

## Cell Theory

This activity was created by Robyn.

There are three main points to the cell theory:

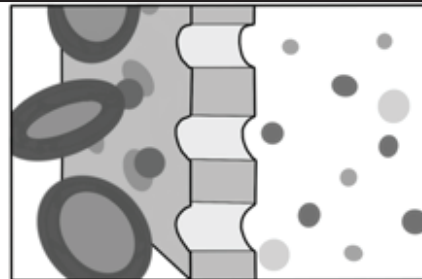
1. Living things are composed of one or more cells
2. Cells are the basic units of life
3. New cells arise from existing cells

Human bodies are made up of cells. Single human cells have membranes that are selectively permeable, with a single nucleus.

An experiment can be done with a single egg and acidic liquid to represent a single human cell. By following the instructions and making observations along the way, you will be able to see with your own eyes how a selectively permeable membrane works. You will be able to see how the nuclease acts in the fluids of the cell. Placing the egg in the acidic liquid will dissolve the hard-outer shell of the egg and thus represent the selectively permeable membrane.

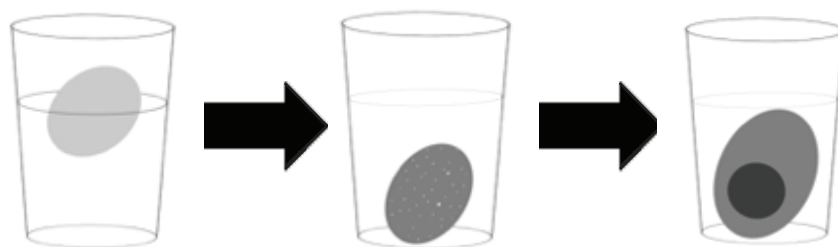


Here is an example of a selectively permeable membrane.



### Eggs-periment Time!

1. Fill a glass with vinegar, 3/4 full.
2. Put egg in glass of vinegar.
3. Monitor egg for 12-24 hours, watch for bubbles around the shell.
4. After the 12-24 hours has passed, make observations on the egg and vinegar experiment, try taking the egg out and holding it.
5. Let the egg sit in the vinegar bath for an extended period of time-maybe even a week!



What happened to the size of the egg? Why did this happen?

What other liquids could you use to dissolve the shell of the egg? Use the same process and try it out!

Try using soda or isopropanol.