

Project FOCUS
Best Lessons
MIDDLE SCHOOL: 7th Grade Life Science

Title of Lesson: Cell Anatomy/Function Lab

Theme: Cell Structure and Function

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.
- S7L2. Students will describe the structure and function of cells, tissues, organs, and organ systems.
- S7CS2. Students will use standard safety practices for all classroom laboratory and field investigations.
- S7CS4. Students will use tools and instruments for observing, measuring, and manipulating equipment and materials in scientific activities.

Enduring Standards (objectives of activity): **(I deleted the ones that didn't apply)**

Habits of Mind

- Asks questions
- Works in a group
- Uses tools to measure and view
- Looks at how parts of things are needed
- Describes and compares using physical attributes
- Observes using senses
- Draws and describes observations

Content (key terms and topics covered):

Cell function and structure

Prokaryotic cells vs. eukaryotic cells

Learning Activity (description in steps)

Abstract (limit 100 characters): Using the materials provided the students will look at different cell types under microscopes, make observations, and compare/contrast the cell types. They will work in groups of four. Each team member is responsible for a specific item: cheek cells, potato, red onion, or yogurt. Each student will set up whichever item given and prepare it to be observed under the microscope for the group to see. After looking at each item, the students will draw what they see in the spaces provided on the lab worksheet. There will be questions to answer at the end of the lab. These questions are a part of the reflection that will be written in the interactive notebooks.

Materials Needed (type and quantity):

- Microscope
 - Slides
 - Cover slips
 - Forceps
 - Petri dishes
- Scalpel (8)
- Lugol's solution
- Potato (1 per class)
- Red onion (1)
- Toothpick (8 per class)
- Yogurt (8 teaspoons per class)
- Spoons (8 per class)

Notes and Tips (general changes, alternative methods, cautions): If I do this lesson again, I would cut really thin potato slices beforehand and distribute them to each group. Although my teacher and I cut small sections of potato for each group, we did not make the thin slices for them. Also, if time permits I would have the students look at the different substances under the microscope without staining first and then with the staining. That way they could compare the two.

Sources/References:

- 1) Georgia Performance Standards