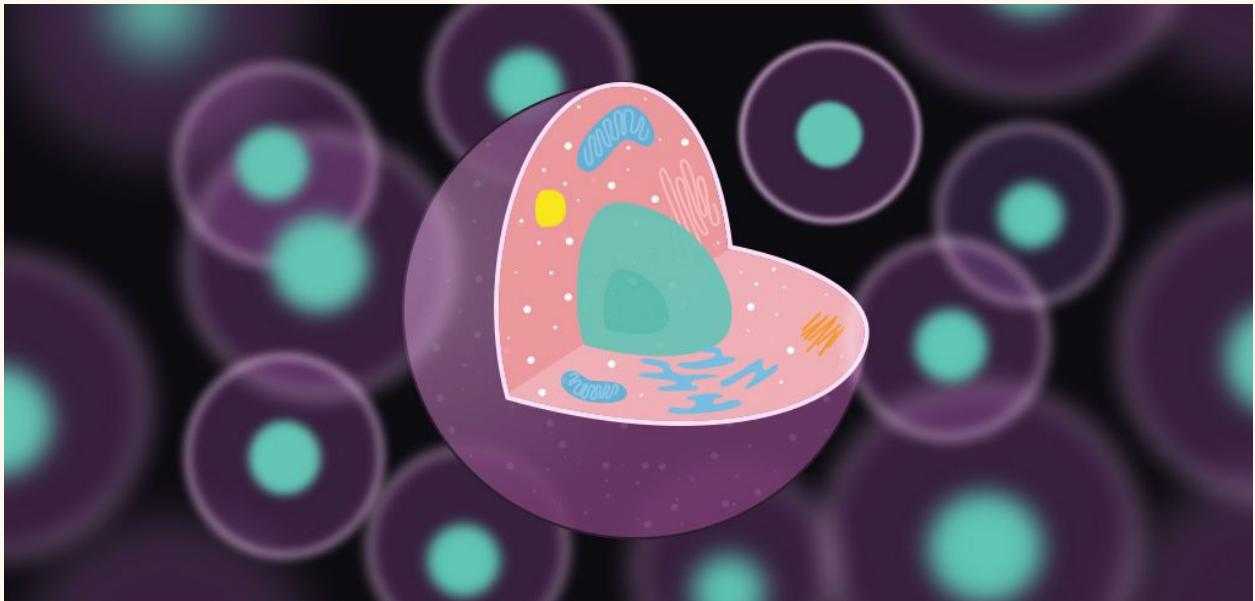


SCIENCE PERIOD 2

MS. Budrow

# All living things are made up of Cells

By Awesome Student



## Purpose

To prove that all living things are made up of cells.

## Materials

- Black Microscope
- Biotic slides
  - Skeletal muscle
  - Motor Neurons Cell
  - Pine leaf

- Abiotic Slides
  - Vitamin C (Abiotic)
  - Wool (Abiotic)
  - Vitamin D (Abiotic)

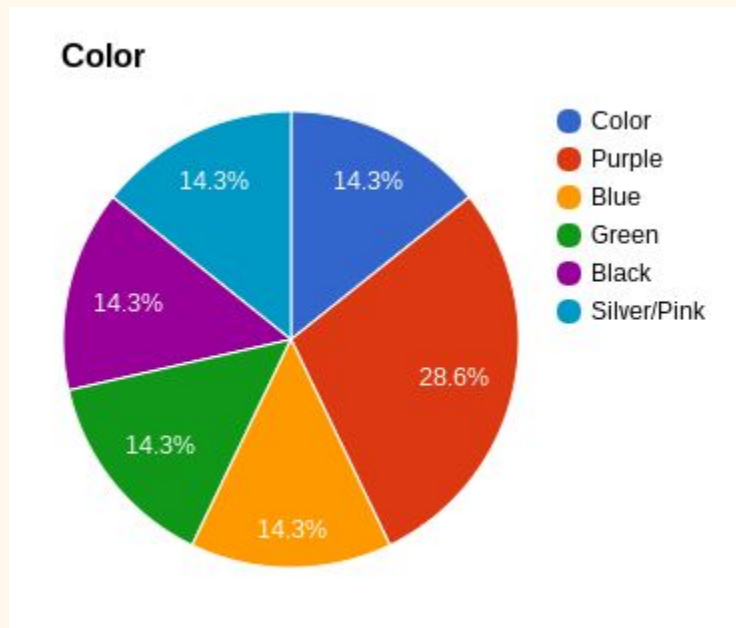
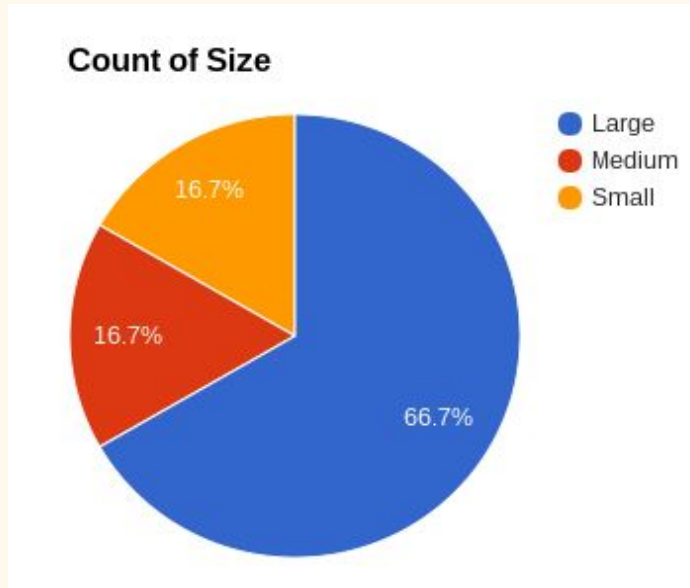
## Procedure

1. Take the microscope
2. Plug in the microscope
3. Turn on light source (Light Box under stage)
4. Grab these slides
  - a. Skeletal muscle (Biotic)
  - b. Motor Neurons Cell (Biotic)
  - c. Pine leaf (Biotic)
  - d. Vitamin C (Abiotic)
  - e. Wool (Abiotic)
  - f. Vitamin D (Abiotic)
5. Put any of the selected slide under the stage clips
6. Make sure slide is over the opening in the center of the stage
7. Put on stage clips
8. Adjust the object until clear under microscope
  - a. Adjust coarse focus
  - b. Adjust fine focus
  - c. Adjust slide
  - d. Adjust nose piece/lens
  - e. Repeat this step till slide is clear
9. Look through eyepiece at the slide
10. Record data into data table
11. Repeat steps 5-10 with all slides
12. When finished putting data into data table put the slides away
13. Turn off light source
14. Unplug microscope
15. Then use the data table to make graphs about the data table

## Data Table

<b>Slide Title</b>	<b>Skeletal muscle</b>	<b>Pine leaf</b>	<b>Motor neurons cell</b>	<b>Silk</b>	<b>Vitamin D</b>	<b>Wool</b>
<b>Color</b>	Purple	Multiple shades of purple	Blue	Green	Black	Silver and pink
<b>Size</b>	Large	Medium	Small	Large	Large	Large
<b>Pattern</b>	Elongated and purple	Circular shades of red and purple and a little bit of light green	White with few small and lots of tiny blue dots	Lots of strings of green	Looks like black powder on white screen	Looks like multi strands of pink and silver

# Graphs



## Conclusion

All living things are made up of cells. The wool looks pink without the microscope but with the microscope it looks like pink and silver strings. The Pine leaf has cells inside it under the microscope unlike the wool that never was alive and it didn't have cells. With the evidence in the data table we can draw a conclusion that all living things are made up of cells. The pine leaf had cell bodies and the skeletal muscle that has really small cells that make the muscle look purple. But the wool and vitamin d there was no cells all it was is a piece of material and vitamins. No cells or anything that would look remotely like a cell. The human body is made up of all cells, our body has 37.2 trillion cells. In the Game "Guts and Bolts" the objective is to connect each organ with pipes for blood to flow through to power the robot. An organ is made up of all cells. The human body needs organs to function and survive. In conclusion, cells make up living things and the evidence above proves it.

Sources: <https://www.brainpop.com/games/gutsandbolts/>