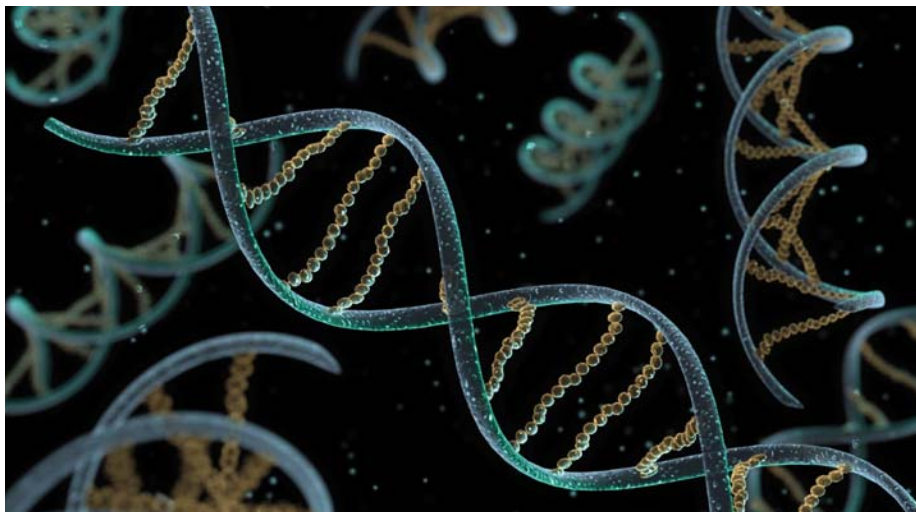


Better Teaching[®]

Tips & Techniques to Improve Student Achievement

Secondary
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Bringing Lessons to Life

'Living cells' make mitosis come alive



Mitosis is a tough topic for biology students to understand. And some teachers say the concept can also be boring to teach. Yet chromosome replication and division are among the most important concepts biology students must master.

Here's a fun way to make mitosis come alive:

1. **Give students the "big picture"** view of mitosis. When a cell is about to undergo mitosis, it must first make a duplicate of its DNA. Once duplicated, the original chromosomes line up on one side of the cell and the copy, or sister chromosomes, on the other. Finally, the cell can divide.
2. **Ask a number of students** (three for this example) to come to the front of the room to represent the chromosomes in a parent cell that is preparing to divide.
3. **Have each of the three students** in the parent cell "tag" another student.

These tagged students become their sister chromosomes. The cell material is now duplicated, and it's time for the cells to divide.

4. **Have the three pairs of students** form a line and then, on your direction, separate into two new parent cells (each new parent cell consists of a group of three).
5. **Repeat the game** until every student in the class is part of a group of three.
6. **Be prepared to keep control**—tag games are a great way to focus students' attention. But they can also turn into disorganized chaos without appropriate supervision.
7. **Help students associate** each of the steps of the tag game with one of the phases of mitosis. Then help them develop a mnemonic to remember the various phases.

Source: David A. Sousa, *Brain-Compatible Activities: Grades 6-8*, ISBN: 1-4129-5273-5 (Corwin Press, 1-800-233-9936, www.corwinpress.com).

Connecting With Students

High standards for all does not mean similar instruction for all



Teachers want *all* students to learn. And state and national standards mandate that all students perform at expected levels. Yet schools today are seeing an influx of culturally diverse students.

Can all students be expected to achieve at the same levels? Yes! But that does not mean all instruction has to be the same. The challenge is to find a balance in responding to the needs of all students.

Begin by checking your own expectations. Do you believe that students whose cultural backgrounds are different from yours can learn? They can. However, keep in mind that they may:

- **Process information** differently.
- **Communicate** differently.
- **Adapt to the classroom** environment differently.
- **Relate to teachers and peers** differently.

Once you have set high expectations for all students:

- **Vary your teaching strategies** to fit their learning styles.
- **Ask questions that are relevant** (in concept and context) to their lives.
- **Consider their cultural differences** as positive, not negative, influences.
- **Prepare them to fit in.** While accommodating differences, expect your students to adapt to the needs of the entire learning community.

Source: Nancy Protheroe, "ERS Focus On: Teaching in a Multicultural Classroom" (Educational Research Service, 1-800-791-9308, www.ers.org).

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Time Management

Don't waste time with repetitions



Your students were to complete an in-class assignment. Ten minutes later, they still hadn't settled down to work—and you had repeated the instructions twice. How can you avoid this scenario?

- **Know the purpose** of your assignment and what you expect of students before giving instructions.
- **Wait for students to focus** on you before giving instructions. If necessary, wait silently until all eyes are on you.
- **Remember that your students** have diverse learning styles. Present instructions in a variety of ways.
- **Post instructions** on the board, print them on file cards or email them to students in advance.
- **List steps clearly.** Use numbers or bullets. Begin each step with a verb—*list, write, complete*.
- **Tell students** how the assignment will be evaluated. It may help to distribute a rubric.
- **Assign buddies** to help students clarify instructions.

Source: Jane Bluestein, *The Win-Win Classroom: A Fresh and Positive Look at Classroom Management*, ISBN: 978-1-4129-5900-1 (Corwin Press, 1-800-233-9936, www.corwinpress.com).

Working With ELL Students: Part Two of a Four-Part Series

Teach mastery of homophones & homographs



“The *principal* issue here is the *principle* of religious freedom.” “I want to *write* about the *right* to free speech.” “*They’re* holding *their* meeting over *there*.”

English is filled with confusing words like these. Homophones sound alike, but have different meanings and different spellings. Homographs are spelled alike but have different sounds. When English language learners encounter these words in their textbooks, they often can't make sense of what they are reading.

Here's a way to help your ELL students master homophones and homographs:

1. **Create a paragraph** that includes some confusing word groups that apply to your subject. One teacher wrote a paragraph about the Civil War that included these confusing word pairs: *principals* and *principles*, *manors* and *manners*, *wind* and *wind*.

2. **Have English learners identify** the confusing words and create an illustrated vocabulary journal. Ask them to create symbols for the parts of speech—or use abbreviations, like *N* for noun.
3. **Provide practice for students** to use the words. Separate words into categories—verbs, adjectives, nouns.
4. **Assign students to create a skit** or a pantomime to illustrate pairs of words. Present these to the class.
5. **Create sentences with blanks** for students to fill in the correct words. As students practice using these words, they will learn to use them to express their ideas and understand the words as they encounter them in academic texts.

Source: Julie Jacobson et al., “A Seven-Step Instructional Plan for Teaching English-Language Learners to Comprehend and Use Homonyms, Homophones, and Homographs,” *Journal of Adolescent & Adult Literacy*, October 2007 (International Reading Association, 1-800-336-7323, www.reading.org).

Homework

Make the switch to standards-based grades



Take a look at your grade book. How is it organized? Do you have sections for homework, quizzes, unit tests and final exams? Consider a new approach. Base your grades on students' success in meeting standards. And don't record grades for homework!

Instead, encourage students to use homework to practice skills. Allow them to make mistakes and learn from them without paying a price on their report cards.

You can still collect homework and review it. But let students' final grades reflect what they have learned, not whether they did their homework.

Will your students quit doing homework? No. Not if you teach them that completing assignments is just like practice before a big sporting event. The more effort they put into homework, the better they will do on test day.

Once you switch to a standards-based grading system, you will have created a tool for showing students where they need to improve. You will also have a ready reference for talking with parents about their progress.

Source: Susan Christopher, “Homework: A Few Practice Arrows,” *Educational Leadership*, December 2007/January 2008 (Association for Supervision and Curriculum Development, 1-800-933-2723, www.ascd.org).

Mathematics

Copy strategies of effective math teachers



Effective math teachers, like good teachers everywhere, are good classroom managers. They use their time wisely, they engage all students and they accommodate the diverse learning styles of their students.

According to research, successful math teachers also have students who:

- **Are challenged.** They apply math concepts to solve real-life problems and are introduced to the newest concepts in the field of math.
- **Work with others.** Students of effective teachers work in pairs and small groups. They don't have to wait for the teacher to answer a

question; they can actually learn from one another.

- **Are actively involved.** They don't just listen to lectures or watch other students solving problems.
- **Communicate mathematically.** Students create graphs, write in journals and share ideas. Communication takes place in an environment that allows for mistakes, fosters understanding and promotes respect for others.
- **Use manipulatives** and other math tools. After receiving instruction, students are given many opportunities to use new skills in class.

Source: "The Informed Educator Series: Elements of Highly Effective Mathematics Programs" (Educational Research Service, 1-800-791-9308, www.ers.org).

Resources



Tucking a few good books in your beach bag? Add *Meet Me in the Middle: Becoming an Accomplished Middle-Level Teacher* by Rick Wormelli. It's filled with practical ideas, classroom anecdotes and student comments. Covering topics from assessment and block scheduling to understanding the adolescent, it's a book you'll want on your reference shelf. (ISBN: 1-57110-3287, Stenhouse Publishers, 1-800-988-9812, www.stenhouse.com.)



You're in the home stretch. Just days to go before your vacation begins. But between now and then you have a stack of report cards to complete. Need help with comments? Go to the suite101.com website at www.cbv.ns.ca/studies/activities/management/record.html for an extensive list of secondary report card comments. You'll find them sorted by positive and negative.



Check out the Secondary Teacher's Lounge at [www.gradebook.org/Secondary %20Teacher's %20Lounge.htm](http://www.gradebook.org/Secondary%20Teacher's%20Lounge.htm) for a one-stop site with links to just about everything a secondary teacher could need. It's quick and easy to navigate. You'll find links for the following topics and more: awards, bulletin boards, discipline, grade books, lesson plans, content area resources, clip art, educational games, grants and funding and even retirement!

Technology

Cn u pls txt d vocab? Thx. Please decode.



In most schools, texting during class is banned. But some teachers have found creative ways to incorporate text messages into their lessons.

Teacher **Jeff Chamberlain** at **Peablo West High School** in **Pueblo West, Colorado**, says, "Rather than fight the battle of using cell phones, I have the kids use them to write their vocabulary assignments using 'text talk.'" Here's how it works:

1. **Each student** has a partner.
2. **Student A texts** a vocabulary word using txt format to student B. (*New Deal = nu dl.*)
3. **Student B creates a definition** or selects a characteristic of the vocabulary word to text back to student A. (*lgs hlp stp dp.*)
4. **Student A decodes** the text (*legislation that helped stop the Depression*) and writes it down.

5. **Partners switch roles.** Student B texts the next vocabulary word to Student A, and so on.

6. **Students turn in** their decoded messages.

If students don't have cell phones, Chamberlain has students write the messages and pass them like notes.

The assignment can be done entirely in class or as homework. When students work on the assignment in class, they must remain silent as they work on decoding the text messages.

The great part is that the activity can be modified as needed. Each student can have a few words to text with another student. Or vocabulary for an entire chapter can be assigned. The main thing is that "it really gets done and they know the words!"

Source: Jeff Chamberlain, Pueblo West High School, 661 Capistrano Dr., Pueblo West, CO 81997.

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 Critical Thinking

Critical Thinking

Sow the SEADS of critical thinking



Have you ever had students so involved in a discussion that you actually had to stop them to end your class?

What gets the excitement started? Thought-provoking questions—questions that are posed not just by the teacher, but the students themselves.

To promote stimulating dialogue about information or a statement someone has made, give students file cards to keep on hand. Have them write the acronym SEADS down the left side of their cards. Next to each letter have them write questions to consider:

- **S = Source.** Who or what is the source of the statement or information? Is it the original source? Is it reliable?
- **E = Evidence.** What is the evidence to support the statement or information? Is it accurate?
- **A = Assumptions.** What assumptions is the speaker making? Are they correct?
- **D = Definitions.** Are the key terms clear and specific?
- **S = Slant.** Can students identify a particular bias in the material?

As students prepare for and participate in class discussions, have them use SEADS as a guideline.

Source: John Barell, *Developing More Curious Minds*, ISBN: 0-87120-719-2 (Association for Supervision and Curriculum Development, 1-800-933-2723, www.ascd.org).

Learning Journals

Help students reflect on learning



Students are able to think more critically when they understand *how* they learn as well as remembering *what* they have learned. Giving students time in class to reflect on both these issues will help them become more independent learners.

Take time at the beginning or end of a class (this makes a good sponge activity) to have students write in a journal. Offer them some writing prompts to spur their thinking.

For example:

- **This week in this class**, I learned that
- **I was surprised** to learn that
- **The easiest thing** I learned this week was
- **I am still not clear** about

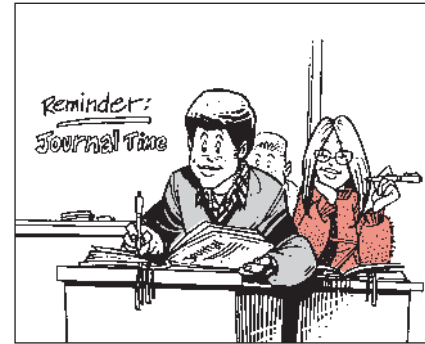


Illustration by Bob George

Students can keep their learning journals private. Or they can share them with you as a way of helping you understand more about what—and how—they are learning in your class.

Source: Margaret A. Theobald, *Increasing Student Motivation: Strategies for Middle and High School Teachers*, ISBN: 1-412-90622-9 (Corwin Press, a Sage Publications Company, 1-800-233-9936, www.corwinpress.com)

Reading

Reading guides prompt critical thinking



Ask students about a reading assignment and they can often answer factual questions. But ask them a question requiring critical thinking and you may be met with blank stares. A reading guide can help students focus their attention as they read.

Here are some activities you could include in a reading guide:

- **A step-by-step diagram.** If a reading assignment is describing a process—a recipe, a chemical formula, a software procedure—have students create a diagram that shows each step.
- **A series of continuums.** Identify statements in the text

that are opinions. Have students mark along a continuum how much they agree or disagree with each statement.

- **Student questions.** Ask students to develop two or three discussion questions based on the reading. In class, use these questions to guide the class discussion.
- **Links to their own lives.** Have students write about how selected statements from the text either *do* or *do not* relate to their own experiences.

Source: Ellen Kottler, *Secrets to Success for Social Studies Teachers*, ISBN: 978-1-4129-5026-8 (Corwin Press, a Sage Publications Company, 1-800-233-9936, www.corwinpress.com).