LIVING SYSTEMS

How do all living things live & work together in different environments?

A producer is an organism that makes its own food. Typically this is done through the process of photosynthes using the sun as the energy source.

A CONSUMER is a member of the food chain that eats (o consumes) a producer or another animal.

A DECOMPOSER is found toward the end of the food chain. Decomposers break down dead and decaying plants and anim

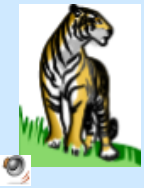
A carnivore is a meat eating organism.

A herbivore is a plant eating organism.

An omnivore is an organism that consumes both plant and animal.

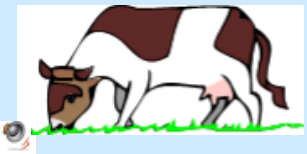
A producer is an organism that makes its own food. Typically this is done through the process of photosynthesis using the sun as the energy source.

Circle which of the following living things would be considered a PRODUCER in a food chain:



A CONSUMER is a member of the food chain that eats (or consumes) a producer or another animal.

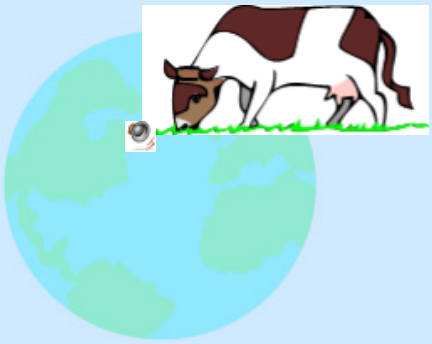
Circle all the living things below that are consumers:



Primary Consumer: A consumer that eats a producer like a plant. These are typically herbivores

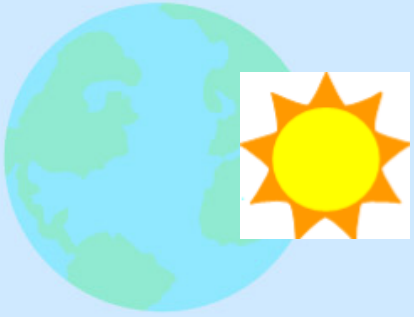
Secondary Consumers: An organism that eats a primary consumer. These are typically carnivores or omnivores.

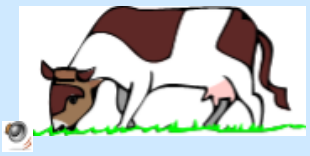
Which organism is a primary consumer and which one is a secondary consumer?



A DECOMPOSER is found toward the end of the food chain.
Decomposers break down dead and decaying plants and animals.

Circle the living things below that are decomposers:





Producer	Consumer	Decompose	Herbivore	Carnivore	Omnivore









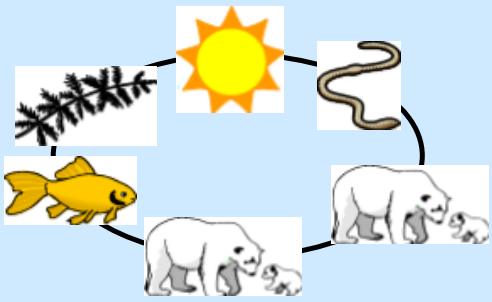

Drag and drop the organisms into the correct place on the chart above. In the last row, fill in your own example of each category.

Brainpop: Food Chains

A food chain is a way to show how energy moves from one organism to another and how living things depend on one another.

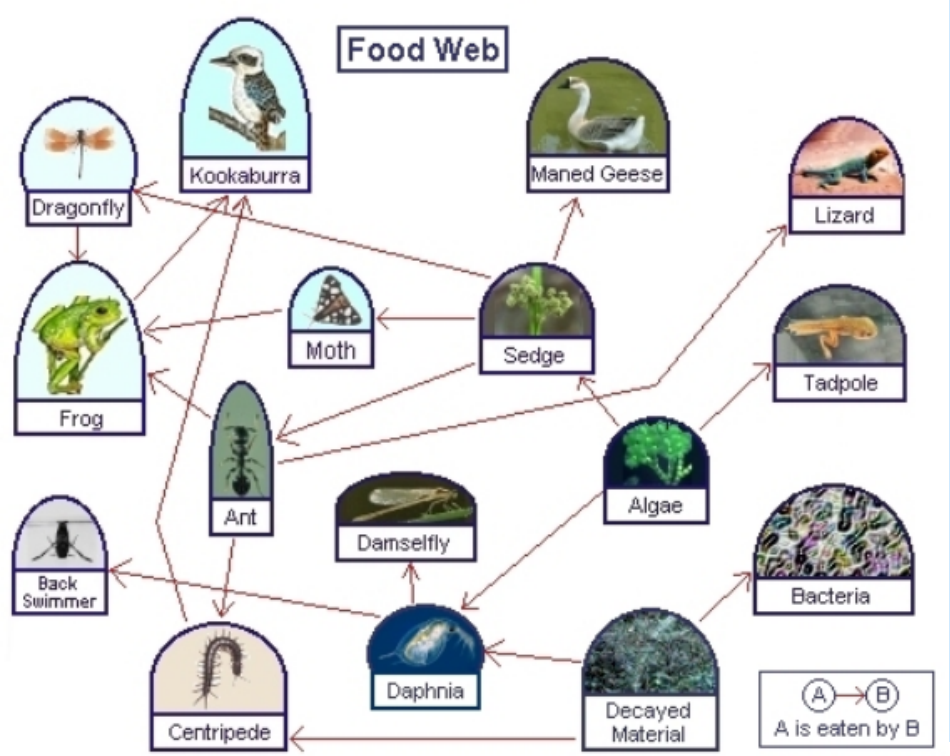



The sun provides the energy for producers



Magic School Bus: Food Chains

A food web is a combination or overlapping of many food chains.



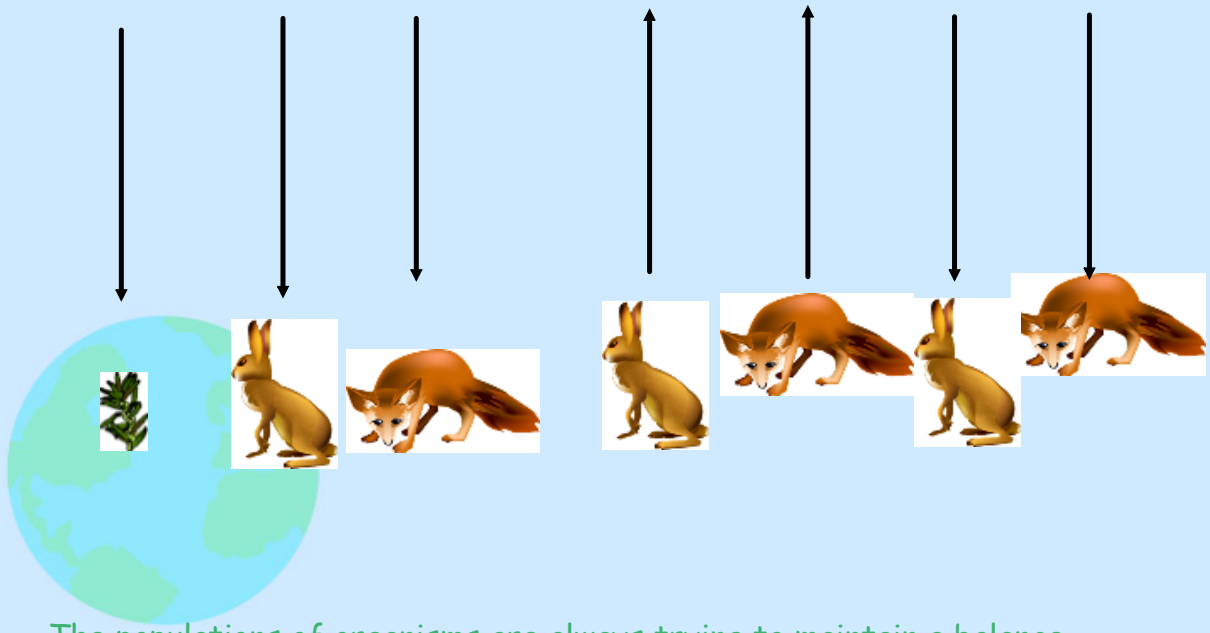
The arrows represent the flow of energy.

Drag the pictures below to make a complete and accurate food chain:

Living Things - Food Chain

Food Chain Game - Looking at the effects of population changes on other organisms.

Dynamic Equilibrium: A balance between two opposite reactions. The balancing of populations.



The populations of organisms are always trying to maintain a balance

Plants, animals and humans living together make up an ecosystem.

Circle the following living things you think might live together in a rain forest ecosystem:

http://www.brainpop.com/science/ecologyandbehavior/ecosystems/

Prey (noun): an organism that is hunted or caught for the purpose of being eaten.

Predator: an organism that survives by consuming other living things as food.

Note: A predator preys (verb) on its victim, for example a cat preys on a mouse.

Population: the amount of a specific type of organism that live together in the same environment.

Habitat: the home of each population. This is a specific part of the ecosystem in which a population lives.

Community: multiple populations of plants and animals living together.

Organism
(Ant)

↓

Population

(Multiple Ants Living Together)

↓

Habitat

(Location Where All The Ants Live
Ex: Ant Hill)

Exception: Occasionally organisms can share a habitat, they co-exist

↓

Ecosystem

(Several Habitats Interacting With Each Other)

http://www.brainpop.com/science/earthsystem/landbiomes/

What is a Biome?

A biome is a large geographical area of distinctive plant and animal groups, which are adapted to that particular environment.

The climate and geography of a region determines what type of biome can exist in that region.

Major biomes include deserts, forests, grasslands, tundra, and several types of aquatic environments. Each biome consists of many ecosystems whose communities have adapted to the small differences in climate and the environment inside the biome. All living things are closely related to their environment. Any change in one part of an environment, like an increase or decrease of a species of animal or plant, causes a ripple effect of change in through other parts of the environment.

The earth includes a huge variety of living things, from complex plants and animals to very simple, one-celled organisms. But large or small, simple or complex, no organism lives alone. Each depends in some way on other living and nonliving things in its surroundings.

Climate is the temperature and precipitation for an area over a long period of time.

Geography is the land and water forms for the area. Examples are lakes, mountains, plains, ...

Savannah

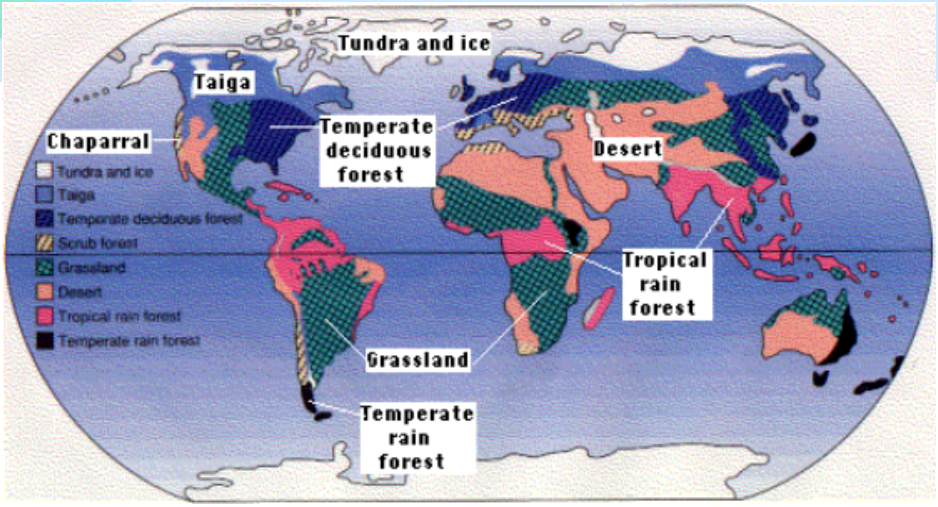
Biome: An interdependent system of plants, animals, and land.

Determined by:

- Temperature
- Rainfall
- Soil, plants, and animals

To understand a world biome, you need to know:

- What the climate of the region is like.
- Where each biome is found and what its geography is like.
- The special adaptations of the vegetation.
- The types of animals found in the biome and their physical and behavioral adaptations to their environment.



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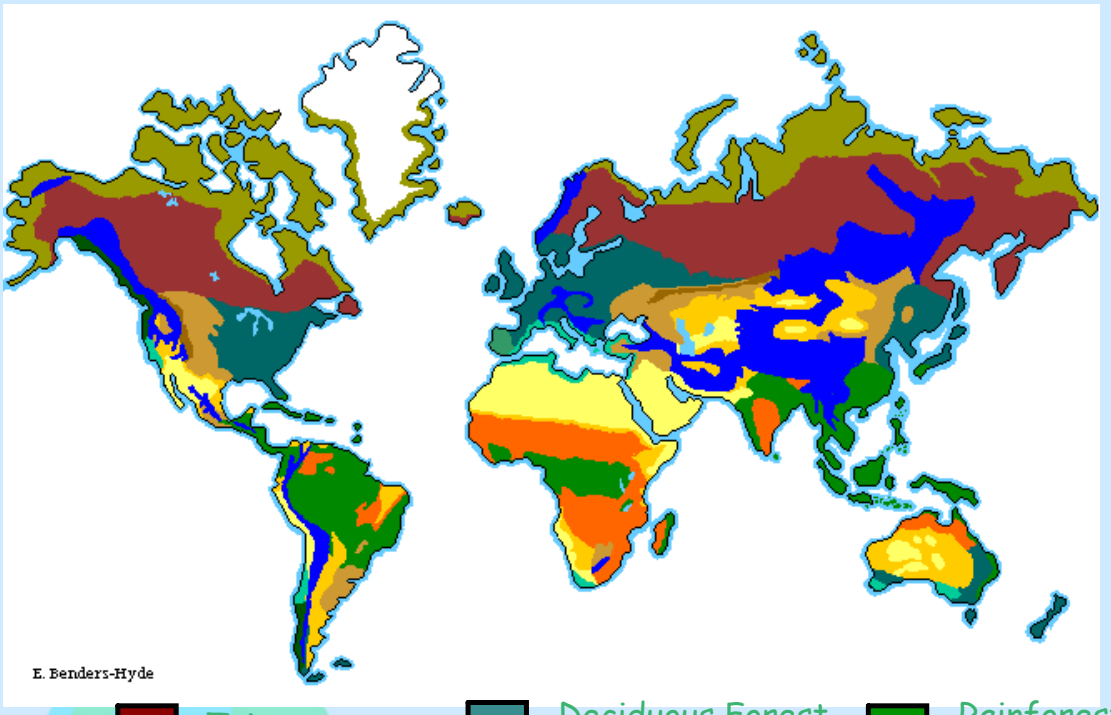


Taiga

Deciduous Forest

Rainforest

Tundra

Desert

Savanna

Grasslands

Fresh Water and Salt Water environments are also considered

Biome	Water	Temperature	Soil	Plants	Animals
Desert	Almost none	hot or cold	poor	sparse - succulents (like cactus), sage brush	sparse - insects, arachnids, reptiles and birds (often nocturnal)
Chapparal (scrub)	dry summer, rainy winter	hot summer, cool winter	poor	shrubs, some woodland (like scrub oak)	drought and fire-adapted animals
Tundra	dry	cold	permafrost (frozen soil)	lichens and mosses	migrating animals
Taiga (coniferous forest)	adequate	cool year-round	poor, rocky soil	conifers	many mammals, birds, insects, arachnids, etc.
Temperate Deciduous Forest	adequate	cool season and warm season	fertile soil	deciduous trees	many mammals, birds, reptiles, insects, arachnids, etc.
Grassland	wet season, dry season	warm to hot (often with a cold season)	fertile soil	grasses (few or no trees)	many mammals, birds, insects, arachnids, etc.
Tropical rain forest	very wet	always warm	poor, thin soil	many plants	many animals
Swamp	very wet	warm	nutrient-rich soil	many plants	many animals
Cave (terrestrial)	variable	cool (and dark)	rocks	almost no plants	few animals

Dessert

Tundra

Taiga

Savanna

Tropical Rainforests

What is an adaptation?

An adaptation is a structure or behavior that helps a living thing SURVIVE in it's environment.

Can you think of any adaptations that animals might have?

Adaptations

Using a pen, match the plant or animal with the correct structural adaptation below:

Long arms to climb trees

Long neck to help it reach leaves on the top of trees

Thorns to protect it from animals

Flat teeth to chew grass

Light wings to help it fly.

Behavioral Adaptations are certain types of activities a living thing performs that helps it survive.

Drag each animal below to the correct behavioral adaptation.

Flying south for the winter

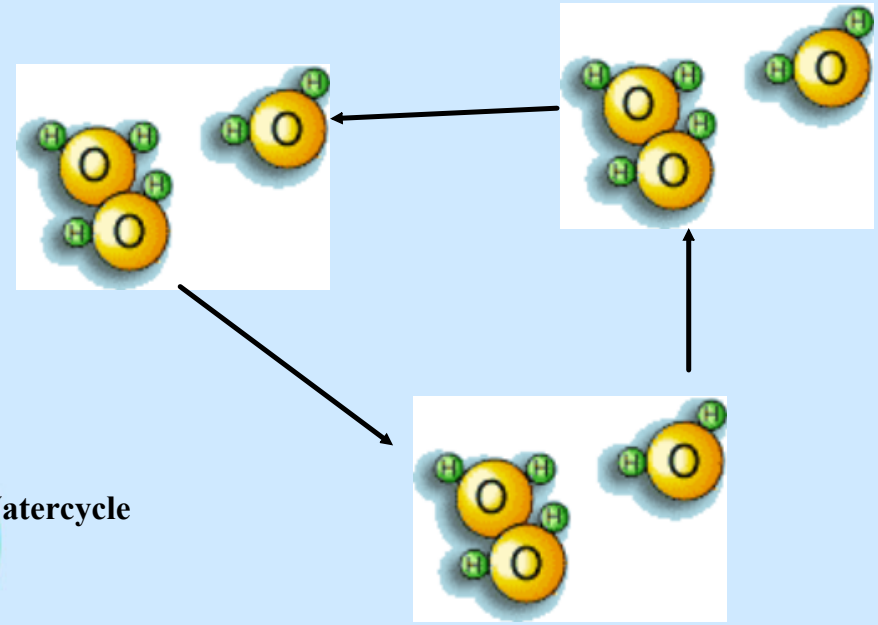
Hibernating

Renewable resource: natural resource that can be used again and again, if used properly.
Ex: Water, air, sunlight, dirt, vegetation.

Nonrenewable resource: natural resources that can't be used again.
Ex: coal, oil, metals, petroleum, minerals, precious stones.

Natural Resources Brainpop Video

The water cycle



Magic School Bus: Watercycle

Water cycle Terms

Transpiration: when trees and plants give off water as a vapor (gas).

Precipitation: any form of water falling to the earth's surface.

Ex: Rain, snow, sleet, hail...)

Condensation: water vapor turns to a liquid. Cold temperatures help this process.

Infiltration: water seeps into the ground.

Run-off: water runs off the earth's surface, usually leads to a body of water.

Evaporation: water as a liquid turns to water as a gas. Heat, wind, & surface area speeds this process.

Ground water: water that pools or collects underground.

Water cycle Terms

Transpiration: when [redacted] give off water as a vapor (gas).

Precipitation: any form [redacted] to the earth's surface.

Ex: Rain, snow, sleet, hail...)

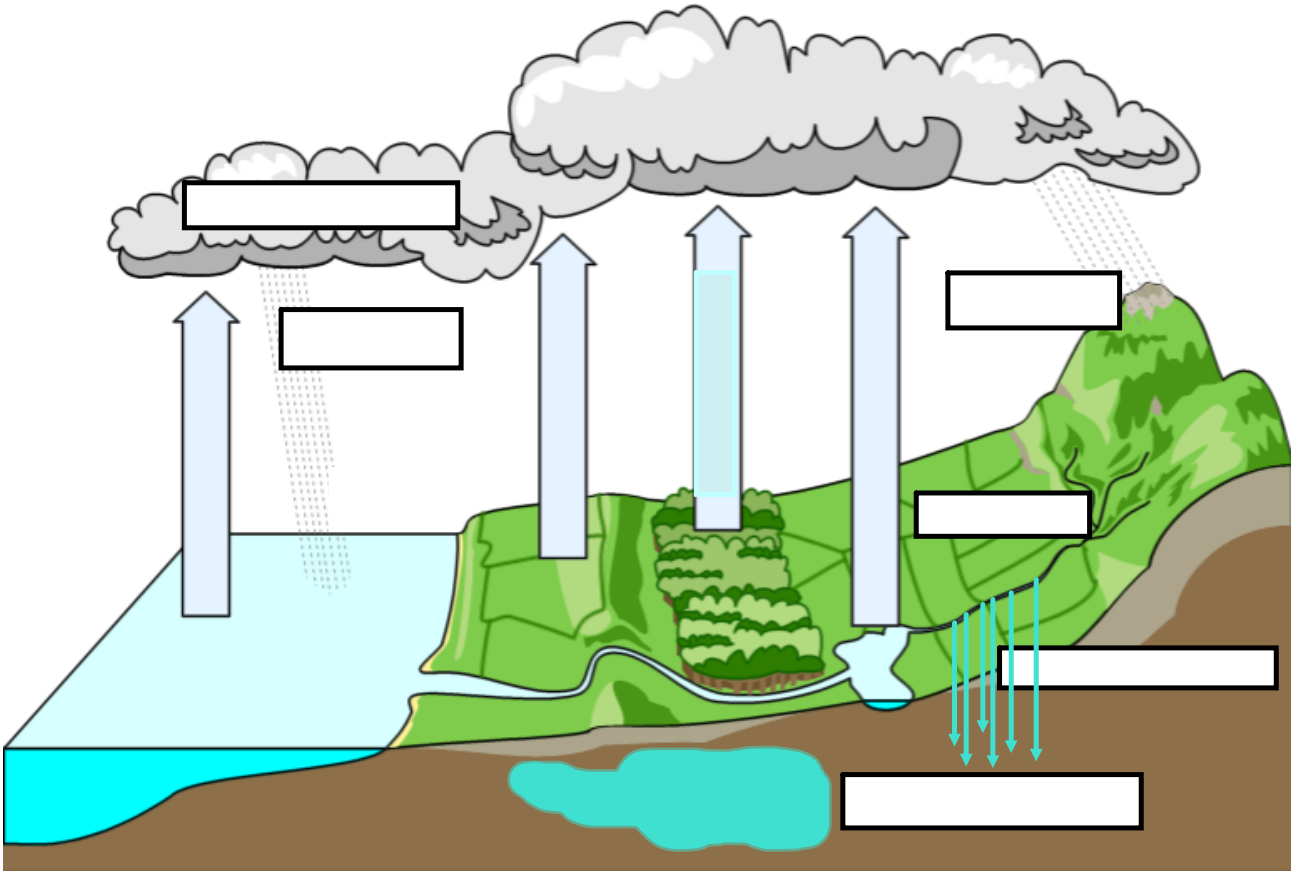
Condensation: water vapor [redacted]
Cold temperatures help this process.

Infiltration: water seeps [redacted]

Run-off [redacted] the earth's surface, usually leads to a body of water.

Evaporation: [redacted] turns to water as a gas. Heat [redacted] area speeds this process.

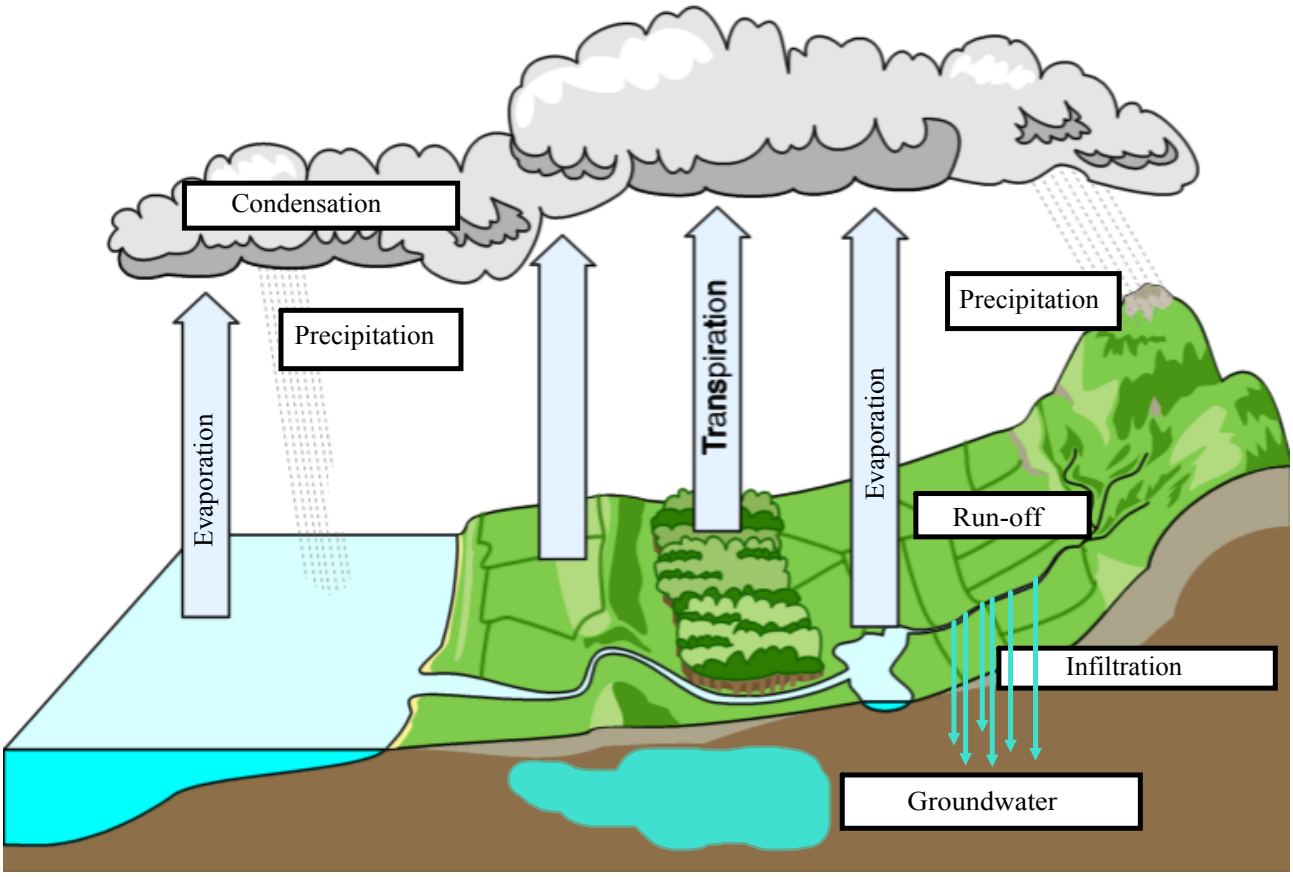
Ground water: water that [redacted] underground.



The Water Cycle

Use the following terms to label the parts of the water cycle:

Evaporation	Infiltration	Run-off	Groundwater
Condensation	Precipiation	Transpiration	



The Water Cycle

Let's explore...

Raindrop Roadtrip

Watercycle Puzzle

Attachments

- Food Chain Game
- Living Things
- The water cycle