

Games, Contests & Puzzles: Entertaining Ideas for Educating Students

Teachers can take heart in the good news that students are likely to make meaningful progress toward instructional goals when they engage in regular drill, practice, and review of academic material. Instructors must also face the bad news, though, that students often find such activities to be tedious and unmotivating. One powerful strategy that successful teachers use to lend interest to academic drill, practice, and review is to structure these learning opportunities so that they contain elements of 'fun.' Like most of us, students are engaged by game-like tasks that are novel or unexpected, include various rewards, foster a safe level of competition, or promote positive and cooperative social interactions.

Read on for some ideas on how to adapt common games to promote student learning, to change quiz formats to make them more enjoyable, and to introduce other classroom activities that educate students in an entertaining manner. While these strategies may appear to be designed simply to be fun, don't be misled. Each strategy has the potential to push students to take a more active role in recalling and applying previously taught academic content.

Games Students (Will Want to) Play (adapted from Maguire, 1990)

Magazine Scavenger Hunt. The teacher creates a list of 10 to 15 items (e.g., places, objects, people) that relate to the academic subject being reviewed (e.g., a variety of landmarks, commercial products, and popular foods from Texas.) The teacher puts out a pile of old magazines likely to have pictures of the items being sought. The class is divided into teams of no more than 5 students. Each team is given a stack of magazines and the teacher-prepared Scavenger Hunt list, and instructed to find and cut out pictures of as many items from the list as possible within a certain time span (e.g., 20 minutes). At the end of the allotted time, all teams present their pictures to the class. The team who has found the most items wins.



Password: Academic Edition. The teacher puts together a list of course-related terms that students should know. (If possible, terms should refer to persons, concepts, or objects that can be easily described or hinted at using single nouns or adjectives.) Each term is written onto a small piece of paper and placed into a hat or other container. The class is divided into pairs of students. The teacher rotates around the room, starting with the closest pair. The teacher draws a slip from the container and hands it to one of the student.

1. The student reads the word on the slip. If the word seems too difficult, the student can say 'pass' and simply hand the word to the next pair in line.
2. If the student accepts the word, he or she states to the partner a synonym of the word or another term that is logically related. (Note: The student may utter only a single one-word clue!)

3. The partner then uses the clue to guess what the original term on the slip of paper might be.
4. If the partner *correctly* guesses the term, the pair earns a point. If the partner incorrectly guesses the term, the next pair in line is given the word (and starts steps 1-4 over again).

The game ends when all of the terms have given out. The team that has collected the most points at the close of the game wins.

Review-Question Bingo. This game is played according to the traditional Bingo rules but adds a crucial requirement: students who get Bingo can win only if they and the rest of their team is able successfully to answer a series of review questions.

- The teacher makes up Bingo cards for the class. A student Bingo 'card' is made by drawing a grid of five vertical dividing lines and 5 horizontal dividing lines onto a sheet of paper. (The boxes of the grid should be about an inch square.) In the first horizontal line, the teacher picks 5 numbers *randomly* from 1-20 and writes them into the boxes. Moving to the second line, the teacher selects 5 random numbers from 21 to 40 and writes them in any order into the boxes. The teacher does the same in the third line with random numbers from 41 to 60, the fourth line with random numbers from 61 to 80, and the fifth line with random numbers from 81 to 100.
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- Next, the teacher cuts a sheet of paper into 100 small squares. Squares are numbered 1 to 100 and are placed in a hat or other container.
 - The teacher also prepares a list of 10-20 review questions drawn from academic material covered in the course. (The teacher should prepare enough review questions for several Bingo games.)
 - Finally, the teacher decides on what to offer as 'prizes' to winning Bingo teams.

Next, students are divided into groups of 4-5 students. Each student is given markers (e.g., scraps of paper) to mark off Bingo squares, with additional markers available if needed. The teacher is the caller for the game, drawing numbered squares from the hat and calling them out. When a number is called, students whose cards contain that number place a marker on it. The first player who has filled in a vertical, horizontal, or diagonal line with markers calls out "*Bingo!*" Now the fun starts! Before the student and their team can claim a prize, they must correctly answer five review questions read off by the teacher. (It is up to the teacher to decide whether the winning student consults other team members and gives the answers as the team spokesperson or whether any team member can call out an answer.) If the team misses a *single* question, the Bingo game continues. When another *BINGO!* is called, the winning team must again answer a series of new questions before claiming their prizes.

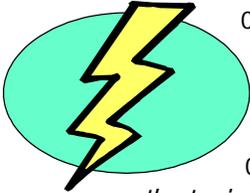
Twenty Questions. This activity is a variation of the well-known parlor game and works well with small groups or the whole class. The instructor picks three categories relevant to the academic subject. If, for example, the topic is American history, three suitable categories might be *dates*, *people*, and *events*. Each student is given a turn to select a topic relevant to their coursework, which they keep secret. The student starts the questioning off by announcing the



category the topic belongs to (e.g., *"I am thinking of an...event."*) The group then peppers the student with questions in an attempt to guess the topic (e.g., *"Did the event occur during wartime?"*) But the student can only answer *yes* or *no* to each question! When members of the group believe that they know the answer, they can call it out any time (*"Is it Pearl Harbor?"*). (Guesses don't count as questions.) Students who make *incorrect* guesses, though, must drop out for the rest of the game! The group must use no more than 20 questions to successfully guess the topic in order to win the game.

Teacher-Led Version: The teacher version of Twenty Questions is run the same as the student-led version, except that the teacher selects the topic and fields all questions.

Word Lightning. Prior to the game, the teacher comes up with a list of topics that relate to the academic subject being reviewed. (As a simple example, a biology teacher reviewing a unit on ecosystems might select the topics "wetlands", "deserts", and "mountain regions") For each topic, the teacher also selects a letter of the alphabet. (It is best to select letters like "B" or "E" that are commonly found at the start of words and to avoid letters such as "X" that are uncommon word-starters.) Students are divided into teams of 4-5. From the prepared list, the teacher gives the first team an academic topic and its associated letter. The teacher sets a timer and gives the team 1 minute to call out as many words as they can that *start with the given letter and relate to the topic*. The teacher keeps count of the total number of words called out. (The



teacher is sole judge of whether a questionable word is allowed to count as 'relating to the topic'.) The teacher then gives a new topic and letter to the next team and repeats the process. The game continues until all teams have had at least one turn. All team scores are posted on the blackboard; the highest-scoring team is declared the winner. TIP: Add a real flurry of activity to this game by giving teams their topic and letter and allowing them 60 seconds of preparation to comb through the text book or course notes to find eligible terms just *before* they begin the timed 1-minute call-out period. (Note: During the preparation phase, team members cannot talk to each other or write down terms that they find. They can only commit terms silently to memory!)

Putting a New Spin on Quizzes

Competitive Quiz Teams & Random Prize Points. This idea uses the elements of within-team cooperation, between-team competition, and random assignment of prize points to motivate students. The teacher, as quizmaster, prepares review questions prior to the quiz. Each question should be based on instructional information previously covered in class and have a brief, unambiguous answer (e.g., *"What major European battle brought an end to Napoleon I's attempt to return to power in France?"*).



Divide the class into two or more teams. Cycle among the teams as you read off the questions. When a question has been read to the team, the team has 15 seconds to huddle and decide as a group on an answer. The team spokesperson announces the answer to the quizmaster and rolls a die to determine the amount of the team's random prize points. The quizmaster then tells the team whether their answer is correct.

If the team gives the *correct* response, the prize points are added to their score. If the team gives the *wrong* answer, (a) the prize points are deducted from their score, and (b) other teams can attempt to answer the same question—but face the possibility of gaining or losing the same number of prize points. TIPS: Allow students to choose names for their teams. Assign students to draft quiz questions and answers as a review exercise and select the best of them for this activity.

Extra-Credit ‘Kickoff’ Quizzes. The instructor creates brief (1-3 item) weekly quizzes for students to complete at the start of class. Students are given a time limit (e.g., 5-10 minutes) to complete the quiz. Quiz questions should be constructed to require that students recall recent course content in order to answer them correctly. A key to making these quizzes motivating to students is to count them as *extra credit* (e.g., students have the option of replacing a single test grade in the course with their aggregate kickoff quiz grade, etc.). TIPS: If you have students who need extended time to complete the quiz, assign it as an optional take-home assignment. Invite students to submit their own quiz questions for you to use. Permit students to consult their textbook and class notes as needed during the quiz (to encourage them to actually use these materials!) Allow students to work together in small groups to complete the quiz. Individualize quizzes for those students in your room with special needs by including additional supports (e.g., excerpts from text, additional clues or hints) to ensure a high probability of success.



Quizzes Developed by Student Teams. Teachers can tap the cooperative and competitive spirit of students at the same time with this activity. (The most valuable review of instruction occurs as students prepare quiz questions for their classmates!) To prepare, the teacher first creates a general template for students to follow in preparing a class quiz. (E.g., the quiz must always contain 5 multiple-choice items and one essay question.) The class is divided into groups of 4-5 students. Each group is assigned a section of the material covered in the course and directed to prepare a short quiz and answer-key based on that material. (Groups should of course consult their notes and course text to create the quiz.) When the student quizzes are ready, the teacher looks them over to be sure that items are ‘tough but fair’ and that answers are correct.



Next, groups are paired off. Students in Group 1 in each pair take Group 2’s quiz, and vice versa. Students then grade the quiz they took using the supplied answer key. The teacher permits students who do well on the quiz to count it as extra credit or toward an ‘effort’ or class participation grade. TIPS: Because this activity may take more than one session to complete, teachers will probably want to reserve it to prepare students for key examinations (e.g., midterms, finals). Collect the best items from each quiz to include in later student tests or as review questions.

Spicing Up Review: Other Ideas

Classroom Commercials: A Learning Break. To tap the interest of media-savvy students, the teacher can assign pairs or teams of them to create a 1-3-minute ‘commercial’ that reviews key instructional content. (Teachers will probably get the best results in this activity if they frame the assignment as a specific goal: e.g., “*Barry and Susan, your job is to create a TV or radio*

commercial that shows the viewer or listener the steps to follow when completing a 2-digit by 2-digit multiplication problem.³) Students should be encouraged to be as creative as their imaginations and available resources permit. (For instance, students asked to create a commercial about how to compute multiplication problems might decide to convert the steps of the math operation into a catchy jingle and put it to original music.) Each team then has an opportunity to present their 'commercials' to the class. TIPS: Invite other classrooms to attend the premiere performance of your student 'classtime commercials'. Or volunteer your students present their commercials in other rooms. Encourage students to videotape or audiotape the best of their commercials and archive them to use in future situations with students who need to review a particular academic topic.



Learning Fair. Students are divided into groups. Each group is given an academic topic, concept, or operation and instructed to work together to construct a brief (e.g., 5-minute) interesting, interactive lesson to teach it. Groups are encouraged to draw diagrams or use other visual aids as appropriate to illustrate key point(s) of the lesson and to create group activities to demonstrate that their 'students' have mastered the lesson content. Then the classroom or other school space is converted into a 'learning fair'. Each group is allocated a table and wall space to set up their lesson. The class moves from one learning station to another, participating in the short lessons and asking questions. TIP: If students from other classrooms would benefit from your class's learning fair, you may want to set it up in a convenient common space (e.g., gymnasium) and invite teachers to bring their students in to take part.

Mystery Stories. Students love mysteries. Teachers can take advantage of this interest by creating short 'detective-story'-like narratives that pose a puzzle. To find the solution, students must recall important facts, concepts, and ideas covered in the course. Here is a sample 'mystery story' that could be used in a geography course:

Story: A captain is sailing her freighter in the Pacific Ocean. Ten hours later, she is in the Atlantic Ocean. In getting from the Pacific to the Atlantic, the boat was lifted 26 meters above sea level. During the entire trip, the boat never left the water. How was this trip accomplished?

Answer: The boat traveled through the Panama Canal (which lifts boats 26 vertical meters to the level of Lake Gatun—the Canal's interior waterway-- and back down again).

TIP: Also use mystery stories when *introducing* a topic to build student interest and activate prior student knowledge about the topic.

Stump the Teacher. Instructors who feel confident of their mastery of an academic subject area can offer to take on all challengers. The teacher invites students to come up with difficult questions (and matching answers) about a specific topic being studied. (It is up to the teacher whether students are allowed to base questions only on material drawn from the text book, or whether they can also venture into other assigned readings, or—if the teacher is *really* daring--any outside source for their items.) On regularly scheduled occasions, time is set aside in the classroom schedule for interested students to read off their questions. The teacher attempts to answer each question off the top of her or his head. If the teacher answers the question correctly, she or he gets bragging rights; if the student stumps the teacher, though, he or



she wins points or some other reward or incentive (e.g., a 'Get Out of 1 Homework Assignment Free' pass). If there is disagreement between teacher and student over the correct answer, a peer (student) group can be deputized on the spot to resolve the dispute (but they have to give a rationale for their decision!)

NOTE: Students should be given common-sense, fair guidelines that they must follow when playing this game: e.g., student questions should have answers that are brief (e.g., can be answered in a single short sentence), based on fact rather than opinion, and do not depend on puns, riddles, or wordplay.

Tour Guide. In this assignment, students prepare and present an entertaining 'travelogue' that will help the class to experience a region as if they were tourists traveling through that locale. It can make potentially dull subjects vivid and interesting!

Students are divided into groups. Each group is given a country or geographical region to research on the Internet. The presenters can spice up their travelogue with maps, sound files, excerpts from explorers' journals, or digital photos. They may wish to describe road conditions, foods eaten in the region, brief historical highlights, major cities--any information that will paint a three dimensional portrait of the area. TIP: This assignment can be adapted to a range of subjects, including history (*"Let's take a trip to Rome in the first century A.D."*), literature (*"We are going to embark on a tour of the theater district in Elizabethan London!"*) and even science (*"As our spaceship of tourists approaches the edge of the solar system, the ship's radar begins to pick up the faint signals of ancient comets floating like sooty snowballs in the Oort Cloud."*)



References

Maguire, J. (1990). *Hopscotch, hangman, hot potato, and ha, ha, ha: A rulebook of children's games*. New York: Prentice Hall Press.