GAMES FOR TEACHING SCIENCE AND MATH CONCEPTS

(1) Games in the single computer classroom: Design a lesson to use a computer game (Graphing Equations, Geoworld, Castles, Mastermind, Puzzle Tanks, The Factory, Tetris, Fife Stones, Connect Four, etc.) in a classroom with only one computer and a large display unit. Include the following:

- Major concepts
- Performance objectives (what will students be able to do when the lesson is completed?)
- Detailed handout that will lead students through the lesson

Who Wants to Win a Million Dollars?
Science Game
http://education.jlab.org/million/index.html

Procedure:
- Read the rules of the game to the class
- Divide the class into two equal teams and choose team captains.
- The game will be played with each team taking turns. A team’s turn ends when they get an answer wrong.
- The teacher will control the game and select the answers specified by the team captain.
- The Izzie points or money is added up and the team with the highest amount wins the game.

(Alternatively, the teacher could design his own questions based on the units that have been studied.)

Who Wants to Win a Million Dollars?
The Rules

Who Wants to Win a Million Dollars is a quiz game modeled after the TV show Who Wants to be a Millionaire®. All of the questions in the game are science and math based but, unlike the TV show, you aren't playing for real money. Sorry! But you are playing for Izzie points (small extra credit points).

There are 15 questions standing between you and a (pretend!) million dollar pay day! Each question is presented in multiple choice format. One of the four choices is the correct answer - your job is to pick the right one! The questions become more difficult as you progress through the game, but the potential (fake!) payoff increases as well! Miss a question and the game is over.
There are two safe levels, one at $1,000 and the other at $32,000. Once reached, you can not win less than that (imaginary!) amount. You can quit the game at any time and take your current (worthless!) winnings home with you.

If you need help, there are three 'life lines' at your disposal. You can use each one only once during the course of the game, so use them wisely!

**The life lines are:**

**Poll the Lab**
Magically taps into the minds of the staff of Jefferson Lab and tallies what they think about the question. Beware! Sometimes they are busy or distracted and might answer incorrectly!

**50/50**
The computer will randomly remove two incorrect answers, leaving the correct answer and one incorrect answer.

**Ask an Expert**
Magically taps into the mind of a staff scientist at Jefferson Lab to see what they think about the question. As with the Poll the Lab life line, this isn't always foolproof.

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(2) **Games in a small group setting:** Design a lesson to use a computer game in the small groups. Include the following:

- Major concepts
Students solve crossword puzzles using science terminology. Students will be able to learn terms and how to find definitions online. Students will work individually on the crosswords. Those finished early can try NASA’s quiz games, which follows.

3. Games

Jefferson Labs Games
http://education.jlab.org/indexpages/elementgames.html

Crossword Puzzle: The Solar System
http://education.jlab.org/sciencecrossword/solar_01.html

Use the clues provided to solve each crossword puzzle. To place letters on the puzzle, **first select the clue you are answering from the pull-down menu** and then **enter you answer in the text box**. Press the 'return' key on your keyboard when you are done. Correct letters will be green while incorrect letters will be red. Good luck and have fun!

**Need Help?** Log onto **Science Glossary** at Reeko’s Mad Scientist Lab:
http://www.spartechsoftware.com/reeko/Glossary.htm
Geoman’s glossary of Earth Science:
http://jersey.uoregon.edu/~mstrick/geology/geo_glossary_page.html
Or use url:
http://www.google.com/search?q=cache:OwVIvKQ6ppIJ:jersey.uoregon.edu
/~mstrick/geology/geo_glossary_page.html+science+terminology+glossary&hl=en

NASA Games
http://kids.earth.nasa.gov/games/

Nasa What on Earth? Game
http://gaia.hq.nasa.gov/quiz/quiz_start-template.cfm

Tectonics Quiz game
http://kids.earth.nasa.gov/archive/pangaea/quiz.html
Who was the first to notice that South America and Africa seem to fit together?

1. Alfred Wegener
2. Sir Francis Bacon
3. Frank Taylor

Find out about Continental Drift.