



Construct a Cell

Overview: Students will gather items they can find in nature to put as parts in a cell. The catch is that students must explain why that item represents the cell organelle by using metaphors, similes, or other explanations. **Prerequisite:** Students must have a firm understanding of cell parts and functions. This lesson would be great as a unit wrap-up lesson. An example would be that an acorn could represent a vesicle because it transports seeds to other places in a protective casing like a vesicle transports proteins in a cell.

Subject Areas: Science

Grade Levels: 6-8, 9-12

Topics: Biology, STEM, Plants

Great Lakes Literacy Principles:

5. The Great Lakes support a broad diversity of life and ecosystems.
6. The Great Lakes and humans in their watersheds are inextricably interconnected.

Materials:

- Red (animal cell) and Green (plant cell) rope or hula hoops as the cellular membrane or “holding area” for all cell parts
- Cell parts cards (see supporting file)

Lesson:

Bring students outside and put them into groups. Depending on how much rope/time/students you have, you can divide them into two groups and have one group complete an animal cell (red rope) and the other complete a plant cell (green rope) with the matching red and green cards for animal cell parts and plant cell parts, respectively. Please note to students not to destroy other living things to make their cell (no ripping tree branches off, etc.). Also, encourage them to be creative and really think about the functions of the different organelles in order to assign each organelle with something they find in nature. Remember, the goal is for students to find an object and use a metaphor, simile or other comparison to describe the function of the organelle using the object from nature. Then have students teach the other groups about their cell and provide their descriptions.