

In the Beginning 8 - Activities

LESSON ACTIVITIES

✓ **Further Understanding:** Investigation/Reasoning Skills

The Living Cell

The tiny, living cell is the basic unit of all living organisms. [Look up a picture of a model cell on the Internet.] Each cell is a complete and self-contained unit and in some ways resembles the human body, as it does the same kind of things the body does. As we examine the parts of the cell, we will compare each to a body part or system that performs a similar function. Remember that all these complex functions are happening inside a cell that is so tiny it can't be seen with the human eye.

- A cell has a membrane surrounding it that holds it together. [What is that similar to?] *Skin*
- A plant cell has a cell wall which provides support for and gives form to the cell. [What is that similar to?] *skeleton*
- A cell has a nucleus that directs the functions of the cell. [What is that similar to?] *brain*
- The inside of the cell, except for the nucleus, is called cytoplasm and contains organelles that perform special functions. [What is that similar to?] *internal body organs*
- In the cytoplasm of a plant cell are chloroplasts where the process of photosynthesis takes place. [What is that similar to?] *There is no similar structure in an animal cell since animals can't produce their own food.*
- In the cytoplasm are vacuoles that store food. [What are they similar to?] *fat cells or liver which stores glycogen*
- In the cytoplasm are mitochondria that break down food and process it and oxygen to provide energy for the cell. [What are they similar to?] *stomach/lungs, digestive/respiratory system*
- In the cytoplasm is the endoplasmic reticulum that is made up of little channels and tubes that move materials from the cytoplasm to the cell membrane. [What is that similar to?] *blood vessels, circulatory system*
- In the cytoplasm is ribosome which breaks down food and makes it useful for the plant. [What is that similar to?] *stomach, digestive system*
- In the cytoplasm is a centrosome which is involved in producing new cells. [What is that similar to?] *a woman having a baby*
- In the cytoplasm is a Golgi body which stores and transports materials and which breaks down material the cell uses or processes. [What is it similar to?] *digestive system*

Discussion: What would happen to the function of the cell if any part of the cell were missing? (Review and name each part for the students to explain.) What would happen to a plant if its cells didn't function properly? How does the cell demonstrate design? What can be learned about God through the study of the cell?

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- ✓ **Investigation Activity:** Examine a Cell

Instructions: Examine the thin, dry outer skin of an onion under a microscope to see the cells.

- ✓ **Game:** Put Together a Plant

As a reminder that plants are made up of different parts, which are necessary for the plant to function, put together a plant.

Instructions: Print off pictures of different plants from the Internet. Cut the pictures into pieces and hide the pieces. Give each child a copy of the picture of one of the plants. Each child then needs to find the pieces that make up its particular plant.