

Better Teaching[®]

Classroom Ideas to Improve Student Achievement

Secondary EDITION

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Bringing Lessons to Life

This is the pencil—how big is the giant?

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÷ × There are many ways to teach algebra students proportional reasoning.

One of the most inventive is to have them imagine the size of a giant by looking at a giant pencil.

Create several large drawings of pencils—perhaps 20.5 inches long by five inches wide. Post them on the walls of your classroom. Tell students these pencils belong to a giant. Have them collect data from these giant pencils to answer questions such as:

- **How tall** is the giant?
- **How much larger** than you is he?
- **Could he walk** through the door?
- **Could he stand** in the classroom?
- **How heavy** might he be?

Working in pairs, have students:

1. **Measure their own pencils** and find an average (for example, 8.5 in).
2. **Determine the average student height** (for example, 5.5 ft).
3. **Set up a proportion problem** with one unknown— x .

4. **Determine the answer** using the scale factor ($20.5 \text{ in.} \div 8.5 \text{ in.} = 2.41$).

$$\frac{\text{giant ht.}}{\text{student ht.}} = \frac{x \text{ ft}}{5.5 \text{ ft}} = \frac{\text{giant pencil } 20.5 \text{ in}}{\text{student pencil } 8.5 \text{ in}}$$

$$\begin{aligned} \text{scale factor} &= 2.41 \\ x \text{ ft} &= 2.41 (5.5 \text{ ft}) \\ &= 13.26 \text{ ft} \end{aligned}$$

Students can then use that same basis for other units as well:

- **If the giant** is 2.41 times as tall as they are, he might reasonably weigh 2.41 times what they weigh.
- **If students** take the dimensions of their desks, can they calculate the size of the giant's desk?

This is a great way to engage all students in mathematical reasoning.

Source: Adapted with permission from "Giant Pencils: Developing Proportional Reasoning," *Mathematics Teaching in the Middle School*, copyright 2009 by the National Council of Teachers of Mathematics. All rights reserved.

Connecting With Students

Personalize your teaching to engage students in learning



Unless this is your first day of teaching, you've probably had One of Those Classes.

As you begin talking about the subject at hand, you look out at your class and watch the students tune you out.

But there are ways to keep students engaged. One way is by personalizing your teaching—helping students see how what you are teaching connects with them.

Here are some ways to do that:

- **Connect your lesson** with something students want to know. One good way to do this is through journal writing or free writing. Start each class with a question students can answer for themselves: "When in your life might you want to know how to find the volume of a cube?"
- **Present real-world challenges.** Students are often confronted with real-world problems that ask them to use skills and information from their class. So have them prepare a report for the City Council on a significant source of pollution in their community.
- **Make use of today's technology.** Assign historical characters. Ask students to design websites featuring their characters' professions. Or have them create PowerPoint[®] presentations highlighting a cause.

Source: John H. Clarke and Joseph DiMartino, "Get Personal," *Virginia Journal of Education*, April 2009 (Virginia Education Association, www.veanea.org).

Teaching Tips

Use three ideas to review lessons



Before you start teaching *today's* lesson, you want to do a quick review of what students learned *yesterday*. Here are three ideas that will help students refresh their memories about what they already know:

- 1. Admission slip.** When your students walk in the door, give them each a slip of colored paper. Ask them to write the answer to a question on yesterday's lesson. Examples could include, "What do you think was the most important cause of the Civil War?" "List three characteristics of mammals."
- 2. Crystal ball.** Have students pretend they are staring into a crystal ball. Based on what they learned yesterday, what do they think today's lesson is likely to be about? What do they think will happen next in the novel they are reading?
- 3. Yesterday's news.** Have students write the headline and the lead paragraph of a "news story" about yesterday's lesson.

Source: Gay Ivey, *Creating Literacy-Rich Schools for Adolescents*, ISBN: 9781-4166-0321-4 (Association for Supervision and Curriculum Development, www.ascd.org).

Connecting With Parents: Part Two of a Three-Part Series

Parents can help link learning to future goals



By middle school, many parents don't know how to support the school. They may not feel able to help with homework. They may not have met all of their child's teachers.

But a new study shows there is one way parents can help their teens do better in school: They need to help teens set goals for life—and then help them recognize the link between achieving those goals and doing well in school.

Harvard University researcher Nancy Hill reviewed more than 50 studies to see what kinds of parent involvement improved student achievement. She found that this is a time of transition. Teens are beginning to think analytically. They are also improving their skills in problem-solving, planning and decision-making.

But study after study showed that parents still have a critical role to play.

Their job is to help middle and high school students see a link between school today and their goals for a job in the future. Future doctors need to know that they must do well in science classes. Future engineers need to sign up for advanced math.

Many studies showed that parent involvement with homework has mixed results. Some students appreciated their parents' help. But others either thought their parents were interfering or complained that Mom and Dad didn't use the same strategies as their teachers.

So rather than asking parents to help with math or history homework, ask them to talk with their kids about future life goals. Then help parents and students link school learning to those goals.

Source: American Psychological Association, "Tying Education To Future Goals May Boost Grades More Than Helping With Homework," *ScienceDaily*, May 21, 2009, www.sciencedaily.com.

Motivating Students

Consider the value of your rewards program



Schools have always offered incentives to encourage students to do their best. From awarding academic or athletic letters to promising a pizza party if everyone passes a big test, rewards can sometimes provide motivation for students who need it.

But new research questions the value of some rewards programs. Before you set up a reward system in your classroom, here are some things to consider:

- **Rewards work best** if they are tied to the activity you're trying to promote. The more arbitrary the reward ("Everyone who passes the test will get candy"), the more likely it is to have a negative effect.

- **Once you put a reward system** in place, you have to commit to it and keep it going. Some students will lose their motivation once the rewards are removed.
- **Some of the most powerful** rewards don't cost a cent. A teacher's praise, for example, can be highly motivating—particularly when it's deserved. And that's especially true when the teacher focuses on behavior ("You worked so hard on this project and it shows") rather than on innate qualities ("You're really smart").

Source: Lisa Guernsey, "Rewards for Students Under a Microscope," *New York Times*, March 3, 2009, www.nytimes.com.

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Published monthly September through June by The Teacher Institute®, a division of NIS, Inc., an independent, private agency. Equal opportunity employer. U.S. Federal ID# 54-1500427. Canadian GST No. R128424462. ISSN: 1556-9942. Copyright © 2009 NIS, Inc.

Publisher: *John H. Wherry, Ed.D.* Editor: *Erika Beasley*.
Writer: *Kristen Amundson*.

To order a subscription, call or write: The Teacher Institute®, P.O. Box 397, Fairfax Station, VA 22039-0397, Tel: 1-800-333-0776, Fax: 703/323-9173, www.teacher-institute.com.

Technology

Put cell phones to good use in your classroom



Cell phones can be disruptive—and even used to help some students cheat. But they can also be valuable learning tools in your classroom.

Instead of fighting students on the use of cell phones, teachers in many parts of the world are already using the technology to enhance student learning. If your school district allows students to carry cell phones during the day, here are some ways to use them productively:

- **Have students take photos** of a project they completed in class to share with their parents.
- **Use the text message function** to keep absent students up to date. Once you hand out an assignment for tomorrow, ask, “Who will text message this assignment to Taylor?” (Be sure to get parents’ permission for this arrangement.)

- **Give students a writing assignment** to be completed as a text message. “In 140 characters or fewer, write why Hamlet hesitates to kill his uncle.” Students without cell phones can complete the assignment on paper.

Although you may allow cell phones in your classroom for these controlled uses, you should still ban them at other times. For example:

- **Students should not** be allowed to have cell phones during a quiz or a test.
- **Students should not** be allowed to secretly record anyone in your class (including you) without permission.

Source: Marc Prensky, “Listen to the Natives,” *Educational Leadership*, December 2005/January 2006 (Association of Supervision and Curriculum Development, www.ascd.org; also available online at www.ascd.org/authors/ed_lead/el200512_prensky.html).

Resources



When students take notes, they are more likely to remember what was said in class. But students may not know how to take effective notes. That’s the purpose of *How to Take Great Notes in Class and From Textbooks and Become an A+ Student* by James Roberts. Keep a copy handy for quick lessons—or for students to consult. (ISBN: 9781-8917-0709-4, Lawrence House Publishers, www.budbooks.com.)



Ancient Chinese oracle bones. An 11th century Serbian manuscript. The oldest European map of the Western Hemisphere. The World Digital Library makes these and other ancient treasures from national libraries around the world available to anyone with a computer modem. In addition to print, the site also includes photographs, films and audio tracks. Access the collection at www.wdl.org/en.



Did you ever read an education book and think, “Well, that would never work in *my* classroom”? The goal of *Do-able Differentiation* is to make differentiated instruction work in real classrooms with real students. It’s short on jargon and long on practicalities. Authors Michael Ford and Michael Opitz include diagrams, sample lessons, suggested texts and other easy-to-adopt ideas. (ISBN: 9780-3250-1283-4, Heinemann Publishers, www.heinemann.com.)

Teaching Social Skills

Help students speak in complete sentences



You ask Andrew why he was late. He shrugs and mumbles something that resembles, “Dunno.”

This behavior is disrespectful to you. But it’s also hurting Andrew. Without practice speaking in complete sentences, he’s less likely to be successful in school or later when he tries to get a job.

Make a rule in your classroom that everyone—including you—must speak in complete sentences. You’ll also be helping your students:

- **Learn and practice** correct grammar.
- **Expand** their vocabulary.
- **Self-correct** their mistakes. When you hear a student say,

“He don’t—er, doesn’t,” you’ll know the student is learning.

- **Present themselves favorably.** A job or college interview should not be the first time a young person has to speak in more than monosyllables.

Give your students plenty of opportunities to practice. Require them to use complete sentences—whether they are responding to a question or making a request.

When your students start using subjects, verbs and predicates—and all are in agreement—they will be developing an important social skill.

Source: Paul G. Young, *Promoting Positive Behaviors*, ISBN: 9781-4129-5303-0 (Corwin Press, a Sage Publications Company, www.corwinpress.com).

Share an Idea!

Do you have an idea to improve student learning that should be in this newsletter?

Send your ideas to **Better Teaching**, Editorial Dept., P.O. Box 397, Fairfax Station, VA 22039, fax to 1-800-216-3667 or go to www.teacher-institute.com/ideas.

Full credit will be given with each article published. Materials sent cannot be returned.

Focus on: Classroom Management

Teaching Routines

Make routines run on 'auto-pilot'



Think of some of the procedures that need to happen automatically for your classroom to operate efficiently: Students need to know where to turn in their homework. They need to know what to do when the bell rings. They need to know how to leave class during a fire drill.

You can teach these procedures now. Or you can watch as chaos develops the first time there's an interruption.

Here's one teacher's method for teaching class procedures:

1. **Make a step-by-step list** of exactly what you want students to do in a particular situation.
2. **Turn that list into a poster** or an overhead transparency.
3. **Create a fill-in-the-blanks** worksheet for the overhead projector. As you teach the procedure, have students come up to the projector and fill in the correct answer.

Keep these teaching materials handy. If students demonstrate they have not learned a particular procedure, stop what you are doing and reteach.

Once students master the procedures, your classroom will operate on "auto-pilot." You'll be able to focus on what you want to teach, not on explaining where to turn in late work.

Source: Glenda Beamon Crawford, *Managing the Adolescent Classroom*, ISBN: 0-761-93106-6 (Corwin Press, www.corwinpress.com).

Getting Organized

Checklist helps students be prepared



You told your students to bring a ruler and a red pencil to class. And about half of them did. So the lesson took twice as long because students had to share these basic materials.

Ever wish you had that magic formula for helping students get to class with the materials they need? Develop a materials checklist with the following categories as headings:

- **Materials I need** for class on (date):
- **Where I will find** these materials:
- **Where I will put** the materials so they get to class:
- **My checklist before class.** I have these materials with me:

Under each heading, leave room for students to fill in the blanks. Each day, as they turn in their assignments, have them turn in their checklists, too.

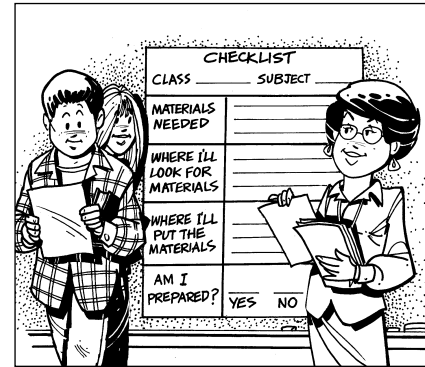


Illustration by Bob George

Assign points for having all the materials they need. Eventually, they will get into the habit of bringing needed materials to your class.

Source: Darlene Mannix, *Be a Better Student: Lessons and Worksheets for Teaching Behavior Management in Grades 4-9*, ISBN: 1-876-28009-2 (The Center for Applied Research in Education, a division of Simon & Schuster, www.simonsays.com).

Student-Centered Classroom

Change your focus—plan backwards



We're all taught to begin at the beginning. But when it comes time to plan units, lessons—and even your entire year—it may make more sense to plan backwards.

So begin your planning by thinking about where you want students to end up:

- **What should they know** about mitosis (or the Cold War, or irregular French verbs)?
- **What will be the evidence** that they have learned this content?
- **What kind of final assessment** would you design to measure what students have learned?

Then plan backwards. If you know that one of your final assessments will involve an oral presentation, you can start working on that skill early in the year.

This also makes it easier to make mid-course adjustments to your teaching. If your goal is for students to write clearly, but an in-class writing assignment shows they are having trouble organizing a paragraph, you'll see that you need to give them more practice.

Source: Bil Johnson, *The Student-Centered Classroom Handbook: A Guide to Implementation*, ISBN: 1-930-55649-7 (Eye on Education Press, www.eyeoneducation.com).