

**Content Standards:** Science—Biology CS 2 Each student observes and investigates organisms, their characteristics, life cycles and environments

**Performance Standards (PS: 1 & 2)**

The student will:

Complete investigations that demonstrate understanding

of the life sciences and will demonstrate an understanding of cells as the basic structure of all living things have specialized parts that perform specific functions

**Technology Integration:**

1 through 4

**Foundation Skills:**

X Communication (writing activity and brochure)

X Reasoning and Problem Solving (demo's fish in salt water etc...)

X Personal Development and Social Responsibility (looking into areas of interest regarding health issues related to cellular problems—cancer—sickle cell—different poisons)

X Making Connections (similarities between cells and buildings introduction—job functions and cell structure functions)

**Targeted DCPS Learner Outcomes:**

X Quality Producers

X Self-Directed Learners

X Knowledgeable Problem Solvers

Collaborative Leaders

Community Builders

**Culminating Performance Task:**

Unit Test and successful completion of mini labs and a cell model project and travel brochure

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X Product X Performance  Process

**Criteria:** Specifications for students to successfully complete performance task

See Rubrics for each activity

Rubric for Cell Model:

<http://www.howe.k12.ok.us/~jimaskew/evalmod.htm>

What is a cell and what does its parts do

Essential Question, Issue, or Problem

**Assessment Tool(s):**

X Rubric several used

X Student Evaluations KWL and student part of rubrics

Portfolio

X Other:

Travel Brochure Unit Test—Model 3D—analogy collage  
As well as HW, Quizzes, Skit, Webquest mini labs

**Standards-Based  
Unit Planner**

**Unit Theme/Title: The Cell**  
**Content Standards: Biology CS2**

**Essential Skills, Concepts, and Information:**

*(List for each performance standard targeted.)*

*ES 1.2 ..2 1.3 2.1, 2.2, 2.3*

**Learning Events:**

*(Activities and Strategies)*

- Introduction of cells and buildings—and analogy between career life job functions and cell functions
- Pre-Assessment survey
- K-W-L
- Hooke, pictures and facts, computer graphics project & large microscope and cork cells (hands-on pass around)
- Show pictures and tutorials (interactive projection) of cell sizes and types
- Closure each day 1-2 new things you learned
- Warm ups
- Cell cartoons each day (focus activity)
- Paramecium and Euglena microscope activity OR via interactive Internet projection OR internet activity in computer lab---also in fresh and salt water (what would happen to a freshwater fish placed in salt water? A salt water fresh placed in fresh water)
- Diffusion/osmosis demo's (copper sulfate,; perfume; lettuce in cold tap and salt water;
- Webquest (they choose one)
- Drawings of cell and animal cells to hang from ceiling (preparation for 3D model)
- Cell model report and diagram 3D
- Plant and animal differences worksheet & use Inspiration for visual organizer afterwards
- The students develop a VENN diagram indicating differences between plant and animal cells
- Creative writing activity
- *If I were* sheet to collect information for the skit—to act out
- Jell-O and or cake models
- Cells and parts in a baggy (students make)
- Vocabulary homework
- Vocabulary chop up
- Vocabulary quiz
- Vocabulary puzzle find
- Functions analogy collage
- Short Skit
- Travel brochure
- Unit Test but includes various levels of thinking (MC/short answer/matching/definitions/analogies etc...)

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