Lesson Title	Who Wants to be a Cellular Biologist?
Length of Lesson	A 30 minute section of a 50 minute class period
Created By	Bo Cherry
Subject	General Science
Grade Level	8th grade
State Standards	8th: 1 d (Inquiry); 3 b (Life Science)
DOK Level	DOK 3
DOK Application	Develop Logical Argument, Compare
National Standards	5-8: A (Inquiry); C (Life Science)
Graduate Research Element	This is a review of cellular biology, which does not coincide with current research.

Student Learning Goal:
MS 8th Grade:
(Inquiry) 1 (d) Analyze evidence that is used to form explanations and draw conclusions; (Life Science) 3 (b) Compare and contrast the major components and functions of different types of cells.

National Science Education Standards of Content 5-8:
(Inquiry - A) Think critically and logically to make the relationships between evidence and explanations; Develop descriptions, explanations, predictions, and models using evidence; Communicate scientific procedures and explanations; (Life Science - C) Structure and Function in Living Systems

Materials Needed (supplies, hand-outs, resources):
Computer; Projector; Powerpoint Presentation (INSPIRE_Cherry_03.31.11_PP); small white boards (7-8); dry erase markers (7-8); paper towels or cloth to erase boards.

Lesson Performance Task/Assessment:
This lesson is a review game that is intended to capture students' interest and have them talk about the questions to reach their "final answer". This game can be played several ways, but the most effective way found is to play in teams of 3-4. Each team has a small white board which they use to write their answers on. Each question is shown on the screen through the projector, and the teams have a certain amount of time to discuss the answers and reach a final answer, which they write on their white board. The instructor, after the set amount of time passes, tells the students to hold up the boards. Teams that get the answer correct, receive the amount of money that the question is worth. A score-keeper must also be designated, or the instructor may keep track of points on the board. The questions are designed to get harder, so more time may be allotted to the later questions (after $32,000). The team which wins the game may select to have a homework pass, or some other reward that the instructor wishes to give.

Lesson Relevance to Performance Task and Students:
This activity is designed to refresh the students on vocabulary and important concepts in cellular biology. Many of the questions require the students to use process of elimination to reach the correct answer. Many questions are also listing questions and require brief discussions within each team.

Anticipatory Set/Capture Interest:
The capture activity for this lesson is a short introduction to the game. Because the activity is an interactive game that is based around the idea of winning money, the students will be interested from the beginning.

Guided Practice:
This activity is designed so that the instructor gets instant formative feedback from the students. By listening to the teams' discussion and seeing their final answers, the instructor will be able to address any misconceptions that the students may have.

Independent Practice:
Students or groups of students will be asked several discussion questions which they will be given time to discuss, then answer. This gives students a chance to think logically with one another, and communicate their discussions to the rest of the class.

Remediation and/or Enrichment:
Remediation – Individual IEP; the PowerPoint will be made available to resource teacher;
Enrichment – Require students to not only list the 5 phases of mitosis, but also draw diagrams for the one million dollar question.

Check(s) for Understanding:
The activity itself will serve as a sort of formative assessment to check for student understanding.

Closure:
This activity is designed to take up about 30 minutes, so the instructor may have other topics to cover for the remainder of the class.

Possible Alternate Subject Integrations:
Ecology, Life Science

Teacher Notes:
None