

## 7th Grade Science



June 2021

Dear BelovED Scholars,

Congratulations! You have successfully met the criteria to advance into your 6th Grade year! Welcome to Middle School! This year will be an exciting time as you continue to make memories, but will also be one in which you begin to reflect on your journey here at BelovED and your goals for High School and beyond! I hope you are looking forward to an enjoyable summer.

Attached you will find information and activities for your summer work in Science. The contents of the packet will provide you with the preparation and foundation for the 6th Grade Science curriculum. Your goal must be to master the concepts and vocabulary and retain them. You are responsible for completing the packet over the summer.

Upon returning to school, your packet will be checked and graded for completion and count as your first homework grade. We will review the packet and an assessment will be given. We are going to have an exciting, challenging and fun year. I look forward to working with you all next year. I hope you have a great summer!

Best of luck to you all,

Ms. O'Connor  
7th Grade Science

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Cells

### What are cells?

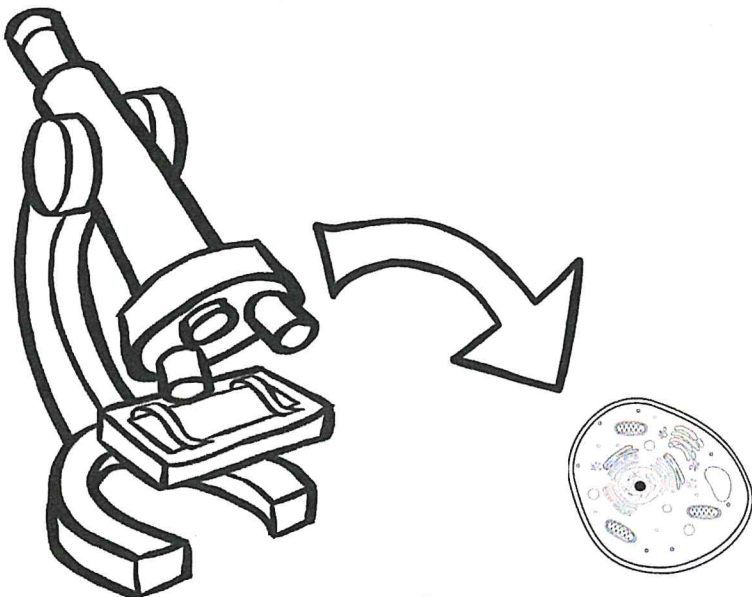
Cells are the basic units of structure and function in living things. Cells are often called the "building blocks of life" because all living things are made up of them. You can think of cells like bricks in a building. Each brick works together to help that building stand. Cells work together to make your body work correctly. All life processes are carried out by cells.

### How many cells are in our body?

There are about 32 trillion cells in your body. We are complex organisms so we need all of these cells to make our bodies work correctly. Elephants are bigger creatures. Scientists estimate that they have about 150 trillion cells in their bodies. There are organisms that are only made up of one cell. These are called microorganisms. Bacteria is an example of a microorganism.

### How can I see cells?

Most cells cannot be seen with our eyes. Eggs are an example of cells that can be seen with your eyes. Chicken, ostrich, and frog eggs are some examples. Most cells are microscopic. In order to see them, you need to view them through a microscope.

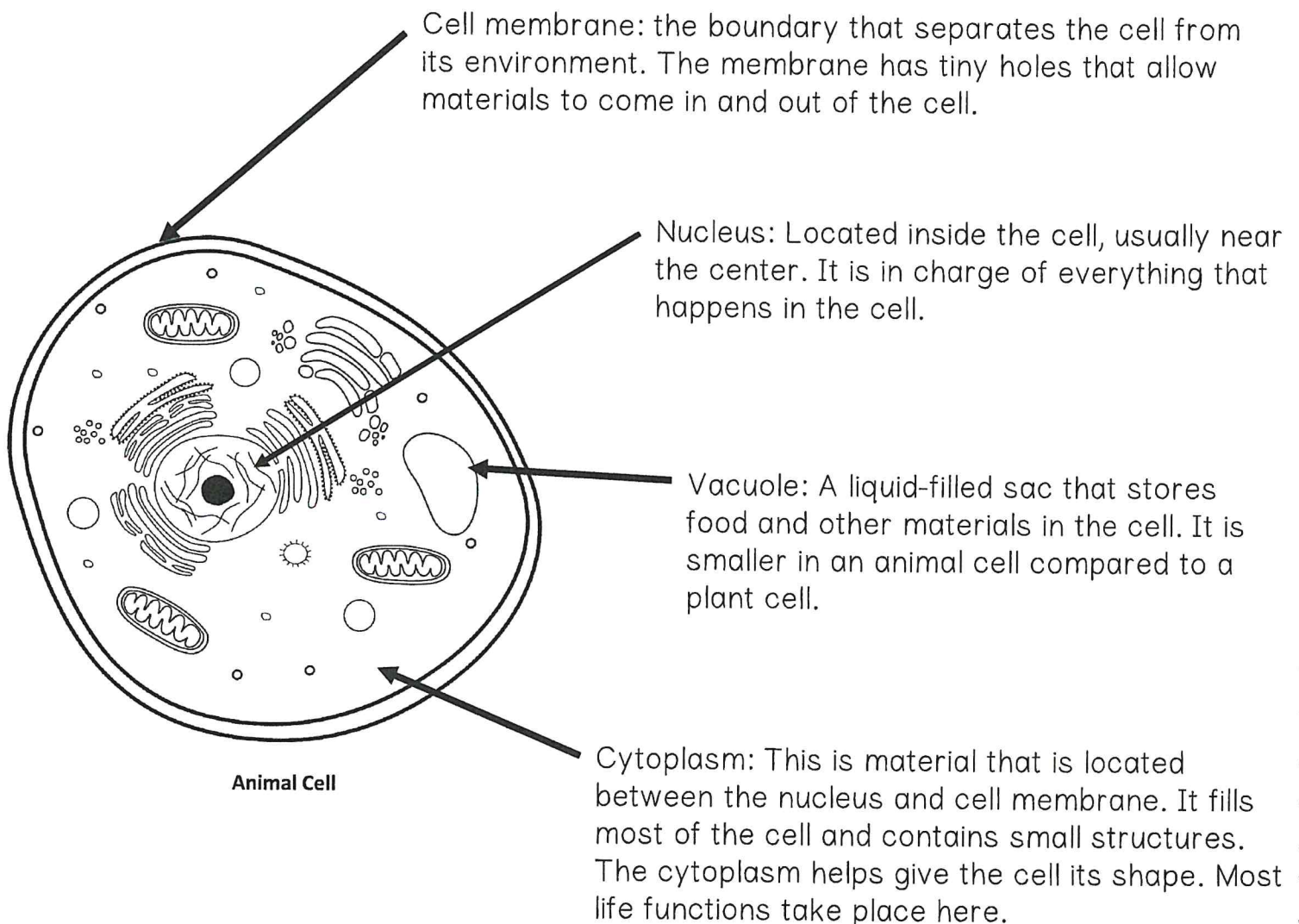


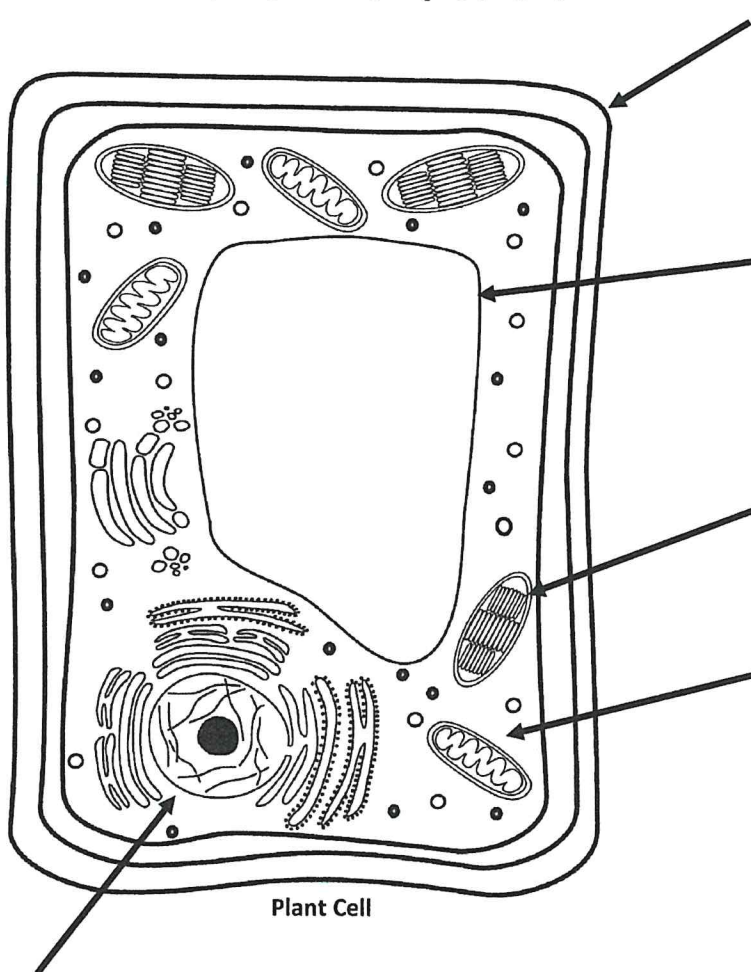
## What do cells look like?

We already learned that cells come in different sizes. Most are microscopic but there are few that we can see with our eyes. Cells also come in different shapes. Some cells are circular in shape. Others may have a more rectangular appearance. Some cells are shaped like a comma. Others have a shape similar to a screw. The shape of a cell can give scientists clues as to what it can do.

## What are cells made up of?

Even though cells are so small, they are made up of even smaller parts. There are three main parts to most cells; the cell membrane, the nucleus and the cytoplasm. Animal cells are circular and plant cells look rectangular.





Cell wall: Similar to a thin skin that covers the cell, the cell wall protects the plant cell and gives it its shape. The wall has tiny holes that allow materials to come in and out of the cell.

Vacuole: A liquid-filled sac that stores food and other materials in the cell. It is smaller in an animal cell compared to a plant cell.

Chloroplast: Large green structures that capture energy from sunlight and use it to produce food for the cell.

Cytoplasm: This is material that is located between the nucleus and cell membrane. It fills most of the cell and contains small structures. The cytoplasm helps give the cell its shape. Most life functions take place here.

Plant Cell

Nucleus: Located inside the cell, usually near the center. It is in charge of everything that happens in the cell.

Overall, plant cells tend to be larger than animal cells.

Plants cells are different from animal cells because they contain chloroplast, cell walls and have larger vacuoles.

Animal Cell	BOTH	Plant Cell

## What You Learned.

- ✓ Cells are the basic units of structure and function in living things.
- ✓ There are about 32 trillion cells in your body.
- ✓ Most cells are microscopic.
- ✓ Cells are made up of smaller parts.

Answer These:

1. Which part "bosses" the other parts of a cell? \_\_\_\_\_

2. What cells can be seen with your eyes? \_\_\_\_\_

3. What do cells look like?

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4. What does the cell membrane do?

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5. Where do most of the life functions take place in a cell? \_\_\_\_\_

6. Does each part of the cell work alone? Explain your answer.

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Fill in the Blank:

Word Bank

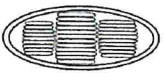
cell wall	size	
cell membrane	life processes	cells
chloroplasts	nucleus	shape
		vacuole

1. \_\_\_\_\_ are the basic units of structure and function in living things.
2. A plant cell has two parts that an animal cell does not. The two parts are \_\_\_\_\_ and \_\_\_\_\_.
3. The \_\_\_\_\_ is the "boss" of the cell.
4. A cell carries out \_\_\_\_\_.
5. The \_\_\_\_\_ allows substances to come in and out of the cell.
6. Cells vary in \_\_\_\_\_ and \_\_\_\_\_.
7. The size of the \_\_\_\_\_ varies in plant and animal cells. It tends to be larger in a plant cell.

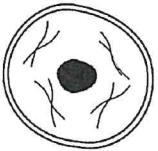
Vocabulary: Look at the picture and read the statement. Determine which cell part it is describing.



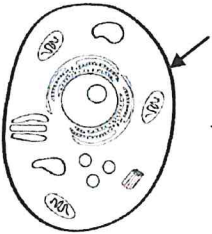
\_\_\_\_\_ 1. Liquid-filled spaces. It stores extra food and wastes. Plant cells have larger ones than animal cells.



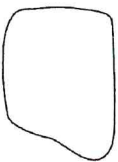
\_\_\_\_\_ 2. Found in the cytoplasm of the plant cell. They contain a green substance called chlorophyll needed by plants to make food.



\_\_\_\_\_ 3. The "boss" of the cell. It controls all of the cell's activities. It is very important during reproduction.



\_\_\_\_\_ 4. Barrier that allows materials to come in and out of the cell.



\_\_\_\_\_ 5. Liquid-filled spaces that store food and waste. They are larger in plant cells than in animal cells.