

8th Grade Science  
Lesson: April 6, 2020

**Learning Target:**

I can identify abiotic and biotic factors in an ecosystem.

**Warm Up:**

List three things that an organism would have to be considered “living”.

Video over the [Characteristics of Living Things](#)

# Background Information:

## Biotic vs Abiotic Factors

**Biotic = living (BIO = life)**

**Abiotic = nonliving**

**To determine if something is biotic (living) , think back to the characteristics of living things and cell theory.**

## Background Information:

**Biotic Factors:** living things, their remains, and features, such as nests, associated with their activities.



# Background Information:

**Abiotic Factors:** the non-living physical and chemical components of an ecosystem.

examples- rocks  
oxygen  
water  
sunlight



# Practice 1

Using the information from the previous slides complete the following activity

Organize the following words into TWO lists, Abiotic and Biotic Factors:

Biotic Factors.

Snake  
Clouds Rain Oxygen Mountain Sand  
Moss Leaf People Goldfish  
Ph of soil Wind Mud Sunlight Air Weather  
Bumblebee Tulip Raccoon Temperature Polar Bear  
Rocks Soil Gold Salamander Minerals Earthworm  
Deer Volcanoes Ice Lake Fire Moon  
Climate Raspberry bush A cell Maple tree  
Corn on the plant Eagle

# Practice 1 Continued

Self Check - Review your **answers** and compare to the answer key.

## Biotic Factors:

Goldfish, moss, polar bear, leaf,  
salamander, bumblebee,  
tulip, earthworm, maple tree, deer,  
people, eagle, cell, snake,  
raspberry bush, and corn of the  
plant

## Abiotic Factors:

Wind, clouds, sand, sunlight air, ph of  
soil, weather, mountain, oxygen, ice,  
mud, soil, minerals,  
moon, temperature, volcanoes, lake,  
fire, gold, rain, and climate

## Practice 2

Just a few more things to consider:

1. Do biotic and abiotic factors affect each other?
2. If there is no water, can anything grow or survive?
3. If it is extremely cold one winter, will that affect whether an animal survives?

## Practice 2 Answers

1. Do biotic and abiotic factors affect each other?

**Yes, biotic factors would not exist without abiotic factors such as sunlight, oxygen and water.**

2. If there is no water, can anything grow or survive?

**No because water is essential to photosynthesis and cellular respiration that provides the energy to grow, reproduce, metabolic process, and move.**

3. If it is extremely cold one winter, will that affect whether an animal survives?

**Yes, temperature is an abiotic factor that can affect the animal by limiting the food in the area.**



# Additional Practice

Click on the link below additional practice.

1. Complete these [Ecosystem Activities](#): Play video, key vocabulary and test yourself
2. Watch the video and review (click) each key vocabulary before the Test Yourself
3. Then take the Test Yourself it will check your answers and tell you which was the correct one.