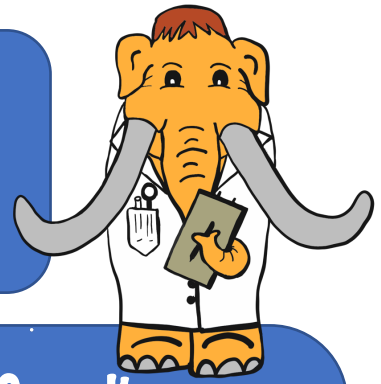


# Science Saturday @ Home

## Cell Model and Scavenger Hunt



### Gathering Supplies:

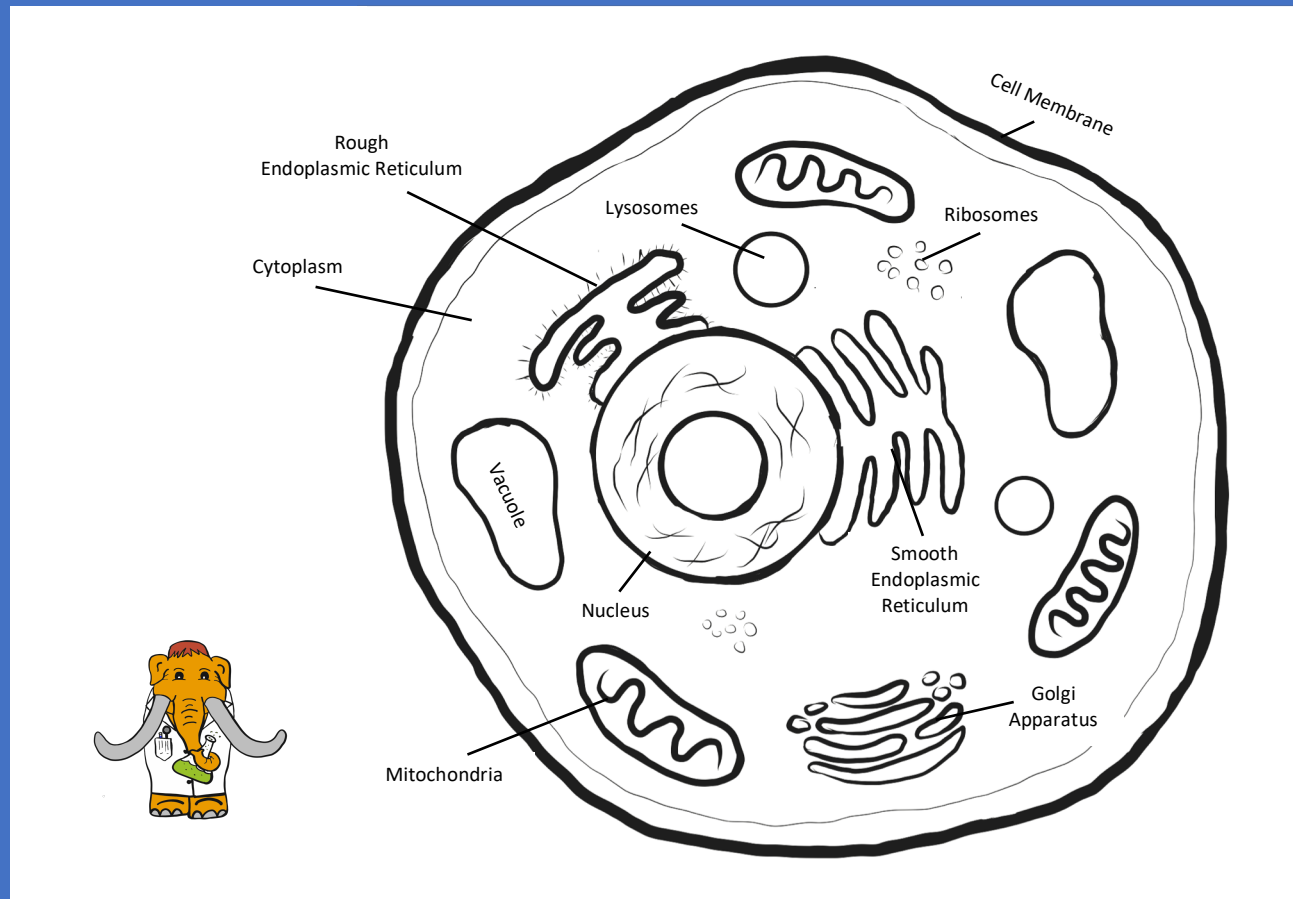
- Glue
- Scissors
- Tape
- Large Round Plastic Lid (Optional) or Paper Plate
- Small items from around the house.
- Cell Printable (Optional)

### How To Steps:

There are over 75 trillion cells in your body! Let's explore the different parts of an animal cell while building your own cell model.

1. You can use the cell diagram on the next page along with the description of the different parts of the cell, or print out the Parts of the Animal Cell printable to help you build your cell.
2. You can use a plastic lid, like from ground coffee or a nut container, or a paper plate for your cell. If using the paper plate use a marker to draw in the Cell Membrane. If using a lid, the cell membrane is the edge of the lid. Your glue will be the *Cytoplasm* that fills the cell.
3. Now see if you can find other items from around your house to represent the other parts of the cell, the *organelles*. Maybe a button or a fuzz ball for the Nucleus or glitter or ground pepper for the tiny Ribosomes.
4. Once you have found the different parts for your cell, it's time to build your cell! Use a layer of your glue inside your cell and glue each item into the cell. For your model make sure that you have at least one of each of the cell parts shown. Let the glue dry and you have your very own model of an animal cell!

# Parts of an Animal Cell



**Cell Membrane** - The outer part of an animal cell. The cell membrane regulates chemical balance in the cell by controlling what goes in and out of the cell.



**Nucleus** - The brains in the center of the cell. The nucleus contains the cell's DNA and tells the parts of the cell what to do.

**Glue**

**Cytoplasm** - Fills the cell and carries structures called organelles. Organelle is the name for the parts of the cell that work together to keep the cell going, like the mitochondria and lysosomes.



**Mitochondria** - The cell's powerhouse, breaking down food to make energy for the cell.



**Lysosomes** - Breaks down waste in the cell.



**Ribosomes** - They make proteins for the cell.



**Rough Endoplasmic Reticulum - (RER)** Moves proteins from the ribosomes covering it to different parts of the cell as needed.



**Smooth Endoplasmic Reticulum - (SER)** Stores other materials needed by the cell.



**Golgi apparatus** - Packs up proteins to be sent out of the cell when the body needs them.

## Max and His Cell Model



## Did You Know?

Cells are the basic unit of all life, and all living things are made up of cells! Cells contain a fluid called cytoplasm which holds the different parts of the cell called organelles. The cell produces energy and proteins, which work like building blocks for the body, along with waste management and disposal. Kind of like a very tiny factory!

There are two basic types of cells, prokaryotic and eukaryotic. Prokaryotic cells do not have an enclosed structure for the nucleus of the cell and include single cell bacteria that can live on their own. Eukaryotic cells are the type of cells that make up us, and include all types of plant and animal cells.

Plant cells are a little different from ours. They have a rigid cell wall to help them hold their shape. They also contain chloroplasts which help produce energy from the sun through photosynthesis.

Cells come in all different shapes and sizes. A group of the same types of cells is called tissue, and different tissues make up organs. In your body a nerve cell may be up to a meter long! A blood cell is a tiny, slightly donut shaped cell. A bone cell will have a stiff structure while a muscle cell can stretch. We are able to grow because our cells can make copies of themselves through a process called mitosis.



Blood Cells



Nerve Cells