Case Details

Case Title:

Sticky Situation

Author(s):

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Grade Level(s):

Middle School

Subject(s):

Life Science

Summary:

During an exciting game of basketball between the Cleveland Cavaliers and the Houston Rockets, Lebron James embarrasses Tracy McGrady with a slam dunk for the ages. But as Lebron returns to earth after soaring through the air, he slips on a mysterious substance on the court. What could this substance be? Is it alive; is it dead, how did it get there? It's up to you and your investigation team to find out!!!!!!!!

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http://www.cse.emory.edu/cases/casedisplay.cfm?case_id=1864

Learning Objectives:

- 1. Identify the sample to be made of eukaryotic cells
- 2. Identify the different organelles and list their functions.
- 3. Explain the difference between prokaryotic and Eukaryotic cells.
- 4. Draw a prokaryotic and eukaryotic cell.
- 5. Explain the differences between plant cells and animal cells.
- 6. Determine what a cell needs in order to grow and divide
- 7. Understand the process of cell division.
- 8. Re-enforce proper lab techniques.
- 9. Identify the type of tools that you can use in order to identify cells

National/State Standards:

Georgia Performance Standards

S7CS1. Students will explore of the importance of curiosity, honesty, openness, and skepticism in science and will exhibit these traits in their own efforts to understand how the world works. (NSES Content Standard C) a. Understand the importance of and keep honest, clear, and accurate records in science. b. Understand that hypotheses can be valuable, even if they turn out not to be completely accurate.

S7CS2. Students will use standard safety practices for all classroom laboratory and field investigations. (NSES Content Standard C) a. Follow correct procedures for use of scientific apparatus. b. Demonstrate appropriate techniques in all laboratory situations. c. Follow correct protocol for identifying and reporting safety problems and violation

S7L2. Students will describe the structure and function of cells, tissues, organs, and organ systems. (NSES Content Standard C) a. Explain that cells take in nutrients in order to grow and divide and to make needed materials. b. Relate cell structures (cell membrane, nucleus, cytoplasm, chloroplasts, mitochondria) to basic cell functions. c. Explain that cells are organized into tissues, tissues into organs, organs into systems, and systems into organisms. d. Explain that tissues, organs, and organ systems serve the needs cells have for oxygen, food, and waste removal. e. Explain the role of the major organ systems in the human body.