

Is it Alive? PowerPoint Notes

Cells function similarly in all living organisms.

Organisms

An organism is an _____ of _____. Yeast is a living organism. Each tiny sphere is an individual living thing.

Biologists often use five basic rules to classify something as living or nonliving.

Five Characteristics of Living Things

1. Living things _____ to their surroundings.
2. Living things _____ and _____.
3. Living things are able to _____.
4. Living things use _____.
5. Living things are made of smaller building blocks called _____.

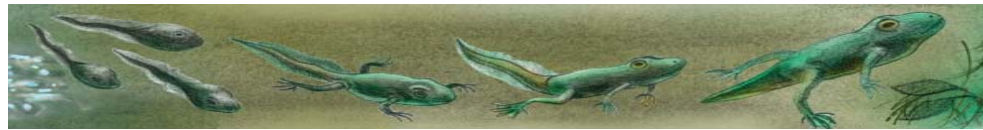


1. Living things respond to their surroundings.

All living things respond to a _____. The sunlight is a stimulus and the frog's choice to sun himself is called a _____.

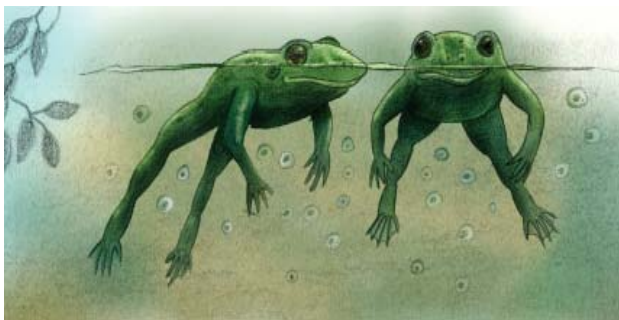
2. Living things grow and develop.

Growth refers to an _____ in _____ and to an _____ in number of _____.



3. Living things are able to reproduce.

The process of _____ of the same kind of organism is called _____.

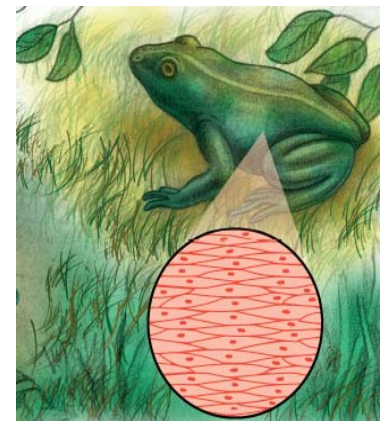


4. Living things use energy.

All living things take materials from their surroundings such as _____, _____, and _____ and use these materials to get _____.

5. Living things are made of smaller building blocks called cells.

A cell is the _____ of a living thing.



Francisco Redi

Before the 1600s, many people thought that living things spontaneously _____ from non-living things! Francisco Redi provided evidence that that _____ (maggots) came from eggs not rotting meat. Redi was an Italian medical doctor. He performed an experiment that demonstrated that maggots in rotting meat came from flies that laid _____, not from the _____ itself. This showed that living things do not come from _____ things.



Now, let's look at an organism to review the five characteristics of life.

Are barnacles alive?

1. Barnacles _____ to their environment by _____ their _____ at low tide, and opening them at high tide.
2. Barnacles _____ and _____. They begin life as free-swimming creatures. Once they find a good spot, they "glue" themselves to a rock and _____ a shell.
3. Barnacles _____. After fertilization from a male barnacle, females hold the _____ in their shells until they _____.
4. By waving their legs, barnacles capture _____. They use _____ from the food to move their legs, open and close their shells, and carry out all _____.
5. If you examined the legs of a barnacle with a microscope you would see that they are made of individual _____.

Pick something that is alive and use the five characteristics of life to explain and illustrate why it is alive.