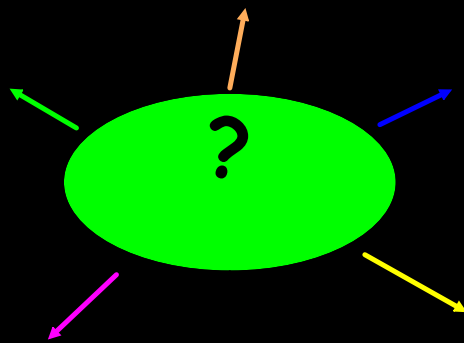


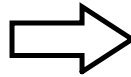
What is Biology?

Brainstorm at each arrow

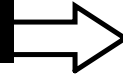


Biology is...

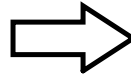
The study of life.



bio, "life"; *logos* "speech"
"to talk about life"



It is the study of living organisms
and how they react to their
environment.



Biologists, through time, have identified a pattern to the organization of living things.

Cell

Smallest unit of living things

Pull

Organs interacting physically or chemically in a task

Organ System

Tissue

Organized group of cells that perform a similar function

Pull

Organism made up of multiple organ systems

Multicellular organism

Organ

2 or more tissues that carry out a task

Pull

Groups of organisms occupying an area

Population

How do you know something is living?

There is often more
than meets the ...



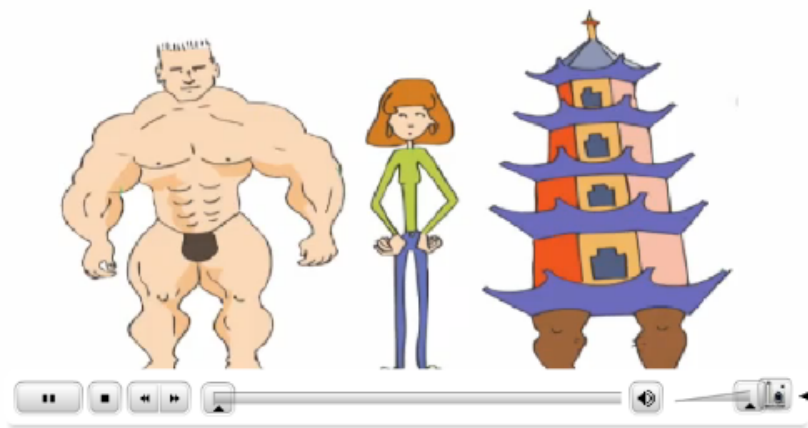
Let's take a look ourselves!

Characteristics of living things

All living things must...

- **Made of cells**
- **Obtain energy for metabolism**
- **Respond to a change in environment**
- **Grow, reproduce and/or develop**
- **Maintain homeostasis**

What is homeostasis?



What steps did you
use to identify which
'creatures'
were alive?

Knowing that,
which creatures
were living?



Is It Alive?

Characteristics of Life

ALL ORGANISMS:

[illegible]

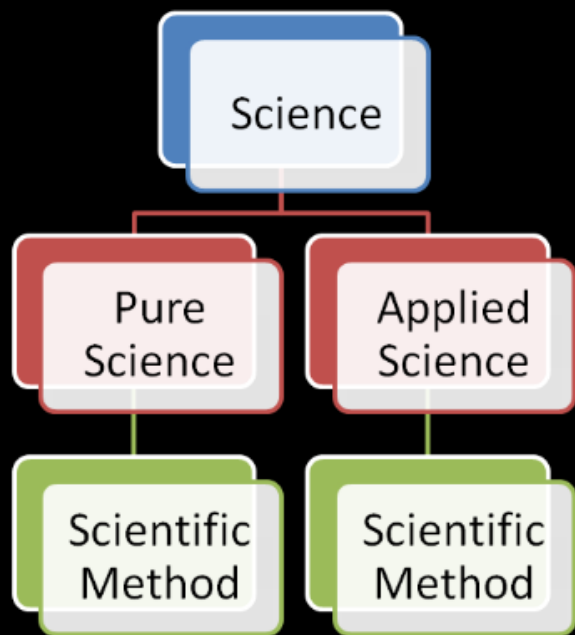
What is Science?

Science is a unique topic---in that it is constantly seeking to answer questions.

There are many genres of science that focus on different topics...botany, chemistry, anatomy and physics are just a few examples.

Pure vs. Applied Science

- There are two divisions of science
- The scientific method is used to solve problems in both divisions of science



Examples:

- When we conduct a lab in our own classroom
- When a professor carries out research in his lab

Example

- A pharmaceutical company uses scientific research to develop a new medication.

Pure

Applied

9. Researchers discover that cats can't taste sweets because they don't have the proper taste receptors.

7. An optometrist creates a new type of eye glass lens.

2. An archeologist discovers a new fossil.

5. A scientist discovers a drug to delay the effects of Alzheimer's disease.

3. A chemist creates a man-made element.

6. An anatomy student studies how the eye receives color.

8. A group of scientists locate a species of frog that gives off an enzyme that may be used to cure cancer.

4. A biology class does an experiment to test the effects of drinking Monster energy drinks on attention span during class.

1. A doctor engineers a new prosthetic limb for a disabled veteran.

10. The American Journal of Medicine reports that skin cancer rates among teenagers has doubled in the last decade.

Attachments

is it alive.mov