



Cell Cookie Lesson Plan

Lesson adapted by Beth Calder and Susan Brawley (There are many similar lessons available on the web, but this lesson plan was adapted by Cooperating Teachers and Teaching Fellows in our program.)

Age level: K-12

(This activity was successful at all grade levels including high school biology.)

Background information on cells and different variations of cell activities can be found at the following web sites:

http://vlib.org/Science/Cell_Biology/

<http://www.cellbioed.org/>

<http://www.kathimitchell.com/cells.html>

<http://www.sciam.com/>

[article.cfm?articleID=000E9461-AB74-1C75-9B81809EC588EF21&catID=4](http://www.sciam.com/article.cfm?articleID=000E9461-AB74-1C75-9B81809EC588EF21&catID=4)

<http://www.hhmi.org>

<http://www.dnai.org>

Objectives:

To review the structure and functions of plant and animal cells.

To reinforce students' comprehension of cell structure with a fun food activity.

Materials:

Large sugar cookies (one per student)

Cake decorating frosting (at least 4 different colors)

Cake decorating candies (at least 3 different kinds)

Note: When working with food activities, be aware that some students may have food allergies.

Activity:

Review plant and animal cells, organelles, and organelle functions with students. (Please see websites above for background information on cells.)

Explain to students that they will be making their own "cell" cookie. Each student has to choose at least 6 organelles to create on his/her cookie using the frosting and/or decorations provided.

Examples: yellow frosting can be added to the top of the cell cookie to represent the cytoplasm of the cell. The outside of the cookie can be considered the cell membrane. A thin line of green frosting applied at the rim of the cookie in a square fashion can represent the cell wall of a plant cell. A large circle of colored frosting can represent the nucleus. Small round candies can be considered the ribosomes, etc.

Allow students to be creative. After students finish their cell cookies, have each student identify the organelles on his/her cell cookie and explain their functions. Students can then eat their cell cookies!

Pizza (using different pizza toppings) and Jello (using fresh and/or dried fruit) cells can be other great substitutions to create cell models. (Jello cell lesson is available at our website).

The students enjoy the activity because of the hands-on approach to learning science, using food, and they can eat their creations after the activity is completed.