

# *Methods that Matter*

## *Six Structures for Best Practice Classrooms*

Harvey Daniels and Marilyn Bizar

*Methods that Matter* argues passionately that teaching does matter and that the methods teachers employ not only affect student achievement but also condition the quality of human relationships in the classroom—and beyond.

The book is divided into seven chapters. Chapter 1 lays out the case that teaching methods do matter, with reference to the current national standards of teaching and learning in each of the main curriculum fields. We identify six key teaching methods or structures used by teachers who are reaching for new standards. These structures are:

- Integrative Units
- Small Group Activities
- Representing-to-Learn
- Classroom Workshop
- Authentic Experiences
- Reflective Assessment

Chapters 2 through 7 take these six structures in turn, offering three kinds of information about each: 1) a definition and brief history of the structure; 2) one or more “variations,” stories from classroom teachers at various levels who have developed their own versions of the structure and; 3) “step by step” descriptions for setting up sample versions of the particular method.

## Study Group Approaches

Study groups can use this guide in a variety of ways. Since *Methods that Matter* asserts that the six key structures are valid and translatable K–12 and across the curriculum, the book may be used by teachers working at any combination of levels or specialties. Members may decide to meet after reading each chapter, or the whole book, to discuss issues and ideas that impact their classroom and their school. Group members who have a particular interest in one chapter can join with others to form method-specific subgroups. For each chapter, this guide offers both questions for discussion and actions to take, as individuals or as a group.

We hope that readers will think of reading *Methods that Matter* as an opportunity to “clean out your teaching closet.” All of us who teach have a multitude of methods that we have used—or seen other teachers use—throughout our teaching careers. Some methods we find particularly useful and depend on every day, day after day. Others we only pull out for special occasions. Some methods we try

a few times and then discard. Most of us end up with a jumbled repertoire of methods, some familiar and reliable, others we use sparingly, while others are either mothballed or simply forgotten.

It's much like your own wardrobe of clothes. Every once in a while, maybe when the seasons change, we go to our closets filled to the brim with stuff on hangers and on shelves, and say in complete despair: "I have nothing to wear!" This is the time to clean out our closets and go shopping in them. We invite you to join us in taking a long hard look through our stacks and racks of teaching methods to reconsider the wardrobe we dress our teaching in every day.

Just as in your clothes closet, your methods closet probably contains some methods that just need to be given away—they have never worked and they are never going to work. But you may also find treasures, prematurely discarded or forgotten items that just didn't work when you first tried them. Now that you have grown and changed, methods that didn't originally fit might be just the thing.

Before we completely exhaust this metaphor, let us simply invite you to enjoy *Methods that Matter*, and to use it as an occasion to review, rethink, renew and refresh your personal repertoire of teaching methods.

### ***Before Reading the Book***

- When you were a student (perhaps in the grade you now teach) what methods did your teachers use? (Lecturing? Reading literature aloud?) Which ones worked best for you as a learner? Did it make a difference to you *how* subjects were taught?
- Think about the methods course(s) you took (or are taking) during your teacher education. What methods were covered and stressed in these courses? What methods were actually used by the college instructors? What was the fit between theory and practice? Which of these methods have you been able to translate to the classroom? Which ones not? Can you tell what makes the difference?
- Make an inventory of your own current teaching methods. What are the ingredients of your personal teaching repertoire? What methods do you rely on most in your day to day work? What methods have you struggled with or abandoned?

(A note to preservice teachers: the activities in this guide were written with the assumption that the reader is in a working classroom. But even if you don't have access to a school classroom, you can still do most of these activities and respond to the questions if you reflect on your own school experiences as a student.)

## **Chapter 1: Best Practice: From Principles to Programs**

Reviewing the recommendations of more than twenty national standards reports, we identify strong common threads in all these documents. Despite their diverse subject specialties and discipline loyalties, groups as disparate as the National

Council of Teachers of Mathematics, the Center for the Study of Reading, and eighteen others have made the same basic point about teaching and learning. All these organizations have called for classrooms that are:

student-centered	collaborative
experiential	democratic
reflective	cognitive
authentic	developmental
holistic	constructivist
social	challenging

- Do these principles match the standards documents that you have encountered in your own school, district, or state?
- Some educators have argued that there are two conflicting school reform movements, one focusing on testing and accountability and the other on renewal of teaching and learning. Do you agree with this dichotomy?
- What focus has been placed upon the methods of teaching in your school or district in recent years? Have certain methods been mandated or privileged over others?
- Who makes the standards that affect you and your students? How are they communicated and enforced?

In their review of the national curriculum and teaching standards documents, we find these common recommendations:

LESS whole-class-directed instruction, e.g., lecturing

LESS student passivity: sitting, listening, receiving, and absorbing information

LESS prizing and rewarding of silence in the classroom

LESS classroom time devoted to fill-in-the-blank worksheets, dittos, workbooks, and other “seatwork”

LESS student time spent reading textbooks and basal readers

LESS attempt by teachers to thinly “cover” large amounts of material in every subject area

LESS rote memorization of facts and details

LESS stress on the competition and grades in school

LESS tracking or leveling students into “ability groups”

LESS use of pull-out special programs

LESS use of and reliance on standardized tests

MORE experiential, inductive, hands-on learning

MORE active learning in the classroom, with all the attendant noise and movement of students doing, talking, and collaborating

MORE emphasis on higher-order thinking; learning a field’s key concepts and principles

MORE deep study of a smaller number of topics, so that students internalize the field’s way of inquiry

MORE time devoted to reading whole, original, real books and nonfiction materials

MORE responsibility transferred to students for their work: goal-setting, record-keeping, monitoring, evaluation

MORE choice for students: picking their own books, writing topics, team partners, research projects

MORE enacting and modeling of the principles of democracy in school

MORE attention to varying cognitive and affective styles of individual students

MORE cooperative, collaborative activity; developing the classroom as an interdependent community

MORE heterogeneously grouped classrooms where individual needs are met through individualized activities, not segregation of bodies

MORE delivery of special help to students in regular classrooms

MORE varied and cooperative roles for teachers, parents, and administrators

MORE reliance upon teachers' descriptive evaluation of student growth, including qualitative/anecdotal observations

- Review these recommendations, taking note of which ones you agree with and which you question. You might indicate which ones are officially supported or encouraged in your school. Discuss your ratings with your study group.
- *Methods that Matter* argues that the basic teaching methods are applicable at all grade levels. Do you agree with this proposition or do some methods fit different ages of students better?

We explain that the six methods covered in the book have several common features—choice, responsibility, expression, and community.

- *Choice*. What are some ways that you allow your own students choices in the classroom? What problems or challenges have you faced in offering choices to kids?
- *Responsibility*. What are some ways that you assign genuine responsibilities to your own students? What problems or challenges have you encountered in giving responsibility to kids?
- *Expression*. What are some ways that you invite your students' expression over a range of different modes, forms, and genres? What problems or challenges have you experienced as you invite more of kids' expression in the classroom?
- *Community*. What are some ways that you build community in your own classroom? What problems or challenges have you faced in trying to create a collaborative climate?

## Chapter 2: Integrative Units

Chapter 2 asserts the importance of dissolving traditional subject matter boundaries and engaging students in broad, lifelike, interdisciplinary inquiries. We describe a continuum of thematic teaching that runs from common teacher-created units on topics of perennial interest to students (rain forests, dinosaurs)

all the way to purely “negotiated” curriculum, where students’ questions become the starting point for extended investigations that may or may not be “backmapped” to content area requirements and mandates.

- Thinking back on your own schooling, what were some of the most interesting units you can remember as a student? What made them memorable or valuable?
- As a teacher, what has been your most successful thematic unit? How do you define “success”—student engagement? high test scores? supervisors’ approval? parental encouragement? What about this unit makes it work for students?
- Some themes lend themselves better than others to rich, interdisciplinary investigation. Can you think of four or five examples of such themes, versus ones that are inauthentic, forced, or limited in scope?
- What planning or management problems have you encountered in teaching integrated units?
- To what degree are you free to design and teach interdisciplinary units in your current teaching assignment? What factors—scheduling, textbooks, standardized tests, curriculum guides, tradition—pressure you to stay within traditional subject matter boundaries?
- Have you ever team-planned and/or team-taught an interdisciplinary unit or course? What was that experience like? Can any pairs of teams in this study group see an opportunity to collaborate on an integrated unit?
- We describe in some detail James Beane’s model for negotiating the curriculum with students and building a unit of study from the questions they pose about themselves and their world. How could you adapt this negotiating process to your own curriculum, school, and students?

---

## Variations

### Grains of Sand, Negotiation, and Interdisciplinary Study

**Activity:** Katy Smith, a high school English teacher who team teaches an American studies course with Ralph Feese, a history teacher, in describing her attempt to have students negotiate the curriculum says, “Our hopes were realized when the students produced a unit syllabus that rivaled any we or our colleagues ever produced and then went to work enthusiastically to find the answers to the questions that they had asked.” Respond to this statement. Do you believe that students are able to develop questions that are suitable to drive the curriculum?

**Activity:** Choose a chunk of curriculum content or a unit that you are planning to teach. Ask students to list what they already know about the topic, recording their ideas on chart paper. Then ask kids to brainstorm some questions that they would like to pursue about the topic. Now, the teacher’s job will be to think about the resources that need to be available to students so they can find the answers they

seek. Post the question list prominently in the classroom and have kids use it to keep track of the questions they answer as they proceed through the inquiry.

## The Moon Unit: Steps Toward Integrated Learning

**Activity:** “The Moon Unit” enacts the idea of dividing the classroom up into learning stations or centers through which students rotate. Even in high school classrooms it is possible to think about teaching with centers if you can set up the space and design valuable activities. Choose a topic that could be taught through student-directed activity at several “substations.” Divide your room into centers and design activities for students to attempt on their own. What resource and materials will be needed? You might want to team with another teacher at your grade level to plan and implement this experiment. Invite parents into your classroom to help students as they work through the activities. Afterwards, review the experience. What were the high and low points?

## Immigration and Family History Through the Arts: A Story in Many Voices

**Activity:** In what ways could you use art to involve students in a unit of study? Think of ways for students to use art into, through, and beyond the unit. As you consider this question, think about visual art, performance art, and music. Can these activities help to deepen students’ comprehension?

---

## Step by Step

### Breaking Down Department Walls with Interdisciplinary Field Trips

**Activity:** Sometimes change is awfully hard to envision—not to mention get started—in schools. This article talks about taking a group of kids and teachers and doing something different for just *one day*. Keeping the commitment minimal—after all, it’s just a single day—seems to open the door for new ways of being with kids. So, in your study group, brainstorm one special day of pathfinding. Think about a one-day workshop, with kids and teachers together, exploring new ways of learning. What would it look like? Now—if it sounds good, do it!

## Chapter 3: Small Group Activities

Teachers who are reaching for new standards must have ways of decentralizing the classroom, making it smaller, enlisting students, peer teachers, forming a variety of working partnerships, teams, and task forces. Indeed, if teachers cannot make such collaborative structures work, they will inevitably be thrown back on the presentational model of instruction that has proved so ineffective in the past.

- When you were a student in elementary and secondary school, what kinds of small-group activities (if any) can you remember teachers assigning? How

did they work? What role did you typically take as a group member? What lessons can you bring from your own experiences with cooperative learning as a student to your role as a teacher?

- In its landmark SCANS Report, the U.S. Department of Labor says that collaborative teamwork skills are just as important as basic academic skills in helping people succeed as workers, citizens, and parents. Do you believe this is true? Has the American culture and workplace really changed from an individualistic to a more cooperative environment? What should schools be doing to prepare students for the social world they will actually live in?
- What kinds of small-group activities or structures have you used in your own teaching? (Literature circles, lab partners, group investigations, peer editing groups, buddy reading, dialogue journaling, etc.). Which ones have been most successful? Are there collaborative structures that you use regularly?
- What have you learned about training kids for small group work? What roles have you found to be important for you to take as small group work goes on?
- What management problems have you had to overcome? What structures, materials, or procedures have you put in place to make small group work more successful?
- How have you faced the problem of evaluating small-group work and jointly created products?
- Each member of the study group may pick one chunk of upcoming curriculum and design ways to teach part of the content through well-structured, small-group activities. Group members can share and troubleshoot their plans before implementing them and can debrief the results afterwards.

---

## Variations

### Student Survey Teams: Asking Questions, Seeking Solutions

**Activity:** Steve Wolk describes an integrated critical learning project that relies heavily on group investigation. What were the benefits of having students work in groups for this particular project? Of what importance was the classroom community in supporting this investigation?

**Activity:** Divide your students into small groups and have them develop a survey about some aspect of your curriculum. Have them administer the surveys to respondents inside and outside of school, collect and tally the results, make sense of the data, create charts and graphics, and give presentations on the results.

---

## Step by Step

### Preparing Students for Literature Circles

**Activity:** Divide students into small groups for literature or nonfiction circles. Provide students with choices of reading material. At the beginning, you can use

the role sheets included on pages 81–84 as tools to help students prepare for wide-ranging discussions. But the role sheets are just temporary tools that should be eliminated once the students have learned how to engage in discussion around text. Then, students they can prepare for their discussions by jotting notes in a journal or learning log that is brought to group meetings. In language arts, the students can read novels, and in the other content areas, let them pick from sets of interesting nonfiction books or articles.

## Chapter 4: Representing-to-Learn

In traditional schooling, the student's job was to receive: to sit still, absorb, and somehow remember information being transmitted by the teacher. Modern learning research has shown how ineffective this model of instruction is. For students to engage deeply in the ideas of the curriculum, they need to act upon its content—talking, writing, drawing, dramatizing, singing, and dancing the ideas they encounter. Chapter 4 shows how skillful teachers use a variety of well structured ways for students to express their thinking.

- As a learner and thinker, what are your own strongest modes of expression—dance, drama, writing, movement, music, painting, sculpture? When you were a student, were these strengths recognized in your schools? Can you remember a time when an expression of your thinking was especially valued and celebrated? What was the affect on your motivation and attitude? How could you broaden the invitation for student expression in your own classroom?
- What experiences have you had with journal keeping, both as a youngster and as an adult? Did you ever keep a diary? What functions did this kind of writing serve for you?
- Have you used journals or learning logs in your teaching? In what subject and context? What value did you find in the activity? What management issues arose?
- Chapter 4 suggests that teachers should use more representing-to-learn activities during lessons, not just after them. What strategies might you try to help students construct meaning during their encounter with subject matter?
- One of the newest and most promising domains of student expression is the digital world of technology. Across the country, young people are making their own hypermedia stacks, electronic portfolios, and even Internet Web sites. What potential for computer-based student expression do you foresee in your classroom? What might be your own next step toward plugged-in teaching?
- Each member of the study group may pick one chunk of upcoming curriculum and design ways to include rich options for student expression during this unit. Group members can share and troubleshoot their plans before implementing them and can debrief the results afterwards.



- One of the keys to the success of America’s most celebrated schools—such as Central Park East High School in New York—is the regular use of performances and exhibitions at which student work is brought before a real community audience. These events serve the triple function of making projects more authentic for students, providing genuine feedback for learners, and involving parents and community in the curriculum. In your own school or classroom, what kinds of public events have been used to culminate, “publish,” or celebrate student work? What additional events or outlets can you envision? Perhaps your study group would like to work together to plan a schoolwide event exhibiting student work.

---

## Variations

### Going to Scale: Muralists Use Art and Mathematics to Decry Gang Violence

**Activity:** Help students to identify a topic of great interest and have them design a mural for a wall in the classroom that in some way depicts the topic and their own emotional responses to it. Students can work in small groups to design segments of the mural. The segments should go together to form a meaningful whole so they will have to coordinate their sections with the other groups.

---

## Step by Step

### Jotting and Sketching: Twenty-Three Ways to Use a Notebook

**Activity:** Choose a content area, such a math or science. Have students keep journal specifically for that subject. Work with the students to design the format for the journal, including how, when, and with whom it will be used. One example would be to keep a dialectic/double-entry journal: on one side of the page, students write facts or information and on the other side they react to and reflect on what they are learning. This other half of the page gives students space to explore content and express their learning, even their confusions, in writing. In math, these journals can help students learn how to communicate mathematically if they do their computations in mathematical language on one side and explain their thinking process in English on the other.

## Chapter 5: Classroom Workshop

The workshop is both a metaphor and a model for turning classrooms into learning laboratories. In the ancient crafts workshop, the teacher was a master craftsperson who demonstrated a trade and coached apprentices in the context of making real products for the community. In contemporary classrooms, we

borrow the workshop metaphor to create writing workshops, science workshops, math workshops, and other workshops across the curriculum. Students get large chunks of time to practice the trade of reading, investigating, or problem solving, while teachers take on the new roles of mentors, coaches, and models.

- In your own student days, can you remember any classes that used a studio-laboratory or workshop method? (Art, home economics, physical education?) How did you respond to it? If there were factors that made the class engaging—or unattractive—what were they?
- A key assumption of workshop teaching is that kids should be spending much more time *doing* the work of a subject field than listening to lectures about it. What do you think is a reasonable balance between doing and hearing about? Should it be the same in all subject fields or do some topics require more presentation and others more practice?
- Have you tried out one of the contemporary workshop models designed by teacher-authors like Nancie Atwell, Wendy Saul, or Lucy Calkins? What was your experience with adopting and adapting such a model? Is the program still in use in your classroom? If so, what elements have changed since you started?
- If study group members have a workshop segment in their teaching day, ask them to share what they have learned about making it work. What schedule do the kids follow? How do they know what their choices and responsibilities are? What structures, procedures, or materials do you use to organize things? What roles do you take as a teacher? How are records kept? What form of evaluation and assessment do you use? What management issues have you needed to solve to make the workshop work?
- What advice would you give to a colleague about to set up a classroom workshop for the first time?

---

## Variations

### A Community of Mathematicians

**Activity:** If you have already implemented one kind of workshop in your classroom, pilot another one. If you've got writing workshop going, move into reading. Or try math workshop. Choose one topic (measurement, equations, area and perimeter, triangles) and use the workshop model to explore that topic. Follow the model in "A Community of Mathematicians" and be sure to design mini-lessons that "deliver the curriculum." The largest period of time is devoted to *work time* where students study independently and in small groups. During this time, meet with students to help guide and move the work along. Take notes on what you see as you meet with students and reflect on the role that you take as you facilitate the workshop. Be sure to have time for sharing so that students can

learn from each other. Be careful not to look only for correct answers. Honor the steps and methods that students use to solve problems.

---

## Step by Step

### Conferences: The Core of the Workshop

**Activity:** If study group members have materials they have used to organize a classroom workshop, they can bring them to the group and share. Or schedule the study group to meet in the classroom(s) of workshop veterans, who can tour colleagues through the room setup and materials on-site. Better yet, have interested group members schedule a classroom visit during school hours to see the workshop in action.

**Activity:** In your study group, schedule part of one meeting as a workshop. Ask one or two colleagues who are experienced with workshop teaching to set up a demonstration session during which people experience the key ingredients of time, choice, structure, response, and community. A reading or writing workshop might be the easiest place to begin.

**Activity:** In your study group, practice holding conferences. One strategy is to have two willing teachers role-play a conference in a fishbowl situation. Use a sample of one teacher's writing, and have the other teacher ask questions and provide support. Be sure that the person who role-plays the teacher gives positive feedback and asks the person who is playing the student to identify where she needs feedback. Observers will note if it is a genuine two-way conversation rather than one dominated by the teacher.

## Chapter 6: Authentic Experiences

Successful teachers have ways of making school *real*. They open the classroom door both ways—bringing the world into the school and getting the kids out. They bring the real stuff of life into the classrooms—owl pellets to dissect, grandparents to interview, or community surveys to tabulate. And they lead the students out into the community: to research endangered wetlands, to study local politics, or to serve in long-term service-learning internships. Making school real isn't exactly a teaching method, but it seems to be a condition or a mindset that's consistently associated with the most outstanding—and engaging—classrooms.

- Try to remember some field trips you took as a student in school. Pick out one especially memorable or powerful one. Make some notes about what you recall and why it seemed so significant to you as a young person. Share these

recollections in your study group. What is it about getting out into the world that is so special for students? Is it just the novelty and break from the routine—or is there some real learning “leverage” to be gained from immersion in the outside world?

- One of the keys to authentic learning is bringing a wide variety of community members into the classroom for different roles—as informants, performers, coaches, or helpers. What are some of the ways in which you already use community members in your school? What other roles can you envision? What kinds of additional training, preparation, or resources would be needed to make this higher level of involvement really successful?
- Chapter 6 features the story of a very special kind of field trip at Washington Irving School in Chicago, where students go to a bookstore and select books for their own classroom libraries. This is a powerful demonstration of the habits of lifelong readers—browsing, sampling, and choosing. Would some variation on this field trip be valuable in your school?
- As Chapter 6 reports, all students at Best Practice High School in Chicago are placed in service learning internship sites around the city every Wednesday. Teachers at BPHS often say that this is the most important day of the week for students. What kind of service learning opportunities do your students enjoy? What new or expanded opportunities could be developed, consistent with the age of the students and the nature of the school community?
- Pat Bearden and Yolanda Simmons have developed an extensive program using ethnic and family history as the basis for extended interdisciplinary investigations, and this program has been adopted by classrooms from primary through high school. If members of the study group have used family history as a major teaching theme, ask them to share their experiences with it. How could we take the next step with family history?
- Sometimes teachers fear that authentic learning activities are “extras,” that they constitute time off from the real curriculum. And yet, if your class takes a spring week to study the ecosystem of a local pond, you can often “backmap” this activity to prove that kids are learning not only science but are also reading, writing, computing, teaming, and representing their thinking in a variety of modes. In other words, they are simultaneously meeting many curriculum requirements in the middle of this “fun” activity. As a study group, try this backmapping process with an authentic activity someone is planning—a field trip, an art show, or other special event.

---

## Variations

Using Primary Sources: Bringing Literature and Students to Center Stage

**Activity:** Choose a unit where you have previously relied heavily on a textbook to drive the unit. Gather a selection of primary sources that provide different win-

dows through which to study the topic. For example, if you were studying the Holocaust, you might have multiple texts, such as a chapter of *Night* by Elie Wiesel—a revisionist piece that takes the perspective that the Holocaust never happened or was greatly exaggerated—and a piece that talks about the Holocaust Museum in Washington D.C. or other ways of marking and remembering the tragedy. Students can read the texts in nonfiction circles and report their information to the whole group. If you have a grade level partner, it would be helpful to work together to gather these texts.

---

## Step by Step

### Student Docents Discover Modern Art

**Activity:** This article tells the story of students stepping out into the world to do something real and thereby instantly meaningful. Find a way to design a project that gives students the opportunity to do something authentic. If the school does not already have one, students might develop and implement a school recycling plan. They might plant and care for a vegetable garden on the school grounds, figuring out what should be planted and how the bounty could be shared. They might do a community history project where they interview elders and videotape their interviews. The key here is to involve students in identifying the project and finding a way to share it with the school community.

## Chapter 7: Reflective Assessment

Most American teachers are stuck with the “grading machine” and are required to feed it, even though the numbers and letters assigned to kids contribute more to external accountability than personal growth. But teachers who are reaching for new standards don’t stop there; they also systematically help students to become self-assessors. They require students to set formal goals for their work, to keep their records, to periodically stop and reassess their efforts, to make revisions and decisions about next steps, to seek and use feedback from peers and teachers, to maintain portfolios of work samples, including written reflections on their products and their thinking process. These teachers are doing something much more valuable than grading students—they are helping them learn to run their brains, to become reflective and responsible thinkers and workers.

- What was your own experience with assessment in school? Did you get good grades? What was your parents’ attitude toward your grades? Do you remember a time in school when a piece of your work was evaluated especially positively? What happened and how did you feel? How was your attitude or motivation affected? Do you remember a time in school when a piece of your work was evaluated especially negatively? What happened and how did you feel? How was your attitude or motivation affected?

- Chapter 7 opens with a fairly harsh critique of standardized testing. Do you think this negative view is justified? What role has standardized testing played in your own life? In your classroom and school district?
- What grading policies and procedures are in effect in your school?
- One of the main recommendations of this chapter is to help students become their own self-assessors. Can you describe some steps you are taking to encourage reflection and self-monitoring among your students?
- What has been your experience with portfolios as an alternative form of student assessment? If teachers in the study group have experimented with portfolios, ask them to bring samples to share. If teachers from the same grade level or department are in the group, they may wish to meet as subgroups to design portfolio projects for their own students.
- *Methods that Matter* asserts that the ultimate payoff of a portfolio assessment system comes when a student, his or her parents, and the teacher sit down for a student-led conference during which the learner guides parents through a sampling of his or her best work and reflections on it, along with comments from the teacher. An ambitious study group project would be to push for a schoolwide portfolio night in lieu of regular parent conferences.

---

## Variations

### A Tale of Two Students

**Activity:** One of the tools described in Chapter 7 is the performance assessment, also known as an analytic scoring scale. In your study group, design a performance assessment rubric that could be used with a project underway in one or more members' classrooms—e.g., giving an informative speech. Then have those teachers ask their students to do the same—design a performance rubric for the same activity. Then compare the two scales in your study group. Many times the student-invented scales will cover all the important elements of successful performance, but will be more detailed, more idiosyncratic, and more “fun” than teacher-generated scales.

**Activity:** In your study group, share the procedures or calculations you use for arriving at grades for your students. You may need to discuss school and district assessment policies, report card formats, or other constraints. If you had complete control, what kind of grading system would you have for your students?

---

## Step by Step

### Assessing Science Through Poetry and Myth

**Activity:** In this piece, Lyle Griegoliet asks students to demonstrate their knowledge of science through poetry. Choose a topic that the students have studied and

instead of giving a test, have students write poems or songs that demonstrate what they have learned. Regardless of the content, it would be helpful to show them a couple of Lyle's student examples to serve as models. Arrange a performance, exhibition, or publication to provide a real audience to students' efforts.

