

CLAY CELL DIFFERENTIATION

Materials:

1. Modeling clay of various colors
2. Paper
3. Toothpicks
4. Scotch tape
5. Copies of the “Cell-ibration” handout on the previous page

Activity:

1. Review the parts of animal cells with the students. Remind them of the various organelles and their functions.
2. Discuss the cell examples on the “Cell-ibration” handout. Add in some other interesting cell types if you like, such as photoreceptors, skin cells, or stomach cells.
3. Divide the students into pairs. Assign each pair a type of cell to make a model of (include stem or “normal” animal cells in the assignments).
4. Each pair will use the clay to make a model of their assigned cell, using different colors for different structures. They should note any specialized parts and label them using the toothpicks, paper, and tape to make small location markers.
5. Each student should write a brief description of the cell’s job and why it is important.

Discussion questions:

1. How did the students’ cells have to change to go from the original stem cell to its current form? What sort of structures did it have to create? What structures might it have lost?
2. For those who modeled the stem cells, how could they be useful, if they have the ability to turn into any of the other cells in the room?
3. Why would it be difficult for the specialized cells to take on a different job?