened for us and others, we are healing. We are moving forward in our grief."

Kessler's conclusion: "I sincerely hope that for you, meaning comes soon, if it hasn't already. I hope that work becomes a place where people find it – where coworkers support one another and where managers take care of their workers and allow them to grieve. The pandemic is one season in our lives; it will end. It will be remembered as an extraordinarily difficult time. But the slow process of returning to a new normal – of naming our grief, helping one another reach acceptance, and finding meaning – will continue. For leaders that moment will be an opportunity."

"Helping Your Team Heal" by David Kessler in *Harvard Business Review*, July-August 2020 (Vol. 98, #4, pp. 53-55)

Thomas Guskey on Low-Stakes Teacher-Made Assessments in the Fall

In this *Educational Leadership Exclusive*, Thomas Guskey (University of Kentucky) echoes many educators' concerns about learning gaps when schools resume: the usual "summer slide" will be compounded by students' uneven experiences with remote instruction during the pandemic. Reject test companies' offers of free assessments, Guskey advises: "Although

seemingly altruistic, this is likely simply a clever business strategy." Schools will have to buy companies' assessments to measure progress down the road. Besides, he says, commercial assessments have an uneven track record with curriculum alignment.

A better approach, says Guskey, is short, teacher-made quizzes and prompts to assess prerequisite skills and knowledge for initial curriculum units. "This shouldn't take much time and could be seen as a natural part of teachers' planning for the coming year," he says. "Because these will be low-stakes assessments, they don't have to be psychometrically perfect."

Principals play an important part: giving teacher teams time to craft assessments, ensuring standards alignment, using district assessment experts, and making sure teachers follow up with corrective instruction for lagging students, with proficient students going deeper into the curriculum or tutoring classmates. Guskey sums up the benefits of this quick assessment/mastery approach:

- Right from the start, teachers get the information they need to plan instruction.
- Students build a foundation for later mastery, countering incoming inequities.
- Mastery of key skills early in the year is a powerful motivator and confidence-builder, especially for struggling students.

"When School Is Back in Session, Where Will We Begin?" by Thomas Guskey in *ASCD Online*, June 22, 2020; Guskey can be reached at guskey@uky.edu.

Key Questions for School Reopening

In this *Education Week* article, Madeline Will reports on what she learned in interviews with more than a dozen experts and public health officials on a number of questions that must be answered before schools can safely reopen. See the article link below for expert opinions:

- Should students wear masks?
- Should staff wear masks?
- Should schools check students' temperatures before letting them enter?
- Should schools conduct Covid-19 testing?
- Are there enough places for students and staff to wash their hands?
- Are there enough school nurses?
- Will schools be sufficiently cleaned?
- Is there a plan to protect high-risk teachers and staff?

"Keeping Students and Staff Healthy and Safe When Schools Reopen" by Madeline Will in *Education Week*, June 10, 2020

Handling Learning Loss in the Fall

In this article in *Education Week*, Stephen Sawchuk reports that commercial testing companies are hawking diagnostic assessments to be given when schools reopen. "Not so fast," said the superintendents and assessment experts he interviewed. Here's what they said:

• *Don't use state tests or off-the-shelf exams as a diagnostic tool.* Such tests are not helpful for pinpointing students' strengths and weaknesses on the content teachers will be covering in the fall. Assessments should be closely aligned with the upcoming curriculum and tell teachers what they need to know as they begin each unit.

• *Support teachers in developing and using formative assessments*. PD and coaching should focus on day-by-day and minute-by-minute assessments that measure student learning and allow teachers to adapt and fine-tune instruction in real time. British assessment guru Dylan Wiliam suggests that teachers ask "range-finding" questions at the beginning of lessons to find out what students already know and what gaps need to be filled. "Most people think that the purpose of feedback is to improve the work," says Wiliam. "But in fact, it's to improve the student's performance on a task not yet attempted. Feedback is designed to make you play better for the next day."

• *Connect teachers across grades*. The most helpful information for an eighth-grade English teacher will come from the seventh-grade teacher, who can tell which students never read *Romeo and Juliet*, who didn't write a persuasive essay, and which students were disconnected while schools were closed. Another way to ensure grade-to-grade continuity is looping – teachers moving up with their class to the next grade.

• *Focus on filling curriculum gaps*. Each grade-level team needs to know what wasn't taught during the spring because of lost time or challenges with remote learning – and then plan how to integrate the missing pieces into their 2020-21 learning plan.

• *Resist the urge to reteach*. The consensus among educators Sawchuk interviewed was that teachers should forge ahead with grade-level curriculum rather than backtrack to what might not have been learned in the spring. The only exception is one-to-one tutoring, where filling in skill and knowledge gaps can be helpful. Says Tennessee district leader Scott Langford, "Our number one commitment is to accelerate. We are going to stay on high expectations on current grade level, and use intervention time and home time to address the needs. Everything I've read is that when you go back and try to over-remediate, all you do is grow larger deficits."

"5 Tips for Measuring and Responding to Covid-19 Learning Loss" by Stephen Sawchuk in *Education Week*, June 12, 2020

Addressing "Covid Slide" in the Fall

In this *Education Week* article, Heather Hill (Harvard University) and Susanne Loeb (Brown University) explore how schools might deal with students' predicted learning loss when schools reopen. Of course teachers deal with "summer slide" every year, reviewing what was supposed to have been learned the previous year and spiraling the curriculum to fill in forgotten or missed knowledge and skills. But learning gaps will be bigger after three months of remote learning, and will vary significantly depending on home advantages, how well schools managed online learning, and the degree of trauma experienced by students. Gaps may be especially problematic for the youngest students, who are usually on a steep learning curve with reading, writing, math, and social skills.

Hill and Loeb suggest the following steps when schools reopen, whatever configurations are used:

• Track down and reach out to students who disengaged from instruction while schools were closed, and make strenuous efforts to get them back into the fold.

• Have teachers at each level pass along to the next grade-level team what was not covered during remote learning.

• Have all teachers immediately check in on students' emotional state and conduct quick, classroom-based assessments to get a handle on what students know and can do.

• Launch into grade-level content right from the start, rather than repeating material from the previous grade; missing knowledge and skills would then be assessed and backfilled in context.

• Provide effective tutoring for students who are struggling with new material – but don't pull students out of core classes, which will make them fall further behind.

• Make the best use of instructional time throughout the year. This includes minimizing student and staff absences, cutting down interruptions to class time, keeping students working productively when they are not in school, and hiring effective substitutes.

"How to Contend with Pandemic Learning Loss" by Heather Hill and Susanne Loeb in *Education Week*, May 27, 2020; the authors are at heather_hill@gse.harvard.edu and loeb@brown.edu.

A Post-Pandemic Silver Lining for High-Schools?

In this *Education Gadfly* article, Michael Petrilli says the traditional 6-7-hour high-school day "has been crushing teenage souls for generations… Surveys have long shown that teenagers spend most of their day bored, zoned out, and only pretending to listen." The daily grind of getting up way too early and trudging from one class to another is in stark contrast to many students' lively engagement in after-school sports, band, theater, and jobs – and bears little resemblance to college, where there are only about 15 hours of in-person class time a week and lots of open time for independent work, group projects, office hours, and more.

"Students only learn when they are focused, engaged, and putting in effort," says Petrilli. So why can't high school look more like college? This is where the pandemic has opened our eyes to different possibilities. Does every class need to meet every day? Could in-person instruction alternate with independent work or an internship? Could students choose a morning or afternoon schedule? Social distancing might make this mandatory in the fall, with schools at half capacity, but such an arrangement might be a welcome change long term. This, of course, would require changes in current seat-time requirements.

Half-time high, as Petrilli calls it, might not work for every student, and there is the danger of students learning half as much. He suggests two guardrails: (a) having students apply for the more-flexible arrangement and be selected based on their ability to handle independent work; and (b) holding all students accountable for learning through rigorous curriculum-based assessments, either school-generated or external, like Advanced Placement tests.

"Half-Time High School May Be Just What Students Need" by Michael Petrilli in *The Education Gadfly*, May 27, 2020; Petrilli can be reached at mpetrilli@fordhaminstitute.org.

Jennifer Gonzalez Looks Over the Horizon

"Probably the only thing that's certain right now is that no one knows for sure what the next school year is going to look like," says Jennifer Gonzalez in this *Cult of Pedagogy* article. She goes on to share ideas she's gathered from numerous sources (including Larry Ferlazzo) on what might happen in the fall:

• *Ideas for reopening* - "Alrighty then. Deep breath," she says. "Here are some ideas that look like they might sort of kind of work."

- Alternating days (or half days) – Schools would run an A/B schedule, with some students coming on A days and others on B days, with those not in school doing remote learning.
- Cohorts – Small groups of students stay put all day, with teachers moving from classroom to classroom, which minimizes mixing.
- Selective return of grade levels, students, or teachers – For example, kindergarten students return and educators with health risks work online.
- Intensives – Students stay with the same teacher/class/course for a few weeks, then rotate to the next course, again minimizing mixing and movement in the building.
- One-room schoolhouse – Students stay in the same room, with the same teacher, covering all subjects, perhaps with students doing cross-disciplinary project-based learning. This could work remotely or with split classes to maximize distancing.
- Individual learning plans – This might come down to five or six plans for a classroom, with Plan 1 being full-time home instruction with paper-based curriculum, Plan 2 full-time home instruction with robust technology, Plan 3 coming to school some days, etc.
- Keep distance learning – "Obviously, getting all students connected is a must," says Gonzalez, "or at the very least finding good, workable ways to stay in touch without the Internet, but if that's possible, it may be the most realistic approach at least for the start of the school year."

• *Other considerations* – These are other ideas Gonzalez believes are worth considering, regardless of which approach is used.

- Acceleration versus remediation – Post-Katrina research in New Orleans schools showed that moving ahead with the curriculum, with backfilling and scaffolding, worked best.
- All-community outreach – Getting input from educators, parents, students, and others, then running draft proposals by them, is vital to success.
- Focusing on equity and culturally responsive teaching – The hardest-hit students will need particular attention.
- Looping – When teachers keep the same students into the 2020-21 school year, they can build on established relationships and have a better handle on what students know and can do.
- Substitutes - Availability of additional staff is important, but many subs are over 55, which might create health concerns if they're on site.

- Childcare for educators – "Many, many teachers are also parents," says Gonzalez, "so if their own children can't go back to school full-time, that poses a significant problem for teachers as well."

• *Facing the unknown* – Rather than lapsing into "a state of paralysis, waiting for someone to tell you what the plan is," Gonzalez has these thoughts:

- Prepare for a full year of 100 percent distance learning. "Even if your school manages to get kids into the building," she says, "social distancing will likely require students to get their materials and do much of their work on devices." There's lots of accumulated wisdom out there about how to do this effectively.
- Create contingency plans. Be ready for different scenarios.
- Give yourself space to grieve. "Although dwelling on this for long periods of time won't be terribly useful," she says, "it doesn't help to pretend any of this is normal."
- Push back on unreasonable expectations. "Although high-quality instruction is obviously the goal," says Gonzalez, "sending a message that denies current challenges can crush teachers' spirits."

"Good teaching is an intimate experience," she concludes, "and most teachers are at their best when they can stand close to students, examine their work, give hugs and high-fives, have private conversations… Over the last ten years or so, as smartphones took over and we got more and more addicted to screens, we've all collectively shaken our heads at how disconnected we had become. But this pandemic has demonstrated that we weren't actually disconnected. Yes, the devices made things different, but the whole time we were still finding ways to be close, to touch each other, to share physical space. It turns out we really do need that, and I think this is wonderful news."

"Reopening School: What It Might Look Like" by Jennifer Gonzalez in *Cult of Pedagogy*, May 24, 2020

Ideas for Reopening Elementary Schools with Social Distancing

In this *Education Gadfly* article, Michael Petrilli suggests guidelines for opening elementary schools in the fall, drawing on advice from the CDC, schools in other countries that have successfully reopened, and K-12 policymakers. Petrilli believes getting adults back to work is a major imperative, and having schools open will make that possible. With the strong likelihood of cuts in school budgets, any plan must be affordable. And no plan can give 100 percent guarantees because the virus will still be around until a vaccine is widely available. But Petrilli believes elementary schools can be reopened if we follow these steps:

• Give students and educators the choice of full-time remote learning for the coming school year. This is a moral and legal imperative for families with medical risks, and for those who want to quarantine pre-vaccine. Schools would need to make remote learning as attractive and effective as possible, which might mean outsourcing some functions to learning providers.

• Have K-3 students attend school Monday to Friday while grade 4 and 5 students come to school on alternating weekdays, thinning out the student population to make physical

distancing easier. “While it’s hardly ideal,” says Petrilli, “fourth and fifth graders can do some independent work and can be left at home during the school day.” In schools where that doesn’t seem wise, he suggests using middle-school classrooms for grade 4-5 students and having grade 6-8 students spend more time learning independently at home.

• Run buses at 50 percent capacity or less. This might mean staggered bus schedules, more buses, or more students carpooling, walking, and biking to school.

• Require daily screening of adults and students, mask wearing, and frequent hand-washing in organized bathroom visits. And of course any student or adult showing signs of illness would be required to stay home.

• Keep all groups to 10-12 students and use every possible space around the school and every available adult (including volunteers) to supervise all the groups. This schoolwide social distancing means that students wouldn’t mix beyond their mini-homerooms at recess (which would be staggered throughout the day), students would eat in their classrooms, and there would be no assemblies, field trips, or other large-group events.

• Teachers move, students stay put. Homeroom teachers and specialists would rotate from room to room to reach all their students – two groups for homeroom teachers, more groups for art, music, media, physical education, and other specials.

• Have a clear plan if there’s an outbreak. If someone in the school community tests positive, the school would be closed for deep cleaning, contacts traced and tested, and if necessary, quarantined. It might be necessary for the school to be closed for two weeks to ensure there’s no super-spread to the community.

“Seven Steps to Sending Elementary Kids Back to School and Parents Back to Work” by Michael Petrilli in *The Education Gadfly*, May 15, 2020

When Schools Reopen, What to Do With Students Who Are Behind

In his *Education Gadfly* article, Michael Petrilli suggests that the question of how to catch students up when schools are back in session may depend on the grade level, the subject, and how far behind students are. He gives two examples:

• A high-school English class reading George Orwell’s novel, *1984* – Perhaps many students don’t have the vocabulary and interpretive skills to make meaning of the book, so one solution is for those students to read *The Giver* by Lois Lowry, closer to their reading level. But another approach, with no student missing out on *1984*, is for the teacher to do focused work to make the book understandable for less-prepared students. This might include watching a movie rendition or listening to the audiobook; and reviewing plot guides or digital editions of early chapters, with embedded vocabulary help and synopses. All this would be done just before the class reads *1984* together, preparing those students for success.

• A sixth-grade math class with most students arriving years behind – Should the teacher teach grade-level content and try to fill gaps wherever possible, or go back and address the unfinished learning from prior years and Covid-19 slide, running the risk of students not being up to grade level for the state test? The latter approach makes the most sense.

Petrilli believes the difference is that in math, there's a clear progression of standards, with mastery of prerequisite skills very important to success. "No amount of 'supports' and 'scaffolding' is going to magically make that problem go away," he says. "So we should encourage teachers to go back and help kids fill in the holes – while also helping students make progress on grade-level material."

But English is different, he believes. In this area, as well as social studies and science, access to grade-level material should be the default. Once students can decode text, understanding and appreciating material is a matter of building up vocabulary and background knowledge, which effective teachers know how to do – "a mix of well-designed small-group instruction, one-on-one tutoring, online acceleration and enrichment, and whole-class discussions."

The primary grades are different, says Petrilli. Students who were on the verge of sounding out letters, learning to read, and counting to one hundred have big challenges when schools reopen. Petrilli was heavily criticized online when he suggested keeping younger students back, but he's worried about automatic promotion to the next grade. For starters, there must be thorough diagnosis using high-quality assessments. For students who are way behind, he believes they need "the gift of time," which might be rebranded as "a second 2nd grade," moving up to grade 2.5, ideally looping with the same teacher, spreading out three years of standards to four years.

"When It Comes to Catching Kids Up, Let's Stop with the Generalities" by Michael Petrilli in *The Education Gadfly*, May 6, 2020 (Vol. 20, #8), https://bit.ly/2YWuo4q

Planning for Schools' (Hopeful) Reopening

In this *Education Gadfly* article, Robert Pondiscio predicts that when the current crisis is over, remote learning won't continue. We aren't transforming ourselves "into a nation of homeschoolers or 'unschoolers'," he says, "any more than passengers thrown from a sinking ship into lifeboats can be said to have taken up rowing." The online learning being implemented by hard-working teachers is an emergency response. As soon as it's possible, kids and parents and teachers will be happy to get back to their brick-and-mortar schools. Why? "The act of sending our kids every morning to a place called a school is a cultural habit formed over many generations," says Pondiscio. "It persists because we value it, not for want of a better idea or a more-efficient delivery mechanism for education."

There's no question that this period of school closings will widen learning gaps, he continues, because families are much more unequal than schools: broadband access, devices and books in the home, parents available to help. In the words of Paul von Hippel (University of Texas/Austin), "We're about to see what happens when we turn up the volume on families and turn it down on schools." A recent NWEA report predicts that this fall, students will enter school with about 70 percent of the usual reading gains and less than 50 percent of expected achievement in math – and those are averages, masking big differences by social class.

The biggest priority for district leaders right now, says Pondiscio, is getting ready for reopening: "If we aren't planning for the resumption of schools, and for the foreseeable conditions we will face, we will be caught flat-footed a second time." His suggestions:

- Plan for different scenarios – fully open, staggered, virtual for a period of time.
- Assign qualified educators from the central office to teach in the opening weeks to improve the student/teacher ratio.
- Plan to accelerate the learning of students who enter the furthest behind.
- The district's strongest teachers should be working with those students.
- Give special attention to the early grades.
- Assessment-driven achievement grouping may be necessary, especially in the lower grades.
- The primary focus for the early weeks should be on reinforcing the previous grade's learning.
- Use teacher leaders and master teachers to design curriculum and control quality.
- Press new college graduates and non-professionals into service for several weeks or months of targeted, high-dosage tutoring in high-need schools.
- Don't overcomplicate things for teachers.

"Keep it simple," Pondiscio concludes. "Keep it focused, intense, achievable, and time-limited. The most attention should be on those who have fallen the furthest behind."

"No, This Is Not the New Normal" by Robert Pondiscio in *The Education Gadfly*, April 14, 2020, https://bit.ly/3cBSzsH

Robert Slavin on an Ambitious Post-Pandemic Plan

In these back-to-back online articles, Robert Slavin (Johns Hopkins University) says that our current situation calls for something akin to the Marshall Plan, which committed billions of U.S. dollars to rebuild Western Europe after World War II. That war was awful, says Slavin, but schools and universities remained open. The coronavirus pandemic is different, profoundly interrupting the education of students at every level. "This is a particular problem, of course, for disadvantaged students," says Slavin, "whose parents are more likely to get the virus, who are less likely to have technology at home, and who are more often already having difficulties in school."

Even for students who have robust Internet access, technology, and home support, "distance learning is not going to be enough," he says. "There will be happy exceptions, but there is a reason that homeschooling is rare." When schools reopen, there will be a massive challenge repairing the damage done and addressing a widening achievement gap. The work will be made more difficult because there's likely to be an economic recession in the fall, with many young people entering the labor market at the worst possible time.

Slavin has a plan to address both problems: "Schools should hire, train, and deploy large numbers of recent (and not so recent) college graduates as tutors, and in other essential roles in schools," he proposes. "Imagine that every school could receive up to five well-trained, well-

supported teaching assistant tutors, with the number of tutors determined by each school's needs." These young men and women would focus on students who had fallen furthest behind, and could also work as health aides, helping students get eyeglasses and medications for asthma and other chronic illnesses that affect school success, as well as working with families on attendance, social-emotional development, and mental health.

Slavin cites research showing that one-on-one and small-group tutoring can have a powerful effect, up to 0.40 effect size (five months of schooling), provided tutors use proven methods, have expert professional development, and work with proven curriculum materials. He estimates the cost at $600 per student – which compares favorably to the $12,000 per capita cost of having students repeat the grade when schools reopen, something that's been proposed as a post-Covid-19 intervention.

"A Marshall Plan for the Post-Covid-19 Recovery," April 23, 2020, and "Marshall Plan II: Heal the Damage, but Build for the Future," April 30, 2020, by Robert Slavin on Slavin's website, https://robertslavinsblog.wordpress.com/2020/04/

School-Based Health Services When Schools Reopen

In this online article, Robert Slavin (Johns Hopkins University) has two observations on safely opening schools in the fall:

Children are rarely harmed by Covid-19, says Slavin, citing Maryland data showing only 2.2 percent of cases and no deaths among children age 0-9, and 4.25 percent of cases and one death among youth 10-19. Of much more concern are adults age 20-59, who account for 66.8 percent of Maryland cases and 243 deaths. The main health risks of opening schools affect staff, parents, and other adult relatives and friends. "What these observations mean," says Slavin, "is that to be truly safe after reopening, each school should create and implement plans to keep their entire community safe and healthy."

Because schools are such important community institutions, they should serve as a Covid-19 center for local health and referral. Slavin believes each school should have a full-time nurse (about 25 percent of U.S. schools don't) and one or more well-trained health aides to work under the nurse's direction. The job of the health aides would be to ensure that every child, parent, family member, and educator is free of Covid-19, and, if they become ill, direct them to local health professionals for isolation and treatment. Aides would also provide up-to-date information to the community about social distancing, symptoms, and sources of care – and treatments and vaccines, when they become available. As the risks of Covid-19 diminish, health aides could focus on other health issues such as vision, prescriptions, and asthma.

"Opening Healthy Schools" by Robert Slavin on his website, June 11, 2020; Slavin can be reached at rslavin@jhu.edu.

The Kind of Tutoring We'll Need in the Months Ahead

In this article in *Brookings*, Matthew Kraft (Brown University) and Michael Goldstein (Match Education) applaud several initiatives to recruit college students and recent graduates to tutor students who have fallen behind during the school closure crisis. Not only will such programs help address "Covid slide," but they will act as an economic stimulus and fill in for the many internships and summer jobs that have been cancelled.

But Kraft and Goldstein caution that tutoring isn't guaranteed to help. "The standard model of tutoring – a rotating cast of volunteers who sporadically show up to after-school or summer programs – doesn't typically succeed," they say. Billions of No Child Left Behind dollars were spent on this approach, and evaluations found little evidence of student learning gains.

Fortunately there's solid, gold-standard research on "high-dosage tutoring," which has the following characteristics:

- Tutors work full time with the same students through the school year, building relationships that pay off over time.
- Tutoring is personalized, with no more than a one-to-one or two-to-one ratio.
- All students in a school get tutoring, not just those with learning deficits. "Tutoring only struggling students attaches a stigma to the program," say Kraft and Goldstein, "and is often perceived as a punishment."
- Tutoring is a regular, daily, full-period class, not after school (which, again, feels punitive).
- Students get report card grades for tutoring, signaling its importance.
- Tutoring in math will have the biggest impact, since learning loss is likely most severe in this subject and tutors can address discrete skills and knowledge.

Kraft and Goldstein suggest forming a National Tutor Corps, along the lines of AmeriCorps, and focusing on (a) the absolute minimum of red tape, (b) careful recruiting and selection (it's helpful to get feedback from students as candidates conduct 10-minute tutoring sessions), and (c) constant assessment and feedback as the program proceeds. There's some evidence that high-dosage tutoring can be conducted remotely.

"Getting Tutoring Right to Reduce Covid-19 Learning Loss" by Matthew Kraft and Michael Goldstein in *Brookings*, May 21, 2020

Is This Looping's Moment?

In this article in *Education Drive*, Texas first-grade teacher Mark Rogers says that every year, the two months after spring break are precious – "an opportunity to crystallize an entire year's worth of human connection, learning, and special classroom memories." But not this year, with almost all students and teachers deprived of in-person connections. Rogers sees the transition from this year to 2020-21 as the perfect time for looping – teachers keeping their students for the next grade level. Here's why he believes principals should support looping:

- Teachers bring into the next year all the human connections from this school year;
- With high-need students, teachers can carry forward the trust that was earned this year, again saving time and emotional energy;
- Teachers hit the ground running in the fall by saving the time normally spent learning names and family information and establishing classroom routines;
- Teachers know exactly what wasn't covered in the previous year and will be able to more quickly fill in those gaps;
- Teachers are in a better position to decide what can be skipped as they merge the 2019-20 curriculum with 2020-21.

"This year, more than any other, our kids need continuity," says Rogers, "our kids need their teachers to know them, and, as a result, our kids need their same teacher next year."

"Why Students Need Looping Now More Than Ever" by Mark Rogers in *Education Drive*, April 17, 2020, https://bit.ly/2RRR9Co

Lessons from a Hong Kong School That's Been Closed Since February

In this *Education Week* article, Mark Lieberman interviews Connie Kim, the middle-school principal of a K-12 school in Hong Kong that has a little more perspective on remote learning than U.S. schools: it's been closed for in-person instruction for more than two months. Here are Kim's thoughts from the long haul she and her colleagues have been through:

• *Forget about replicating the regular school day*. The school tried to run a regular seven-period schedule at first, but quickly found it was way too intense for a remote environment. The school day now consists of four hour-long periods, with the first 15-20 minutes of each reserved for live videoconferencing between teachers and students.

• *Build in no-screen time for students*. Kim's school tries to avoid overdoing it each day, and has implemented a "wellness day" that's a reprieve from the regular pace of teaching and learning. They've also blocked out time for reading, outdoor play, and doing things that don't involve screens.

• *Don't skimp on professional learning*. After having too little collaborative time at first, the school now has a regular schedule of staff sessions via Zoom so teachers can calibrate their teaching and share tips, insights, and resources.

• *Make it easier for students and parents*. At first, individual teachers in the middle school used different platforms for their learning plans, resulting in a chaotic environment for kids and families to navigate. Teachers now use common procedures posted on Schoology, the school's learning management system.

• *Don't assume something can't be done until you've tried it*. Initially, Kim and her colleagues thought that offering personalized instruction and support would be impractical. But using breakout rooms, video chats, and teacher "office hours" solved the problem, and all this has been especially helpful for students with special needs.

• *Pace yourself*. After eight weeks of remote instruction, Kim says they're seeing a loss of enthusiasm and engagement among students. Teachers are now slowing down the pace of

instruction and building in more checks for understanding and review. "The novelty of being on Zoom and working from home is wearing out now," she says. "It's a constant cycle of us having to regroup, recharge, having to be the cheerleaders for our students and our parents."

"6 Tips for Teaching Remotely Over the Long Haul of the Coronavirus" by Mark Lieberman in *Education Week*, April 10, 2020, https://bit.ly/2Rz8qzQ

Will There Be Lasting Changes from the Pandemic?

"Without preparation or permission, we're participating in the greatest social science experiment of all time," says Andy Markowitz in this article in *AARP Healthy Living*. He suggests some ways this public health and economic crisis may influence behavior over time:

- Working from home – Having experienced it, many are taking to the experience.
- Seeing your doctor – Telemedicine was rare before Covid-19, but is widespread now.
- Shopping for groceries – Online purchasing saves time and aggravation.
- Staying in touch – Zoom happy hours and Facebook Live watch parties will endure.
- Wearing face masks – What was common in Asia is now more accepted in the U.S.
- Movies at home – Streaming Netflix and other platforms have proven themselves.
- Traveling by air – The experience will be different in a number of ways.
- Riding public transportation – Same here.
- Protecting your privacy – People may become receptive to electronic contract tracing.
- Washing your hands – The message is getting through.

"10 Things the Pandemic Has Changed for Good" by Andy Markowitz in *AARP Healthy Living*, May 4, 2020, https://bit.ly/3dB4cR3

Covid-Era Practices That Should Continue After the Pandemic

In this article in *Education Week Teacher*, teacher/author Gina Denny says the school-closure crisis "has given us insights and tools to better serve our students." She lists six ways she plans to change "once there is a semblance of normal":

• *Use online technology routinely to deliver assignments, notes, and resources*. These months have brought millions of educators and students up to speed on Google Classroom and other platforms. This will serve them well, even in standard-issue schooling, and also in college, where a fair amount of instruction is online.

• *Stop grading formative assignments*. Remote schooling has deemphasized grades, which has showcased the benefits of feedback for improvement versus summative judgment. "Fewer assignments with more detailed feedback can help students stay motivated," says Denny, "understand the material more fully, and alleviate some of the pressure on teachers, even when giving individual feedback takes more time than right-wrong grading."

• *Assign home-based performance tasks and projects*. Remote schooling has required students to upload choreographed dances, scripted scenes, and music performance for teachers'

critiques – great for avoiding snarky comments from peers and excellent preparation for college and real-world auditions.

• *Bring other professionals into the loop*. Many educators have become less shy about recruiting actors, musicians, authors, politicians, and activists to interact virtually with their students. No reason this shouldn't continue.

• *Create a more-flexible schedule*. Teachers have often been surprised to see students who performed well in "regular" school floundering in stay-at-home schooling – and students who felt stifled by a bell schedule and micro-assignments flourishing with less structure. This suggests that a loose-tight approach might be better when regular school resumes, giving students more control over their time while holding them accountable for results and becoming more self-sufficient with time management.

• *Force students to use "old people" technology*. "Kids who plan to enter the workforce in the next decade," says Denny, "need to know how to use Microsoft Office, properly thread e-mails, and use technology to manage their workflow."

"6 Classroom Changes Teachers Will Make When Schools Reopen" by Gina Denny in *Education Week Teacher*, May 18, 2020

School Reopening Surveys

Panorama Education has made available free surveys of staff and families for schools to gather information over the summer in preparation for reopening.

Details on All-Remote Schooling

In this *Education Week* article, Denisa Superville provides specifics for schools planning on fully distant instruction in the fall.

"The All-Remote Schedule: No Risk to Health, High Risk to Learning" by Denisa Superville in *Education Week*, June 24, 2020

Scheduling Student Rotations for the Fall

This *Education Week* article by Denisa Superville lists the features and pros and cons of weekly, alternating daily, and once-a-week rotations for hybrid school scheduling.

"Building a Schedule Around Student Rotations" by Denisa Superville in *Education Week*, June 24, 2020

Webinar on Critical Issues for Fall 2020

In this one-hour webinar with interactive polling of a large international audience, Kim Marshall Memo Doug Reeves focused on three topics: What we've learned during the pandemic

that will make teaching and learning better; school preparations before school reopens; and key priorities when school begins.

When Will We Be Able to…?

This *New York Times* article reports the results of a survey of more than 500 epidemiologists with their predictions on when they'll be able to bring in mail without precautions (most say this summer), attend a small dinner party (later this year), hug or shake hands with a friend (a year or more), and 15 other everyday activities.

"When 511 Epidemiologists Expect to Fly, Hug, and Do 18 Other Everyday Activities Again" by Margot Sanger-Katz, Claire Cain Miller, and Quoctrung Bui in *The New York Times*, June 8, 2020

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SPECIFIC SUGGESTIONS FOR ONLINE TEACHING

Personalizing Instruction for Students in a Remote Environment

For this *Education Week* article, Mark Lieberman asked dual-language English teacher Tricia Proffitt to explain how she personalizes instruction, and Proffitt gave details on how she's dealt with three quite different students in her all-remote Illinois middle school this year.

• *Student #1: Very limited English* – This first student arrived from South America less than a year ago with very limited English speaking skills, not yet able to read English. At first, the student was overwhelmed by the instructions for daily lessons, so Proffitt began using Google Translate to e-mail assignments and clarify expectations. The girl's work plan is aimed at the same standards as the rest of the class, but geared to her current achievement level; if the class is reading a short story, the girl reads a short story in her native language. Proffitt uses *Learn That Word*, an online vocabulary platform, to focus on specific English skills for this student while the rest of the class works on different exercises in the platform. There are hyperlinks to online assignments to streamline finding materials in the student's Chromebook. "She's working on the skills that she can handle, and she's doing great," says Proffitt.

• *Student #2: Ahead of the class* – From the first day of school, this student stood out with her vocabulary and grammar knowledge, high-quality work, and enthusiasm for learning and helping classmates. Proffitt used online programs to provide assignments that allow advanced students to move ahead in the curriculum. She says to the class, "If you know what you're doing and you want to move ahead, you can," and this student (and others who have mastered basic assignments) get the message. High-achieving students are also pulled into separate videoconferences for more in-depth discussions, and there's a website where they can privately publish written work, add graphics, and supplement the text with a read-aloud. Proffitt reports that her advanced students are thriving.

• *Student #3: Not engaged* – In the early weeks of school, this student participated minimally, then stopped taking part in class activities. After confirming that this was also true in

the boy's other classes, Proffitt communicated with his mother and learned that the family was overwhelmed. "He felt that he had already dug such a big hole, so what was the point," said Proffitt. She reassured the boy that making progress was what counted, even if his pace was slower than the rest of the class. She picked out two important assignments and asked him to focus on those, skipping practice exercises he'd missed. Then she sat with him in a video conference and worked through some of the material with him. Six weeks into the school year, the boy was requesting meetings with Proffitt, participating in synchronous sessions, and e-mailing on no-school days to clear up confusion and request additional assignments.

"Tailored Teaching" by Mark Lieberman in *Education Week*, November 4, 2020

Teaching Remote Lessons in 25-Minute Chunks

"One of the biggest complaints about online school is the zombie-like after-effects of spending too much time focused on a screen," say Kathy Swan, S.G. Grant, and John Lee (lead authors of the C3 Framework) and teachers Andrew Danner and Meghan Hawkins in *Social Education*. This school year finds educators, students, and families immersed in "some of the most momentous events that this country has ever experienced," say the authors, raising questions central to the social studies curriculum:

- In the throes of the pandemic, what is the balance between freedom and security?
- What will it take for the economy to recover?
- What will change as a result of the nation's racial awakening?
- Will the current crises bring out the best or worst in Americans?
- What do we make of this generation-defining election?

"Social studies educators cannot sit this year out," say Swan, Grant, Lee, Danner, and Hawkins, and suggest a way of chunking instruction that explores key issues while avoiding the zombie effect. Their idea is to apply the Pomodoro method, a time management strategy designed to keep people more engaged and productive. Devised in the 1980s by Italian business student Francesco Cirillo, Pomodoro breaks work into 25-minute intervals, separated by short breaks, with a 15-30-minute break after three Pomodoros (the name comes from a tomato-shaped kitchen timer). Different school schedules can accommodate these chunks: 30-minute classes (one Pomodoro), 60-minute classes (two), 90-minute blocks (three).

Last summer, the authors applied the Pomodoro principle to an inquiry unit on the 2020 protests, starting with an introduction, then building background knowledge, then assessing students' work and thinking about applications. Here are the eight 25-minute learning experiences, each building on the one preceding it:

- Provoking curiosity and highlighting the unit's core purpose with a compelling question;
- Teacher modeling of the historical practice of analyzing change over time;
- Students practicing with partners;
- Reinforcing ideas with the class;
- Independent practice;
- Group deliberation, with the teacher fine-tuning skills and knowledge;

- Summative assessment by the teacher;
- Applying ideas in real-world scenarios.

The authors say it's important to use a variety of formats within each Pomodoro: synchronous whole-class presentations and discussions; breakout room activities; polling; and chat box interactions. They found it was important to cue students to the breaks between Pomodoros, with everyone standing up, moving away from their computers, and doing jumping jacks or some form of physical activity. Without the prompt, students tended to switch to another browser and not get the cognitive break they needed before moving on to the next chunk.

The authors recommend recording Zoom meetings, making class recordings available to students, providing "office hours" several times a week to support struggling students, giving detailed instructions and scaffolds via Google Docs, using a class message board to elaborate on class discussions and breakout rooms, and modeling appropriate posting on the message board.

In the full article linked below, the authors give a detailed description of an eight-Pomodoro inquiry unit on the question, "Is there anything new about the 2020 protests?"

"Zooming Inquiry: Online Teaching with the Pomodoro Technique" by Kathy Swan, Andrew Danner, Meghan Hawkins, S.G. Grant, and John Lee in *Social Education*, September 2020 (Vol. 84, #4, pp. 229-235)

Physical Education in Covid-Time

In this article in *Principal Leadership*, James Barry and Ingrid Johnson say that physical activity is more important than ever during the pandemic. In addition to keeping students fit and strong when they're confined to their homes or a single classroom, well-planned physical activity helps deal with anxiety and stress and boosts the immune system. Observing three key restrictions…

- Conducting classes outdoors or in a well-ventilated space;
- Students physically distanced (for example, marking off 6 x 6-foot squares in a gym);
- Not sharing equipment, and sanitizing equipment after every class…

physical education teachers can make an important contribution. Some possibilities for in-school, hybrid, or at-home activities:

- Flipping instruction, with students watching demonstration videos on their own;
- Having students use Flipgrid to share their developing skills;
- Dances like the Cha-Cha Slide;
- Involving family members in scavenger hunts;
- Skills and games with each student using one ball;
- Personalized workout plans;
- Modifying activities for students with special needs;
- Mindfulness exercises.

Barry and Johnson recommend several organizations for ideas on safe physical education and sports activities: Move United, Chromebooks for Health and Physical Education, Adapt at Home

(for students with special needs), SHAPE America, OPEN (Online Physical Education Network) PE, PE Central, and Dynamic PE ASAP.

"Fit to Learn" by James Barry and Ingrid Johnson in *Principal Leadership*, October 2020 (Vol. 21, #2, pp. 20-21)

Jennifer Gonzalez on Managing Hybrid and Remote Instruction

In this *Cult of Pedagogy* article, Jennifer Gonzalez reports on her Twitter outreach to hundreds of teachers around the U.S. who are dealing with a variety of Covid-related changes in their instruction. "Depending on who's running your school," says Gonzalez, "you may be expected to do any number of instructional gymnastics to keep all of these students engaged and on track." Here's her curation of good ideas:

• *Create student cohorts*. These groups might be students who are remote, those who are face to face, those who are on the A or B schedule, or some mixture of different groups. This makes it easier for students who are in the same boat to ask each other questions and support their classmates when the teacher isn't available. It's also possible to bridge students who are physically separated by assigning tasks or projects to pairs, one at home and the other in school. Get-to-know-you activities are helpful as cohorts are formed.

• *Limit synchronous instruction*. Times when all students are plugged in and participating in real time need to be "very limited and used intentionally," says Gonzalez. Specific suggestions:

- Make synchronous time special – readalouds, readers' theater, Shakespeare with parts for at-home and in-school students.
- Use synchronous time to briefly introduce an activity and then debrief at the end.
- Start a class with a short pre-recorded video that gives everyone a task and reviews that day's agenda.
- Put everyone on Zoom, including students who are in the classroom.
- Check for understanding with apps like Pear Deck, Nearpod, Poll Everywhere, Mentimeter, and YoTeach!
- Have a backup plan for when technology fails, perhaps via choice boards.
- Differentiate synchronous instruction. For starters, does everyone need the same amount? Many teachers are putting their lectures and direct instruction on videos that students watch (and re-watch) on their own schedule.

• *Chunk the time*. It's "tremendously helpful," says Gonzalez, "to break up the class period into designated chunks, where some students are learning directly from the teacher, others are working in groups, and others are working independently." Ideally the structure should be visible and predictable. See the full article link below for Caitlin Tucker's and Beth Alexander's approaches to chunking.

• *Intentionally build community*. Here are some teachers' strategies to nurture this very important element:

- Reserve time to get to know each other.

- Make using names a classroom norm.
- Create communal spaces online with apps like Slack, Teams, Padlet, and Parlay.
- Use lunch and recess for socializing.
- Use video, with students sharing brief recordings via Flipgrid.
- Play games with Kahoot, Quizizz, GimKit, Minecraft, and Crumple & Shoot.

Time spent on community building will be repaid instructionally.

• *Experiment with more than one camera and screen*. This might be two Zooms, with one camera on the board (or document camera), the other on the shared screen. In a hybrid situation, this gives at-home students more of a feel for what's happening in the classroom. Some teachers communicate with those at home via Bluetooth earbuds and a microphone, so as not to disrupt in-person instruction. And Swivl cameras can track the teacher or follow group interactions for at-home students to watch.

• *Optimize discussions*. If these are synchronous and include at-home and in-school students, Gonzalez suggests:

- Establish norms – How students indicate they have something to say, time limits on participation, what's best for Chat, muting, and more.
- Enable the Chat, because some students will feel more comfortable participating there.
- Have someone else monitor the Chat, with the class pausing occasionally for a report on what chatters are saying.
- Share questions ahead of time. Some teachers get students' comments in advance and then call on them in the live discussion.
- Repeat students' questions so everyone can hear and consider them.
- Deal with crickets. If awkward silences are a problem, it's important to figure out the underlying reason. For example, more structure may be needed.

Gonzalez concludes: "Consider teaching in a post-Covid world the most massive project-in-Beta ever. It's going to be messy, but that's how humans learn and grow and adapt. Continue to experiment, fall apart on the days when it's your turn (because everyone seems to need a turn every now and then), ask students and parents for feedback, observe other teachers when you can, and most importantly, keep giving yourself and your students grace. We're getting through this."

"How to Teach When Everyone Is Scattered" by Jennifer Gonzalez in *Cult of Pedagogy*, September 29, 2020

Building Students' Writing Proficiency with Digital Tools

In this article in *Edutopia*, South Carolina teacher Lauren Gehr describes some advantages of digital interaction with students about their writing:

- It's easier for teachers to differentiate and personalize comments according to students' needs and social-emotional state.
- Students can refer back to teachers' comments and are less likely to forget them.
- Digital commenting can be done synchronously and asynchronously, in school and at home, with conferences scheduled when the writing is ready for assessment.

- The timing of conferences is not tied to the school day, and students can work at their own pace addressing teachers' feedback.

Gehr recommends three digital tools for this work:

• *Google Docs* – With this application, teachers can highlight a word, phrase, or passage for feedback. "This feature means that a teacher can leave their digital fingerprint on their students' work," says Gehr, "with the sure knowledge that the student will see the comments and feedback in the correct context." Students can respond, and Google Docs makes it easier to keep work organized, communicate via the chat function, track students' progress, and have everything in one place when it's time to assess.

• *Flipgrid* – Teachers can record video or audio suggestions on students' writing, and students can respond with comments or questions; these exchanges are saved to show progress and inform assessment.

• *Wakelet* – This online curation and collection tool helps students organize content and tools like Google Docs and Flipgrid by topic – e.g., narrative, argumentation, links to research sources, and a final portfolio of learning.

"Whether education is happening virtually or face-to-face," Gehr concludes, "digital tools can help ensure that students receive quality writing instruction."

"Promoting Strong Writing Skills with Digital Instruction" by Lauren Gehr in *Edutopia*, September 21, 2020

Joe Feldman and Douglas Reeves on Grading During Covid-Time

(Originally titled "Grading During the Pandemic: A Conversation")

In this *Educational Leadership* feature, assessment experts Joe Feldman and Douglas Reeves discuss student grading during the pandemic. Some highlights:

• For starters, says Reeves, "The pandemic should teach us what we already should have known: many grading systems are broken… Now is the time to learn these lessons and make changes."

• Because of the wide disparities in students' schooling this spring, says Feldman, "We'll need to be more focused on essential content, more explicit about what it takes to earn specific grades, more responsive and strategic with supports, and more expansive about how and when students can demonstrate what they know." This might include report card *Incompletes*, with opportunities to catch up.

• Given learning losses caused by the shutdown, and the fact that many students were behind before the pandemic, says Reeves, "Now's the time to finally face the reality that not every academic standard is equal." That means deciding on *power standards*: essential to the next level, enduring through several grades, and providing leverage (e.g., writing).

• Grades must be accurate, says Feldman, reflecting student understanding, and equitable, not advantaging students fortunate with resources. Most important, grades should be used for diagnosis and prescription.

• Some students have tougher home challenges, says Reeves, but "providing students sympathy or diminished expectations doesn't answer the challenges of inequity. Providing them

engagement, rigorous work, and supports during the school day does." Effective, fair grading policies are part of that – evaluating students' "latest and best evidence" of learning, not averaging work over time.

• It's also important that grades are based on academic proficiency, says Reeves, not behavior, compliance, or attendance, and that teachers are explicit about what needs to be learned or produced to improve a grade. Feldman agrees, adding that extra-credit work and homework should not count for grades, since those give a leg up to students with home advantages.

• Feldman believes it was fine to shift to *Pass/Fail/Incomplete* during the spring, but disagreed with letting students choose between *Pass/Fail* and letter grades; that option was likely used by more-fortunate students, creating two-tiered grading data. For the fall, he supports a return to letter grades "if we're confident that we can be accurate and equitable."

• Reeves believes that going forward, *Pass/Fail/Incomplete* is okay for elementary students, but says it "can lead to devastating inequalities for secondary-school students… [F]or economically disadvantaged students who depend on high grades to qualify for scholarships for postsecondary education, *Pass/Fail* grades deprive them of the chance to compete for scarce scholarship dollars, and dramatically reduce the probability that they will have access to college or technical school. That is a path to *inequity* with lifelong consequences."

"Grading During the Pandemic: A Conversation" with Joe Feldman and Douglas Reeves in *Educational Leadership*, September 2020 (Vol. 78, #1, pp. 22-27); the authors can be reached at joe@crescendoedgroup.org and dreeves@changeleaders.com.

Starting the Year with an Assessment of Students' Literacy Skills

In this *Edutopia* article, North Carolina eighth-grade teacher Kasey Short describes how she plans to get a handle on the skills, knowledge, and social-emotional status of her incoming students (either remotely or in person):

• *Information from sending teachers* – Short has reached out to seventh-grade colleagues for information on the concepts and skills that weren't fully covered in the spring, as well as areas her colleagues believe were a challenge for students during remote instruction. She has also asked for the last piece of formal writing students did before the summer; she'll look at how students did with grammatical concepts, transitions to connect ideas, supporting a thesis with examples, and logical organization.

• *Grammar* – Short will give a preassessment (using Socrative) to see where students are with subject-verb agreement, punctuation with commas, and distinguishing between types of clauses. Students will see their results immediately and set individual goals so they can measure progress when the same test is given at the end of the school year.

• *Sprint writing assignment* – After Short models the process, students will have seven minutes to write as continuously as possible on a list of topics, which will include their experience with remote learning, goals for the year, and extracurricular activities. They'll write in Google Classroom, and Short will use the comments area of the platform to give feedback.

• *Short story preassessment* – The curriculum will begin with a short story unit, introducing two yearlong essential questions:

- What can we learn about humanity from literature?
- How does contemporary society impact individuals?

After reading the story, students will answer questions and participate in a discussion of the essential questions using a digital thread and a live discussion. Short will gather information on students' reading comprehension, writing, grammar, and analytic skills, use of text details to support ideas, and ability to apply concepts from the text to the student's world.

"Starting the Year with Adaptable Literacy Preassessments" by Kasey Short in *Edutopia*, August 7, 2020; Short can be reached at kasey.short@charlottecountryday.org.

Selecting High-quality Curriculum Materials

EdReports has compiled free guidance on selecting first-rate classroom materials, especially suitable for use during the pandemic: https://www.edreports.org/resources/covid-19

"Do Your Materials Measure Up?" by Eric Hirsch and Courtney Allison in *The Learning Professional,* August 2020 (Vol. 41, #4, pp. 28-31)

Doug Lemov on Combining Synchronous and Asynchronous Pedagogy

In one of his online "field notes," author/educator Doug Lemov notes the advantages of two modes of learning that are top of mind these days:

- Synchronous – Builds connections with students, develops their habits of engagement and accountability, and allows the teacher to check for understanding in real time.
- Asynchronous – Allows students to work at their own pace on deeper assignments.

However, says Lemov, with synchronous classes, teachers are limited in the depth of learning they can assign, and too much Zoom work is exhausting. With asynchronous learning, it's hard to know how students are doing and whether they need help.

Lemov describes how English teacher Eric Snider combined the two modalities and reaped the benefits of each (there's a video segment of the class at the link below):

- Snider kicked off the lesson with an engaging 20-minute synchronous lesson on the novel the class was reading, playing an audiobook of a passage.
- He then set up students for independent work with a cue ("Get ready for a plot twist…") and a provocative question.
- He kept the Zoom connection live and students remained on the line as they worked (some turned off their cameras).
- The directions remained on the screen for students to review.
- Snider monitored students' work, giving brief compliments, letting them know he was available to help ("I'm here if you need me"), and inviting them to send him a chat if they needed more time.
- Then he brought the class back together to discuss how they did and review answers.

"(A)Synchrony in Action: Eric Snider's Hybrid Lesson" by Doug Lemov in *Teach Like a Champion*, May 31, 2020

Talking to Young People About Covid-19

This tip sheet from the Center for the Study of Traumatic Stress in Maryland has suggested scripts for explaining the pandemic to preschoolers, school-age children, and teens: what it is, how we protect ourselves, and how we protect people who are at risk.

Spotted in "How to Talk to Students About the Coronavirus Without Scaring Them" by Angela Duckworth in *Education Week*, May 27, 2020

A Detailed Guide for Online Learning

This 11-page guide has practical advice and numerous links for engaging students online and building lasting learning through taking in new content, strengthening long-term memory, and retrieving what's been learned.

"A Science of Learning Guide to Educational Technology" by Kristin Webster, Ryan Marklewitz, Sam Leitermann-Long, Eva Shultis, Andrew Seidman, and Ian Kelleher at the Center for Transformative Teaching and Learning at St. Andrew's Episcopal School, Maryland, April 2020; Kelleher and colleagues are open to feedback at ikelleher@saes.org.

Comprehensive Online Mental Health Resources

This website, created by Sam Dylan Finch, covers a wide range of issues: emotional, physical, situational, relational, and more.

"Your Covid-19 'Choose-Your-Own-Adventure' Mental Health Guide" by Sam Dylan Finch in *HealthLine*, April 24, 2020

An Online Activity to Help Students Understand Place Value

This website, created by Daniel Scher, helps students visualize numbers and place value on a number line. Students guess the location of a red dot on the line and then zoom out to get a more precise sense. There are multiple problems.

Spotted in "Place Value Activities for Third and Fourth Grade" in *Mathematics Teacher: Learning & Teaching PK-12,* May 2020 (Vol. 113, #5, p. 423)

UbD Units on Covid-19

Newsela has just published two Understanding by Design curriculum unit plans on the pandemic developed by Jay McTighe and colleagues. Available (with a free account) at:

Understanding the Covid-19 Pandemic and
Covid-19: Human Disease and Epidemics, A Study of Interacting Systems
You can learn more about the units in this recorded webinar by Jay McTighe:
https://go.newsela.com/Jay-McTighe-ODC.html

Jennifer Gonzalez Resources

This link provides access to an amazing array of materials and suggestions for online learning: https://www.cultofpedagogy.com/distance-learning/:

- Start with your head and your heart
- Nuts and bolts of online learning: Connecting and communicating with students, keeping everything organized, lesson design, content delivery, and options for demonstrating learning
- General tips and advice for teachers
- Troubleshooting, including helping students who don't yet have Internet access

"Distance Learning: A Gently Curated Collection of Resources for Teachers" by Jennifer Gonzalez in *Cult of Pedagogy*, March 30, 2020

Surveys on distance learning and well-being

Panorama Education is making several surveys available free at https://www.panoramaed.com/distance-learning-surveys. Panorama is also offering a free principal's toolkit, with a variety of resources for leading while schools are closed https://www.panoramaed.com/principal-toolkit-spring-2020.

Khan Academy Breakthrough Junior Challenge

This competition, launched on April 1, deadline June 25, 2020, challenges young people 13-18 to explain a big idea in physics, life sciences, mathematics, or the science of the COVID-19 pandemic in a 3-minute video. Competition and $$$ prize details are at https://breakthroughjuniorchallenge.org.

Updated Media Bias Chart

The Ad Fontes chart analyzes numerous media sources by reliability and political leaning: https://www.adfontesmedia.com/?v=402f03a963ba; more important now than ever for students.

A Virtual Kid Lit Party

With children's literature festivals and gatherings cancelled this spring and summer, several authors went to social media and very quickly put together the Everywhere Book Fest https://everywherebookfest.com, scheduled to open its virtual doors on May 1 and 2, 2020.

"Virtual Kid Lit Party" by K.Y. in *School Library Journal*, April 2020 (Vol. 66, #4, p. 19)

A Free Community-Needs Survey

Panorama Education is offering these survey questions on students' needs, as well as free tabulation of results:
https://www.panoramaed.com/community-needs-survey

Tips (with Graphics) for Online Learning

Paviter Singh has curated 18 brief tips for working with students remotely, each accompanied by a graphic symbol:
https://www.dropbox.com/s/rsm7bmqcaxxbtjt/ePedagogy%20Visuals.pdf?dl=0

Five Suggestions for SEL in Distance Learning

Janice Toben of the Institute for Social and Emotional Learning shares tips for distance learning under these headings: Rituals, Energize, Appreciation, Lighten, and Mindful:
https://www.instituteforsel.net/posts/realm

"A New REALM: IFSEL's Tips for Distance Learning" by Janice Toben, March 16, 2020

One State's Resources

The Massachusetts Department of Elementary and Secondary Education has compiled extensive resources for teachers and parents: http://www.doe.mass.edu/covid19/ed-resources.html

Resources for Homebound Preschoolers

Victoria McDougald compiled this list of 32 activities for the youngest students:
https://bit.ly/2QFuMPY

"Smiling Through: Thirty-Two Resources for Entertaining Energetic Preschoolers During Daycare and Preschool Closures" by Victoria McDougald in *Education Gadfly*, March 19, 2020

Advice from a New York City Charter School Leader

Robert Pondiscio interviews Success Academy founder and leader Eva Moskowitz on her schools' policies during the crisis:

https://bit.ly/2vIujFr

"Remote Learning Advice from Eva Moskowitz: 'Keep It Simple'" by Robert Pondiscio in *Education Gadfly*, March 18, 2020

PreK-12 Learning Resources

PBS/WGBH in Massachusetts offers math, ELA, social studies, and science resources for grades PreK-12: https://bit.ly/2UeooBf

Learning-at-Home Activities

Scholastic offers these resources for PreK-12:
https://classroommagazines.scholastic.com/support/learnathome.html

Teaching with Zines

This website has numerous suggestions for getting students creating "zines" – short magazine articles published as booklets:
https://zinelibraries.info/running-a-zine-library/teaching-with-zines/
Spotted in "Zines in the Classroom: Finding an Audience of One – or 100" by Trisha Collopy in *Council Chronicle*, March 2020 (Vol. 29, #3, pp. 26-29)

Phi Delta Kappan Survey, Resources

This link https://bit.ly/3auw9J9 has the results of a PDK survey and other resources for the coronavirus crisis.

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VIDEOS, GRAPHICS, AND LESSONS

Six Principles for Making Good Instructional Videos

In this article in *The Effortful Educator*, teacher/writer Blake Harvard shares what research has taught him about making instructional videos. This will be an important part of remote instruction with his Alabama high-school students this fall.

• *Dynamic drawing* – It's better to draw graphics in real time than present them already drawn. "The ability of the student to be able to see the person (or at least the hand) leading the instruction provides powerful social cues and can assist with guiding learners' attention," says Harvard. He's planning on getting the tools to record his whiteboard while he's talking through lessons.

• *Gaze guidance* – It turns out that people learn better from a video lecture when the teacher alternates looking at the board and at students. This makes a lesson more natural (and more like face-to-face instruction) than looking only at the board or only at the camera.

• *Generative activity* – Students get more from an instructional video when they take summary notes, write an explanation, or physically imitate the teacher's demonstration. Doing one of these activities (or being engaged in other ways) primes three cognitive processes:

- Focusing on and selecting important information;
- Organizing and mentally building a coherent structure;
- Integrating new information with relevant prior knowledge.

"Engaging in these processes during learning supports later performance on transfer tests," says Harvard, "and promotes deeper learning."

• *Perspective* – Students learn better from a narrated demonstration (for example, a lab in a science class) when it's filmed from a student's-eye view. This makes the demonstration more like what students would experience themselves.

• *Subtitles* – In a video, there are three channels for communicating content: images, spoken words, and printed words. Teachers need to be careful not to overload students' working memory, which usually means using only two modes at once. This is especially important with students working in their second language.

• *Distractions* – Learning can suffer when interesting but irrelevant words or graphics are added to a multimedia lesson to make it more entertaining. "This may cause a learner to engage in extraneous cognitive processing, permitting less working memory capacity available to commit to the processing of relevant information," says Harvard. He admits that he loves to insert jokes or stories into videos, but realizes that this may detract from what he's trying to accomplish.

"Principles to Improve the Effectiveness of Instructional Videos" by Blake Harvard in *The Effortful Educator*, August 3, 2020

Math Apps and Online Tools

In this *Edutopia* article, Emelina Minero recommends eleven math apps and online tools, some of which teachers have discovered during the pandemic (click the article link below for URLs of the apps):

Math skills and practice:

- *Moose Math* – This free app helps younger students practice counting, addition, and subtraction; students play math games to earn points to build a town.
- *Happy Numbers*, preK-5 – This subscription-based website breaks down math equations and helps students understand higher-order concepts; students become dinosaurs and hatch eggs when they solve problems.
- *Prodigy*, grades 1-8 – This free game-based website targets student weaknesses identified in its preassessment and tracks students' progress on them.

- *Zearn*, grades 1-5 – A free, self-paced program aligned with Eureka Math starts with fun warm-up activities, then has timed arithmetic problems with videos on new concepts.

Open-ended math tasks:

- *Open Middle*, preK-12 – This program leaves parts of an equation blank and asks students to make them true.
- *Would You Rather Math*, preK-12 – This site has students choose between two real-life examples and make a mathematical argument for their choice.
- *Which One Doesn't Belong*, PreK-12 – This site shows four shapes, numbers, or graphs and asks students to tell which one doesn't belong, using math vocabulary.

Rich math tasks:

- *Fraction Talks*, grades 1-12 – A website that encourages student observation and math discussions.
- *Visual Patterns*, K-12 – Shows the beginning of a pattern and asks students to figure out the equation to fit the pattern.

Simulation tools:

- *Applets* – These are a simple code with a specific objective – for example, statistics students manipulating and identifying sampling distribution patterns in graphs.
- *Desmos*, grades 6-12 – A website and app with interactive math activities and a graphic calculator; some teachers have been able to integrate social-emotional learning into Demos.

"11 Teacher-Recommended Math Apps and Online Tools" by Emelina Minero in *Edutopia*, July 27, 2020

Literature podcasts

Memphis teacher Christy Shriver works with How to Love Lit Learning, a nonprofit that produces free podcasts to supplement classroom studies of great literature. This month's edition is the final episode of a discussion of *Frankenstein* by Mary Shelley. Other studies are available on the website: *The Scarlet Letter*, *Lord of the Flies*, *Of Mice and Men, Raisin in the Sun,* and *Animal Farm*. There are also studies of poets and writers, including Paulo Neruda, Frederick Douglass, and
Elizabeth Cady Stanton. Shriver can be reached at christy@howtolovelitpodcast.com.

Two Student-Created Musical Performances

These online performances might put a smile on your face. The first is by students in EL Education schools:

• *Make the World Better* by EL Education students – https://vimeo.com/413100268

• *All Day Long (The Coronavirus Song)* by Chloe Langford – https://youtu.be/SJM-u6IABGQ

Free Daily Online Drawing/Cartooning Lessons

This *School Library Journal* article lets us know that author Jarrett (JJ) Krosoczka, creator of *Hey, Kiddo* and other popular titles, is doing a YouTube drawing/cartooning lesson every weekday at 2:00 p.m. Eastern Time at https://www.youtube.com/studiojjk. All previous lessons are available here: http://www.studiojjk.com/draweveryday.html

"Authors and Illustrators Lend a Hand" by K.Y. in *School Library Journal*, April 2020 (Vol. 66, #4, p. 18)

YouTube Channels for the Secondary Level

Emma Finn compiled these high-quality video links for middle and high-school students: https://bit.ly/3djZhVr

"Great YouTube Channels for Middle Schoolers and High Schoolers for Learning from Home During COVID-19 Closures" by Emma Finn in *Education Gadfly*, March 19, 2020

Great Minds Videos

These "Knowledge on the Go" materials and daily videos cover math, ELA, and science topics for grades K-8, as well as some high-school topics: https://gm.greatminds.org/en-us/knowledgeonthego

Online News Created by Elementary Students

The Little News Ears website for students age 4 to 9 covers the news with a light touch: https://littlenewsears.com. The site, whose content is free during the Covid-19 pandemic, was created at Tessa International School. Dan Buck is the head of school.

Tips for Making a Screencast

In this *Cult of Pedagogy* feature, Jennifer Gonzalez interviews Kareem Farah on the art of making a classroom video. One key takeaway: teachers' videos shouldn't be longer than six minutes!

"Everything You Need to Know About Building a Great Screencast Video" by Kareem Farah in *Cult of Pedagogy*, April 26, 2020, https://www.cultofpedagogy.com/screencast-videos/, interviewed by Jennifer Gonzalez

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FREE CHILDREN'S BOOKS

Young Adult Novels

This feature in *School Library Journal* has brief descriptions of 13 young adult romance novels, with grade-level recommendations.

"Meet-Cutes Come in All Colors: 13 Irresistible YA Romances" by Desiree Thomas in *School Library Journal*, May 11, 2020

What Students Are Reading

This *School Library Journal* feature lists what students at different grade levels are reading during the school-closure crisis; many of the books have direct links.

"What Are Kids Reading Now? Follett Reveals the Top E-book and Audiobook Checkouts" by Kathy Ishizuka in *School Library Journal*, April 29, 2020

An Online Book on the Pandemic

This book by Elizabeth Jenner, Kate Wilson, and Nia Roberts, illustrated by Axel Scheffler, explains the virus to children from preschool to grade six: https://nosycrow.com/wp-content/uploads/2020/04/Coronavirus_INSwith-cover.pdf.

Coronavirus: A Book for Children (Nosy Crow, 2020), spotted in *School Library Journal*, May 2020 (Vol. 66, #5, p. 12)

Free Audiobooks Online

This *School Library Journal* article notes several sources of material geared to the virus crisis, notably (you can find more in the full issue, next item): Audible's free site for families and children: https://stories.audible.com/discovery

"Going the Distance: Librarians, Covid-19, and the Online Learning Challenge" by *School Library Journal* Editors, illustration by James Yang, in *School Library Journal*, May 2020 (Vol. 66, #5, pp. 20-21)

School Library Journal Free Online

This highly informative magazine for school librarians and literacy mavens has just made its current content free:
https://msi.ipublishcentral.com/pdfreader/school-library-journal-may-2020
Be sure to check out "Comic Relief: Free Resources on Covid-19 in Graphic Form" on pages 34-35, and "Great Books: Asian Pacific American Showcase" on pages 39-41.

Nancy Flanagan Knapp

(University of Georgia/ Athens) suggests five areas in which teachers and school librarians can make effective use of technology, with free links in each:

• Making basic literacy skills practice effective and fun:

- PBS Kids Reading Games: pbskids.org/games/reading
- Education World, The Reading Machine: www.educationworld.com/a_tech/archives/readingmachine.shtml
- Scholastic Student Activities website: teacher.scholastic.com/activities/clf/tguidesitemap.htm
- The Learning Company games: classicreload.com

• Increasing the number and variety of texts available for readers at all levels:

- The International Children's Digital Library: en.childrenslibrary.org
- Unite for Literacy: uniteforliteracy.com
- Storyjumper: www.storyjumper.com/book/search
- Project Gutenberg: www.gutenberg.org
- Gismo Freeware: www.techsupportalert.com/free-ebooks-audio-books-read-online-download.htm
- Amazon and Barnes and Noble: search Free Kindle books at www.amazon.com or Free Ebooks at www.barnesandnoble.com.

• Scaffolding texts for struggling readers and writers of all ages:

- Tech for Teachers: Supporting Struggling Readers with Speech-to-Text: youtu.be/zBLXkAVyJWU

• Personalizing and differentiating instruction for diverse readers:

- Newsela: current non-fiction articles at multiple Lexile levels: newsela.com
- Simple English Wikipedia: simple.wikipedia.org/wiki/Main_Page
- Storyline Online: read-aloud, mostly for younger children: www.storylineonline.net
- Fact Monster: fun facts, trivia games, and homework help for elementary students: factmonster.com
- Khan Academy: short online tutorials for all ages: khanacademy.org

• Bringing out the social in reading:

- Goodreads for students 13 and up; librarians can create private groups with restricted membership: www.goodreads.com
- Biblionasium, which allows users to share their reading preferences; for students age 6-13: www.biblionasium.com
- Library Thing: lets students create a private but shareable personal bookshelf, for kids 13 and up: librarything.com
- Poetry-Free-for-All: for poets of all ages: www.everypoet.org
- Teen Ink: www.teenink.com
- Book Crossing: a forum for sharing actual print books in a unique way: www.bookcrossing.com
- Epals: A reputable global pen pal site that can encourage reading and writing: www.epals.com/#/connections

"Using Technology to Foster Real Reading in the School Library and Beyond" by Nancy Flanagan Knapp in *Knowledge Quest*, September/October 2019 (Vol. 48, #1, pp. 54-60); Knapp can be reached at nfknapp@uga.edu, summarized in Marshall Memo 802

Free webcomics

This *School Library Journal* feature by Mahnaz Dar provides links to 19 webcomics for middle-grade and young adult audiences: https://bit.ly/3bKeOfR

"19 Webcomics to Keep Kids and Teens Engaged" by Mahnaz Dar in *School Library Journal*, April 6, 2020

Permission from Publishers to Read Books Online

This link from *School Library Journal* https://bit.ly/2JrvKLO includes a constantly updated list of publishers who have granted special permission for teachers to read their books aloud online while schools are closed. The current list includes Abrams, Candlewick, Children's Books, Chronicle Kids, Crabtree Publishing, Disney Publishing, HarperCollins, Holiday House, Houghton Mifflin/Harcourt, Lee and Low, Lerner, Little Brown Young Readers, Peachtree, Penguin, Random House, Scholastic, and Simon & Schuster.

"Publishers Adapt Policies to Help Educators" in *School Library Journal*, March 18, 2020

- "10 Strategies for Leading Online When School Is Closed" by Reshan Richards and Stephen Valentine on Global Online Academy, March 4, 2020 - https://bit.ly/3a7yuK1
- "Five Tips for Designing Excellent Video Calls" by Emily Hamlin on Global Online Academy, March 13, 2020 - https://bit.ly/2Wir8iz
- "Coronavirus Has Led to a Rush of Online Teaching. Here's Some Advice for Newly Remote Instructors" by Jeffrey Young on *EdSurge*, March 11, 2020 - https://bit.ly/2WjrVQ8
- "Best Practices: Online Pedagogy" from Harvard University, https://teachremotely.harvard.edu/best-practices
- Resources compiled by Jennifer Gonzalez - https://bit.ly/3d3x8lh

In addition, children's books are available free at Bookshare: www.bookshare.org/cms/

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ONLINE TEACHING TECH RESOURCES AND TROUBLESHOOTING

Making Good Decisions on Educational Technology

In this *Edutopia* article, instructional coach Shveta Miller draws on her 15 years as a teacher and another four years as a literacy specialist with edtech companies to suggest criteria for evaluating the plethora of technology tools and resources that are vying for teachers' attention:

• *Efficacy* – Few front-line educators have the time to check out the research claims made by vendors. "To quickly gauge the impact that a tool can have on your students' learning," Miller recommends, "examine testimonials from students and teachers who have used it… Check to see that there are testimonials where a student enthusiastically describes a new concept they learned, elaborating on how their perspective on an issue changed, or even mentioning what they are reading about or what interesting problems they are learning to solve."

• *The student experience* – See if you can demo the product as a student. If so, check it out from the perspective of an English language learner, an advanced reader, and a student with ADHD. Are there audio or captioning options? Is the audio voice robotic and unengaging? Is the program accessible to visually impaired students? To students who cannot use a mouse?

• *Intrinsic motivation* – Does the program use extrinsic motivators like points, badges, or competition? Or does it activate intrinsic motivation by having students set measurable, achievable goals and see status updates? Most important, is the content relevant and intellectually stimulating?

• *Zone of proximal development* – Edtech companies often claim that their product will be in students' sweet spot – not too hard and not too easy – and will engage them in productive struggle. "It's important to know," says Miller, "if a program is actually serving as a skilled guide for students working in their true ZPD or simply providing general scaffolds or assisted instruction. If it is offering the latter, then teachers can proceed to provide the former."

• *The teacher experience* – Does the program alert the student and teacher about students' current level of mastery, and when they're ready to move up? Miller says this is a weak area in many programs she's analyzed.

"What Matters Most When You're Evaluating Edtech Tools" by Shveta Miller in *Edutopia*, November 12, 2020

A Video on Using Jamboard

This 12-minute video by Sam Kary describes the many ways Jamboard, an online interactive whiteboard, can be used.

"How to Use Google Jamboard for Remote Teaching" by Sam Kary on the New EdTech Classroom, June 20, 2020

Virtual connections

This free (with registration) toolkit from Panorama Education has nine virtual learning resources to build connections with students, families, and staff.

"9 Virtual Learning Resources to Build Connectedness with Students, Families, and Staff" by Panorama Education, October 2020

A Homemade Lightboard for Remote Teaching

In this *NewsUSC* article, Eric Lindberg describes how Emily Nix (University of Southern California) is improving her online teaching this fall. She mounted a sheet of plexiglass in a wooden frame and rigged up LED lighting around the outside – think of it as a glass chalkboard infused with light. When she conducts her classes (synchronous or asynchronous), Nix stands with the plexiglass between her and her laptop, with the image software-mirrored. When she writes words and draws diagrams on the plexiglass, they are clearly visible to students. There's the added advantage that she is facing "the class" as she writes on the "board" – something that isn't possible in a physical classroom.

Nix shared a Twitter video (see the link below) and has had an enthusiastic response from tens of thousands of educators. "I will say I'm much more enthusiastic about the online experience now than I was before I invested in this and figured out, hopefully, to do it well," says Nix. "We can't change the fact that the pandemic is here. But we can help you enjoy and learn the material as well as you could in person." This whole setup cost her just $60 at the hardware store, compared to around $8,000 for a professional lightboard.

"USC Professor's DIY Online Teaching Hack to Engage Students Goes Viral" by Eric Lindberg in *NewsUSC*, August 17, 2020; Nix can be reached at enix@marshall.usc.edu.

Virtual School Day and Virtual Summer Camps

Missouri-based Varsity Tutors is offering these services free during the pandemic. For more information, contact Lucy Crouppen at lcrouppen@varsitytutors.com.

Online Writing Ideas

The 826 website has free resources focused on getting students to write well.

"A Good Time to Write" from 826 National

Online Writing Prompts

The 826LA website has numerous suggestions to get students writing, organized by grades 1-5 and 6-12. "826LA" May 2020

UbD Units on Covid-19

Newsela has just published two Understanding by Design curriculum unit plans on the pandemic developed by Jay McTighe and colleagues. Available (with a free account) at:
Understanding the Covid-19 Pandemic and
Covid-19: Human Disease and Epidemics, A Study of Interacting Systems
You can learn more about the units in this recorded webinar by Jay McTighe:
https://go.newsela.com/Jay-McTighe-ODC.html

Zoom Breakout Rooms

Here are instructions on how you can randomly assign a group of up to 150 students to breakout rooms of 3 (or more):
https://support.zoom.us/hc/en-us/articles/206476093-Getting-Started-with-Breakout-Rooms

Zoom Polling

Another powerful feature of Zoom is the ability to conduct a live poll of participants. Here are the instructions:
https://support.zoom.us/hc/en-us/articles/213756303-Polling-for-Meetings

Dealing with Zoom Problems

These articles in *The New York Times* and *Education Week* report on malicious harassment of Zoom meetings and classes in recent weeks. Some of the "zoombombing" interruptions are by organized groups using a variety of platforms (including Discord, an app popular in right-wing circles) to plan attacks, while others are by teenagers who say they are stressed out by the schoolwork their teachers are assigning (classroom management problems that have migrated to the online world). Zoom, which had 76 million first-time installs in March, has scrambled to provide safeguards and advice to users and respond to concerns about data privacy.

Here are Massachusetts teacher Megan Mullaly's suggestions for K-12 educators. They've been widely shared on Twitter (spotted in the *Education Week* article linked below):

- Do not post your link publicly.
- Consider using a password for entry to your classes.
- Use the Waiting Room feature to screen new arrivals.
- If possible, have another teacher co-host to manage waiting room, comments, muting.
- Turn off Private Chat (this eliminates chats among students but leaves on group chats).
- Turn off Screen Sharing (it can be added back once norms are established).
- Turn on the "remove uninvited participant" and/or "put participant on hold."
- Lock your meeting once everyone is present.
- Explore other settings, including Chime Upon Entry, Muting All, Annotations, etc.
- Use Zoom for check-ins, games, and social interaction but not for direct teaching.
- Have some practice Zooms with friends and co-workers to check out the features.

"As Zoom's Use Soars, So Does Its Abuse by Harassers" by Taylor Lorenz and Davey Alba in *The New York Times*, April 4, 2020, https://nyti.ms/2Xg6i3M and "Zoom Use Skyrockets During Coronavirus Pandemic, Prompting Wave of Problems for Schools" by Mark Lieberman in *Education Week*, April 3, 2020, https://bit.ly/3bWkqmQ

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KIM MARSHALL'S TEACHING MATERIALS

(available free at the links below)

Guns, Germs, and Steel Summary: Written in consultation with author Jared Diamond, this 14-page summary (with maps and illustrations) of the Pulitzer Prize-winning history of the origins of worldwide wealth inequality is suitable for high-school students in world/global studies courses bit.ly/2IYJq0y

The Story of Life, from the Big Bang to You: Written for middle- and high-school students (with illustrations by Ingrid Johnson), this is a comprehensive history of the origins of the solar system, the Earth, and life on Earth (originally published by Holt, Rinehart, & Winston, the updated 2019 edition is open source) bit.ly/38ZI6ov

Reading Stories, Book 1: 92 high-interest stories with comprehension questions originally published by Educators Publishing Service, now open source marshallmemo.com/articles/Reading%201.pdf

Reading Stories, Book 2: 94 high-interest stories with comprehension questions, originally published by Educators Publishing Service, now open source marshallmemo.com/articles/Reading%202.pdf

English: 36 Cumulative Units in Grammar, Writing Skills, and Word Analysis, Book A, originally published by Educators Publishing Service, now open source marshallmemo.com/articles/English%20Book%20A.pdf

English: 36 Cumulative Units in Grammar, Writing Skills, and Word Analysis, Book B, originally published by Educators Publishing Service, now open source marshallmemo.com/articles/English%20Book%20B.pdf

Math: 35 Cumulative Units in Concepts and Skills, Book A, originally published by Educators Publishing Service, now open source marshallmemo.com/articles/Math%20Book%20A.pdf

Math: 35 Cumulative Units in Concepts and Skills, Book B, originally published by Educators Publishing Service, now open source marshallmemo.com/articles/Math%20Book%20B.pdf

(Teacher guides to the English and Math workbooks are available at www.marshallmemo.com, click Kim Published Writing and scroll down to Curriculum Materials.)

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