Marshall Memo 234

A Weekly Round-up of Important Ideas and Research in K-12 Education
May 12, 2008

In This Issue:

Quotes of the Week

"Trust us, we won't disappoint you. Guide us, but don't infantilize us. Show us, don't only tell. Listen to us."

Middle-school students to Scott Greenwood and Patrick McCabe in "How Learning Contracts Motivate Students" in *Middle School Journal*, May 2008 (p. 21)

"A good principal does not hold on to dogmatic beliefs about best practices but acknowledges the tentativeness of his or her suggestions and respects teaching and teachers."

Jeffrey Glanz (see item #1)

"Could it be that the time-honored process of teacher evaluation is an ineffective strategy for improving teaching?"

Kim Marshall (see item #2)

"Teachers are most likely to commit their hearts and souls to high achievement for all students when they work in schools where no one accepts 50 percent or 60 percent or 70 percent proficiency and where teams constantly check for understanding, feed each other ideas, fine-tune their teaching, push each other to do better, and follow up with every child… This work isn't easy, but it's the key to closing achievement gaps."

(*Ibid*.)

"Understanding a concept in the classroom doesn't mean that it will be retained for later recall."

Laurynn Evans (see item #3)

1. Five Virtues for School Principals

In this thoughtful *Principal Leadership* article, Yeshiva University professor (and former assistant principal) Jeffrey Glanz identifies these virtues for school leaders:

• *Courage* – "Schools need principals who will ensure that the rights and dignities of others, especially the disenfranchised, are recognized and upheld," says Glanz. He believes that courage comes more easily when leaders have well-reasoned, articulated values and beliefs that immediately come to the fore when injustices occur or values are challenged.

• *Impartiality* – Glanz says this consists of "freedom from prejudice, bias, and favoritism." It takes courage to refrain from favoritism, he says, for example, when wealthy parents who are well-known in the community ask for "consideration in this matter" when their son faces a suspension. "Favoritism leads inevitably to corruption," writes Glanz, and he urges school leaders to carefully examine their own prejudices and reflect on times they may have shown favoritism; "awareness is an important step toward ensuring an unbiased stance," he says.

• *Empathy* – Principals need to listen to others' perspectives, respond appropriately, and remain committed to relationships, which are key to "motivating, cajoling, and inspiring others to excellence."

• *Judgment* – This means applying knowledge and wisdom sensibly, says Glanz – "the ability to consider a wide array of factors, sometimes simultaneously and immediately." He says that good judgment can be nurtured by periodically closing the office door, taking the phone off the hook, and reflecting on actions recently taken.

• *Humility* – The key outcome of humble leadership is empowering others to play important roles in school improvement. "Humble principals prefer to stay in the background not because they are shy, reticent, or insecure," says Glanz, "but because they are confident and secure enough in their own accomplishments to herald the achievements of others… A good principal does not hold on to dogmatic beliefs about best practices but acknowledges the tentativeness of his her suggestions and respects teaching and teachers."

"Five Essential Virtues for Leading Ethically" by Jeffrey Glanz in *Principal Leadership*, May 2008 (High School Edition, Vol. 8, #9, p. 64-66), no e-link available; the author can be reached at glanz@yu.edu.

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2. Is Supervising the Heck Out of Teachers the Answer?

In this article in *Education Week*, Kim Marshall says that there is a wrong way and a right way for principals to get into classrooms and use student learning results as part of the supervision/evaluation process:

Announced classroom visits are largely bogus, says Marshall. Principals are in classrooms for a tiny fraction of the school year (usually about .5 percent of instructional time); many teachers put on a dog-and-pony show that is not representative of the kind of instruction students are getting the rest of the year; and when principals sit in classrooms doing evaluations, they change the dynamic and skew what's observed. "High student achievement depends on first-rate instructional practices happening week after week and month after month," writes Marshall. "But are they? Principals make an educated guess about what's happening during the 99.5 percent of the time when they're not there, say a prayer – and rely on teachers' professionalism."

As for using test scores to evaluate teachers, there are serious practical and ethical problems, says Marshall:

- The results of most tests aren't available until summer – too late for the usual May deadlines for teacher evaluations.
- More than half of teachers don't give standardized tests (including primary grades, art, music, and physical education).
- Most tests are not designed to measure individual teachers' performance.
- Even the "value-added" approach (measuring gains from September to May) is not valid unless at least three years of data are used.
- Many tests measure lower-order skills and factual knowledge, so making them high-stakes risks dumbing down the curriculum;
- High-stakes use of test results could lead to more cheating by stressed-out teachers.
- Raising the stakes undermines the kind of "professional learning community" collegiality essential to improving teaching and learning.

But is there an alternative to using test scores? In a recent Education Sector report, Thomas Toch and Robert Rothman suggested that teams of evaluators from outside each school should replace principals as evaluators, making multiple visits to each classroom and writing up detailed reports. This approach would be expensive, concede Toch and Rothman, but they argue that it would be more effective than what we're doing now and that funds could be captured by curtailing worthless professional-development workshops.

"Not so fast!" says Marshall. Expert observations might be able to *describe* the classroom practices that are producing higher student achievement – but do they *improve* teachers who are not already effective? "Could it be that the time-honored process of teacher evaluation is an ineffective strategy for improving teaching?" he asks. "It's a shocking, counterintuitive thought, but it might explain why supervision and evaluation never show up as key variables in studies of effective schools."

Why might this be true? In addition to the sampling-error problems mentioned above, Marshall believes the fundamental reason is that conventional teacher evaluation is basically

paternalistic – "Theory X" management, focused on inspection, versus "Theory Y", focused on employee involvement in improving results.

So what *does* improve teaching? "Removing ineffective teachers, for starters," says Marshall, "which requires intensive classroom visits, honest evaluations, opportunities for each underperforming teacher to improve, and the courage to pull the trigger. Thoughtful hiring is also crucial, since each vacancy is an opportunity to get another top-notch teacher on the team." But beyond these basics, the principal needs to skillfully orchestrate seven factors, with sufficient time and support for each one:

• *Shifting the conversation to results* – The principal needs to get all staff members focused on what students are actually learning, without making results part of teachers' evaluations. "Collegial conversations about what's working and what isn't working are most productive when they are low-stakes," he argues.

• *Backwards planning* – When teacher teams plan curriculum units with outcomes in mind, and when they write their assessments up front, there's a natural focus on outcomes. Reviewing and discussing unit plans is a far better use of principals' time than reviewing lesson plans, Marshall argues.

• *Interim assessments* – High-quality, common tests given four or five times a year and scored immediately can give teacher teams the diagnostic information they need to fix learning problems, help struggling students, and continuously improve what they're doing in classrooms.

• *Student involvement* – The interim assessment process becomes even more powerful when students know where they are on the learning continuum, set goals, and get invested in the steps they need to take to reach them.

• *Instructional coaching* – "Teachers thrive on formative feedback from educators who know what they're talking about," says Marshall – principals, assistant principals, department heads, peers, and district coaches. "Feedback is most effective when it revolves around interim results and points teachers toward specific techniques (such as in-the-moment assessments to catch student errors in real time), visits to exemplary classrooms, or pertinent workshops, articles, or books." Low-stakes coaching is far more productive than intensive evaluation, argues Marshall.

• *Mini-observations* – "The best way for principals to get a reality check on teachers' practices and to stay in close touch with classrooms is to make several unannounced classroom visits a day," says Marshall, "and then have candid face-to-face conversations with each observed teacher within 24 hours." This process sparks hundreds of substantive conversations about teaching and learning – and becomes even more robust when the principal is deeply involved in discussions of interim assessment results.

• *Evaluation rubrics* – Well-constructed teacher evaluation rubrics are much better than conventional checklists and narratives, argues Marshall. "Rubrics spell out exactly what performance looks like at each level and give less-than-stellar teachers a road map for improvement. Equally important, they are much less time-consuming to complete, freeing up principals to focus on the right stuff."

Marshall concludes by citing Robert Marzano's recent statement that, beyond a few basics, there isn't one right way to teach. "Rather than prowling through classrooms with checklists of 'correct' practices," says Marshall, "administrators should be looking at interim results with their teachers, identifying the most effective practices, and improving what's not working. This approach makes sense in human terms – and it's also good management."

What will motivate teachers to do their best teaching every day and persist when their students aren't learning? Aggressive supervision and evaluation? Using test scores for evaluation? Merit pay? "I doubt it," says Marshall. "Teachers are most likely to commit their hearts and souls to high achievement for all students when they work in schools where no one accepts 50 percent or 60 percent or 70 percent proficiency and where teams constantly check for understanding, feed each other ideas, fine-tune their teaching, push each other to do better, and follow up with every child… This work isn't easy, but it's the key to closing achievement gaps."

This idea is best summarized by British researcher, Dylan Wiliam: "Agile teaching, responsive to student learning minute by minute, day by day, month by month."

"Is Supervising the Heck Out of Teachers the Answer?" by Kim Marshall in *Education Week*, May 7, 2008 (Vol. 27, #36, p. 23, 25); the article, and Marshall's teacher evaluation rubrics, are available at http://www.marshallmemo.com (click on Kim Marshall Bio/Publications and scroll down).

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3. Using "Reflective Assessment" to Improve Students' Retention

In this article in *Principal Leadership*, Washington state high-school assistant principal Laurynn Evans describes her frustration over the years when students would seem to grasp a math concept in class – *Aha!* – and then forget it when they're given an assessment several weeks later. "Understanding a concept in the classroom doesn't mean that it will be retained for later recall," she writes.

Now Evans believes she's found the answer – reflective assessment – an approach to improving memory that goes back to the ancient Greeks and has an impressive track record in recent research. Reflective assessment consists of teachers guiding students to think about their thinking and reinforce what they have learned – or see if they have not really understood it and need to try again. "Reflective assessment helps students discern what they know and what they do not know and connect what they are learning to other experiences and information," explains Evans. It's especially important in mathematics, because the curriculum is sequential and success at each level depends on retaining concepts and skills from previous lessons. Evans describes specific reflective assessment techniques:

• *I learned… (a.k.a. exit cards)* – At the end of a class, the teacher has students write, "I learned…" on a piece of paper and complete the sentence, elaborating to the degree they feel comfortable. A variation is to ask students to answer an open-ended question on the most important concept presented in the class. This simple exercise serves a dual purpose: it

reinforces learning in students' brains, and it tells the teacher if follow-up, feedback, or reinforcement is necessary the next day.

• *Percolating* – The teacher writes a thought-provoking question on the board for students to think about during the week – an "essential question" that doesn't have a simple right or wrong answer and requires deep thought on the curriculum that's being studied. For example, students might be asked, "In what way is the solving process for this equation similar or different from equations we solved in the last unit?" or "How might this week's lesson apply in the real world?" During the week, students think about the question alone or with a partner, jot down their thoughts, and perhaps present them in writing, charts, diagrams, or drawings. This process informs the teacher what students are getting and not getting and helps students think through and solidify their learning.

• *Talk about it* – The teacher gives students a few moments to talk with a partner about what they have learned, and circulates, listening to what students are saying. This allows students to test their understanding and get feedback from other students, and helps the teacher see what's been grasped and what hasn't.

"The Aha! Moment: Making Math Concepts Stick" by Laurynn Evans in *Principal Leadership*, May 2008 (High School Edition, Vol. 8, #9, p. 17-20); available at http://www.principals.org/s_nassp/sec.asp?CID=1515&DID=57450; the author can be reached at evanslh@mukilteo.wednet.edu.

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4. How Can Teachers Teach So Students Remember?

(Originally titled "Making Lasting Memories: A Conversation with Marilee Sprenger")

In this Rick Allen interview in ASCD's *Education Update*, Marilee Sprenger, author of *How to Teach So Students Remember* (ASCD, 2008), summarizes the seven steps of the learning/memory cycle. She believes students should be explicitly taught about these steps so they understand how their brains work.

- *Reach* – At this stage, it's important for teachers to make the material appealing, perhaps embedding the concepts or big ideas in a story, then introducing facts, then linking conceptual information back to the original story.
- *Reflect* – Reflection time gives students a chance to make connections with prior knowledge and experiences.
- *Recode* – Having students write about what they are learning helps to crystallize and clarify it in their own words.
- *Reinforce* – The teacher should reinforce students' "translation" of the material by giving feedback.
- *Rehearse* – Further rehearsal based on the teacher's feedback helps embed the material in long-term memory. Mnemonics, acronyms, and other memory devices can help at this and other stages.
- *Review* – A "dress rehearsal" and other forms of review further embed the memory.

- *Retrieve* – The student should now be ready to access the memory in an assessment or some real-world application. Multiple-choice assessments are the easiest, straight recall the hardest.

The more the student recodes, reinforces, rehearses, and reviews material, says Sprenger, the more readily it can be retrieved.

"Making Lasting Memories: A Conversation with Marilee Sprenger" by Rick Allen in *Education Update*, May 2008 (Vol. 50, #5, p. 4-5); this interview is available free at http://www.ascd.org/infocon (navigate to Update, then May 2008 issue)

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5. Stepping Up Math and Science Teaching in U.S. Classrooms

In this *Principal Leadership* article, Lesson Lab researchers Kathleen Roth and Karen Givvin, who worked on the science and math portions of the 1999 Third International Mathematics and Science Study (TIMSS), have some observations and suggestions for U.S. schools.

• *Math problems that ask students to make connections* – American teachers tend to reduce and simplify challenging problems, making them into exercises in following procedures and almost never making rigorous cognitive demands of their students. Teachers in higher-achieving countries get much more mileage from making-connections problems, challenging their students to think them through without much scaffolding and help. "Students grappled with the problems making links across ideas and concepts, generalizing, and conjecturing," write Roth and Givvin, which produced markedly higher achievement on international math assessments.

"These results suggest that U.S. teachers should make the most of rich, making-connections problems and let students struggle," they continue, "rather than step in to simplify so that students can come up with the right answer. This will require a change in culture, because U.S. students are used to being given hints to the answers, rather than being required to reason. It will also require teachers to acquire more-sophisticated knowledge of mathematics so that they can facilitate the process of making connections."

Principals can support this process by getting teachers to professional development that increases their content and pedagogical knowledge, letting teachers observe colleagues who demand more of their students, and telling teachers, students, and parents that it's okay for students to struggle with important math concepts.

• *Core science concepts* – The TIMSS study found that higher-scoring countries got their students focused on a few well-defined core concepts and ideas in each course, whereas U.S. schools tended to engage students in activities on a variety of topics. Roth and Givvin believe that American teachers should focus more directly on the key science ideas in each unit and lesson, and shape lesson activities around those core concepts – not just on procedures and results. "Teachers should also review each potential lesson activity to ensure that it matches the lesson's learning goal and advances the content story line," they write. They list these steps to building a coherent content story line:

- Identify one main learning goal;
- Communicate the purpose with goal statements and focus questions;
- Select activities and content representations that are matched with the learning goal;
- Link science content ideas and activities;
- Highlight important ideas and links among them;
- Sequence key ideas and activities appropriately;
- Summarize and synthesize important ideas.

Principals can support this process by providing effective professional development and class visitations, as with math, and also by setting aside time for teachers in each grade to collaborate to develop clear, coherent content story lines for units and lessons and making their core ideas prominent in each lesson.

"Implications for Math and Science Instruction from the TIMSS 1999 Video Study" by Kathleen Roth and Karen Givvin in *Principal Leadership*, May 2008 (High School Edition, Vol. 8, #9, p. 22-27), available at http://www.principals.org/s_nassp/sec.asp?CID=1515&DID=57452; the authors can be reached at kathyr@lessonlab.com and kareng@lessonlab.com.

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6. Making Time the Variable in High-School Math Courses

In this *Principal Leadership* article, Jody Mimmack and Lee Carleton, principal and assistant principal at a Mesa County, Colorado high school, describe how they tackled the problem of a much lower sophomore proficiency rate in math (42%) than in reading (85%), writing (69%), and science (60%). Looking at student failure data, the leadership team realized that the inflexible course schedule was part of the problem. Students who failed geometry had to take the whole course over again the next year. "All students can learn," write the authors, "some just need more time than others." But how could time be made the variable and student success the constant? The school decided it was time to rethink the traditional schedule and come up with more effective interventions. Here's what they implemented in the 2007-08 school year:

- Three parallel geometry courses, all meeting at the same time of day, so students could easily transfer from one to another.
- One geometry course lasting a semester (Q1-Q2).
- One course lasting a full year (Q1-Q4).
- One lasting a year and a half (Q1-Q6).
- Students were placed in the courses based on previous achievement, attendance, and input from students and parents.
- A separate math lab was required of all students in the 1½-year course.
- Teachers created a common assessment to gauge students' proficiency, with 70% as the proficiency target.

- The first assessment was given at Week 3 in the semester class and Week 6 in the yearlong class. Based on the results, a number of students were moved from the semester to the year-long course, and from the year-long course to the 1½-year course.

How did this work out? The three courses had markedly lower failure rates. For example, before the new configuration, 10 percent of Geometry A students failed and had to wait until the next year to re-take their course. In the first quarter of 2007, with the new courses, only 2 percent of students failed the first half-semester of Geometry A, and they were immediately placed in the yearlong geometry course and got back on track to success. At the end of the first semester of the year-long geometry course, only 1 percent of students failed, compared to 10 percent the previous year.

"Changing Variables" by Jody Mimmack and Lee Carleton in *Principal Leadership*, May 2008 (High School Edition, Vol. 8, #9, p. 38-42), no e-link; the authors can be reached at jmimmack@mesa.k12.co.us and lcarleto@mesa.k12.co.us.

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7. Building Middle-School Students' Momentum

In this *Middle School Journal* article, Western Carolina University professor David Strahan uses the case study of Randy, an at-risk eighth grader, to describe a research-based, step-by-step process that teachers can use to build *momentum* for academic achievement. "Athletes and coaches talk of momentum in sports," says Strahan. "Advertisers try to create momentum for new products. Politicians try to strengthen momentum for candidates and ideas." So what does momentum look like in school? It's the integration of "skill" and "will", says Strahan – a sense of self-efficacy. Students with momentum can confidently tackle new assignments, knowing they have the skills and strategies to be successful. Students without momentum, on the other hand, lack confidence and have often internalized a sense of inadequacy. They don't invest effort and energy in new tasks and are often caught in a downward spiral of failure and disengagement in school.

Strahan outlines these progressive stages for developing academic momentum in reluctant students:

• *Creating classroom communities that nurture trust* – Caring relationships are the necessary precursor of improvement, says Strahan. "Successful teachers cultivate trust by involving students in conversations that allow them to learn more about students as individuals, to understand their academic strengths and needs, and to encourage shared responsibility and team building. They also promote positive relationships among students so that they support each other."

• *Sinking their teeth into learning* – Once trust is developed, students can take some risks and get involved in their schoolwork, especially if the teacher scaffolds activities, provides models of strategies in action, gives them honest feedback on their work, and provides explicit guidance.

• *Setting goals and planning* – As students get more engaged, they can set goals, make plans, and take responsibility for their own learning – all with their teachers' guidance and support.

• *Experimenting with new behaviors, thoughts, and feelings* – At this stage, it's helpful to give students choices of assignments. "They can consider alternatives, tap prior knowledge, try strategies in different ways, and relate them to real-world experiences."

• *Growing stronger academically* – As students become more confident and competent, says Strahan, they can candidly assess their own progress, monitor how engaged they are, refine their goals, and improve their skills. They have achieved academic momentum, and their achievement will improve accordingly.

"Successful Teachers Develop Academic Momentum with Reluctant Students" by David Strahan in *Middle School Journal*, May 2008 (Vol. 39, #5, p. 4-12), no e-link available; the author can be reached at strahan@email.wcu.edu.

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8. An Alabama Inclusion Model for Middle-School Special-Needs Students

In this *Middle School Journal* article, four Alabama educators (three from the University of Alabama at Birmingham) use the case study of middle-school student Derrick to describe their "M^{2}ECCA" model for successfully including students with special needs in standards-based urban classrooms. Here are its components:

• *Methods* – Well-adapted content-area reading strategies, including graphic organizers, read-alouds, magic squares, word imaging, and charades.

• *Materials* – Texts related to students' interests; multi-leveled learning centers; assistive technology; manipulative literacy tools, including magnetic letters, word blocks, cards, felt letters, and sand boxes.

• *Environment* – Teachers' belief that all children can and will learn; outreach by teachers to learn about the community's culture, values, and mores; a classroom theme that fairness consists in each student getting what he or she needs; articulation of values and respect for differences; preferential seating to minimize distractions; careful placement of furnishings and equipment; individual student mailboxes and personalized task cards; learning centers; pair/share activities; encouragement of risk-taking.

• *Content* – Learning standards identified; finding how each student can meet or approximate the standard; linking academic content to students' interests; mapping each student's strengths onto each standard.

• *Collaboration* – General-education and special-education teachers co-teach during the literacy block; teachers, parents, and other professionals communicate and work together for the students; peer helpers and collaborative learning groups are used in the classroom.

• *Assessment* – Each special-needs student's interests and preferences are identified; students are systematically observed inside and outside the classroom; formal and informal literacy and content assessments are done.

"Engineering Successful Inclusion in Standards-Based Urban Classrooms" by Deborah Voltz, Michele Jean Sims, Betty Nelson, and Carmelita Bivens in *Middle School Journal*, May 2008 (Vol. 39, #5, p. 24-30), no e-link available; the authors can be reached at voltz@uab.edu, mjsims@uab.edu, benelson@uab.edu, and cbivens@bessk12.org.

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9. Why Hasn't Reading First Boosted Students' Reading Comprehension?

This lead article in *Education Week* summarizes an interim report just released by the Institute of Education Sciences in the U.S. Department of Education. Researchers found that while the $1 billion-a-year Reading First initiative has increased the amount of time schools have devoted to early reading instruction and has improved students' phonics skills, it has had no measurable effect on students' reading comprehension. Grover Whitehurst, director of the IES, said there are four possible reasons for this disappointing outcome: first, that "scientifically based reading instruction" isn't an effective way to improve the bottom line of reading instruction – comprehension; second, that teaching decoding, fluency, and vocabulary have the *potential* to improve comprehension, but schools haven't been spending enough time on them; third, that schools haven't implemented basic-skills instruction properly; and fourth, that improvements in basic-skills practices have spread to schools not participating in Reading First, muting the comparative impact in participating schools.

Some commentators bemoaned the disappointing results. "It's a lot of money, and a lot of hard work being done by teachers and others, and you would hope to see some progress from that," said Timothy Shanahan, a University of Illinois/Chicago researcher. Congressman George Miller, chairman of the House education committee, said that Reading First had been plagued by "severe mismanagement, poor implementation, and gross conflicts of interest… This report makes it shamefully clear that the only individuals benefiting from this significant investment were the president's cronies."

Others suggested a number of ways in which the program could be improved, including (a) Broaden primary-grade instruction beyond the five basic-skills areas identified by the National Reading Panel's 2000 report (phonemic awareness, phonics, fluency, vocabulary, and comprehension), giving more emphasis to critical thinking and understanding; (b) Include a balance of literature and nonfiction in the reading diet of primary-grade students; and (c) Put more emphasis on deepening primary students' content knowledge by increasing the time spent on science and social studies.

"Reading First Doesn't Help Pupils 'Get It'" by Kathleen Kennedy Manzo in *Education Week*, May 7, 2008 (Vol. 27, #36, p. 1, 14)
http://www.edweek.org/ew/articles/2008/05/07/36read_ep.h27.html

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10. A Science Lesson-Planning Format

In this *Principal Leadership* article, science author/consultant Elizabeth Hammerman presents her seven-part format for planning science lessons, with suggested activities for each stage:

• *Engagement I – Motivation and purpose:*
- Think, pair share
- Pose a dilemma, a problem, or an issue
- KWL (what I know, what I want to know, what I learned)
- Read a story or a news item
- Share research findings.

• *Engagement II – Inquiry questions, context, and expectations:*
- Use graphic organizers to show relationships between concepts; ask questions to explore relationships
- Identify essential questions from standards
- Use role-play or simulations to define a context
- Design action plans for learning
- Develop hypotheses

• *Exploration – Process of instruction:*
- Investigations and controlled experiments
- Field experiences
- Observations; collect and record data
- Writing, drawing, and illustrating; conduct surveys or interviews
- Videos, software programs, Internet research
- Jigsaw; tiered learning; stations

• *Explanation I – Processing information:*
- Analyze and graph data
- Discuss and compare results of investigations and experiments
- Explain or describe findings; make suggestions for further study
- Connect learning to prior knowledge
- Describe relationships between concepts.

• *Explanation II with elaboration – Checking understanding, creating meaning, and framing thought:*
- Apply learning to new contexts
- Defend a position
- Connect learning to personal experience and other subject areas
- Describe meaning in a new context

• *Elaboration – Applications, research, and new questions:*
- Further research and application of concepts to self, technology, and society
- Action plans for dealing with problems and issues
- Design and develop new structures or products or modify existing ones
- Invent or design something new

- Engage in Internet or action research

• *Evaluation – Goals achievement; instruction effectiveness:*

- Notebook entries; observation checklists
- Presentations; demonstrations
- Written reports, essays, analyses, and summaries
- Self-assessments using rubrics
- Peer reviews; interviews
- Performance assessments; teacher-made tests

"Science for Real Life" by Elizabeth Hammerman in *Principal Leadership*, May 2008 (Middle Level Edition, Vol. 8, #9, p. 35-39); this article is available at http://www.principals.org/s_nassp/sec.asp?CID=1515&DID=57460; the author can be reached at science-achievement@embarqmail.com.

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11. Short Item:

Earth sciences website – This site, the Digital Library for Earth System Education (DLESE), has materials on earth science and other aspects of the natural world, including lesson plans, maps, images, data sets, visualizations, assessments, curriculum, online courses, support services, and more. It's at http://www.dlese.org/library.

"Bulletin Board" in *Principal Leadership*, May 2008 (High School Edition, Vol. 8, #9, p. 8)

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Do you have feedback? Is anything missing?

If you have comments or suggestions, if you saw an article or web item in the last week that you think should have been summarized, or if you would like to suggest additional publications that should be covered by the Marshall Memo, please e-mail: kim.marshall8@verizon.net

About the Marshall Memo

Mission and focus:

This weekly memo is designed to keep principals, teachers, superintendents, and others very well-informed on current research and effective practices in K-12 education. Kim Marshall, drawing on 37 years' experience as a teacher, principal, central office administrator, and writer, lightens the load of busy educators by serving as their "designated reader."

To produce the Marshall Memo, Kim subscribes to 44 carefully-chosen publications (see list to the right), sifts through more than a hundred articles each week, and selects 5-10 that have the greatest potential to improve teaching, leadership, and learning. He then writes a brief summary of each article, pulls out several striking quotes, provides e-links to full articles when available, and e-mails the Memo to subscribers every Monday evening (with occasional breaks; there are about 50 issues a year).

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Publications covered

Those read this week are underlined.

American Educator
American School Board Journal
ASCD, CEC SmartBriefs, Daily EdNews
Atlantic Monthly
Catalyst Chicago
CommonWealth Magazine
Ed. Magazine
EDge
Education Digest
Education Gadfly
Education Next
Education Week
Educational Leadership
Educational Researcher
Edutopia
Elementary School Journal
Essential Teacher (TESOL)
Harvard Business Review
Harvard Education Letter
Harvard Educational Review
JESPAR
Journal of Staff Development
Language Learner (NABE)
Middle Ground
Middle School Journal
NASSP Bulletin
New York Times
New Yorker
Newsweek
PEN Weekly NewsBlast
Phi Delta Kappan
Principal
Principal Leadership
Principal's Research Review
Reading Research Quarterly
Reading Today
Rethinking Schools
Review of Educational Research
Teacher Magazine (online)
Teachers College Record
TESOL Quarterly
The Reading Teacher
Theory Into Practice
Tools for Schools/The Learning Principal