



MANZI'S NEWS



A Newsletter for Manzi's Water Wise Club Members

January 2016

Life and Living

Hi Friends,

I am very excited to talk to you again! I hope you are all looking forward to this month's newsletter. Life is composed of living things, known as biotic components, and non-living things, known as abiotic components. Living things are plants and animals. Non-living things are very essential to support life and are water, sun, soil, air and other objects. Everything that we come across every day is either living or non-living. Both living and non-living things have their own characteristics.

Characteristics of Living Things

Living plants and animals can carry out all the seven life processes, namely:

- **Movement:** All living things move in some way. This may be obvious, such as animals that are able to walk, or less obvious, such as plants that have parts that move to track the movement of the sun.
- **Growing:** All living things have the ability to grow.
- **Breathing:** This the process of using air to release energy from food.
- **Excretion:** Removal of waste products from the body.
- **Sensing:** The ability to detect changes in the surrounding environment.
- **Reproduction:** The ability to reproduce and pass genetic information onto their offspring.
- **Nutrition:** The intake and use of food (nutrients). This occurs in very different ways in different kinds of living things.

Some living things appear to be dead whilst they are living, such as dry seeds. They need favourable conditions to come back to life. Some living things on Earth cannot be seen with the naked eyes. Aids such as microscopes and magnifying glasses are needed to see them e.g. germs.



Activity

What You Need

- 3 X pieces of bread
- 3 X re-sealable plastic bags
- 1 X permanent marker
- Water

Experiment

1. Put a piece of bread in all three bags. Make sure each bag is sealed tightly. Label them with a marker.
2. Take one bag and put it in a dark and warm place.
3. Place the next bag in the refrigerator.
4. Place the last bag in a sunny area with one teaspoon of water.
5. Check each bag daily to record any changes you see, and compare the results.

What Happens?

- Mould, which is a fungus, will develop on some of the samples. They grow from spores which float in the air.
- Mould grows best in warm, dark and moist conditions.
- In the first bag, the bread kept in darkness should develop mould more quickly than the bread kept in light.
- In the second bag, the bread should develop mould more slowly in a refrigerator because its cold. It is an unfavourable condition for the mould.
- In the third bag, the moist bread will develop mould more quickly than the dry bread. Bread moulds are in a category of living things and some can cause illness if eaten. Sometimes people use them to make kinds of cheese and antibiotics.



Characteristics of Non-Living Things

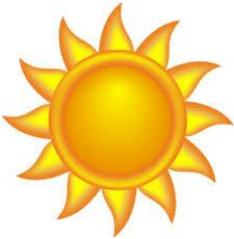
- Non-living things cannot carry out all of the seven life processes.
- Some things that were living could have died and are now classified as a non-living thing, i.e. dead wood, dry leaves, etc.

Activity

Using the characteristics of living and non-living things, decide which each of these is. Draw a line from the picture to the word.



<input type="radio"/>	



LIVING

NON-LIVING



Remember to be Water Wise.
Lots of Love
Manzi

References:

* Department of Education Natural Sciences and Technology

* <http://wilderdom.com/games/>

• <http://files.havefunteaching.com.s3.amazonaws.com/activities/science/living-and-nonliving-activity.pdf>