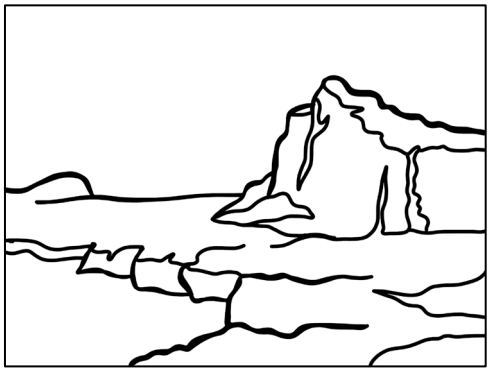
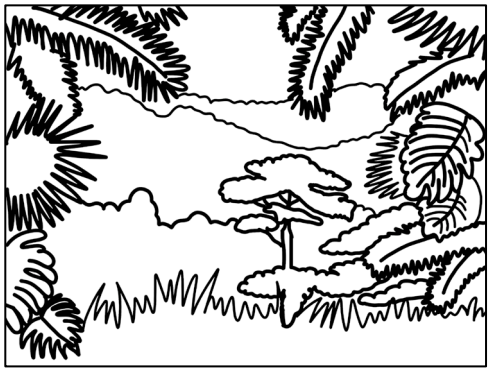
Name _____

Biomes





In the spaces below, in the 1st Column, write what you already KNOW about biomes. In the 2nd column, write what you WANT to learn about biomes. The last column will be completed at the end of the lesson (what you've learned).

K	W	L

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Biomes

What are Ecosystems?

community of organisms that interact together and with their environment



- complex and interactive
- **abiotic and biotic** components
- energy and nutrients flow throughout

☆ Circle the correct answer.

Organisms in an ecosystem interact with their environment.

True

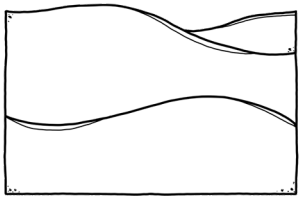
False

An ecosystem includes all biotic and abiotic factors (living and nonliving parts) of the environment.

Components in Ecosystems

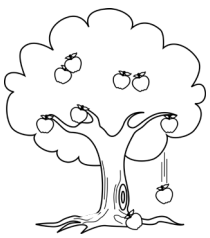
Abiotic
nonliving

Examples:
- water
- soil
- sunlight
- temperature



Biotic
living

Examples:
- polar bear
- grass
- apple tree
- grasshopper



The abiotic and biotic factors **work together to establish balance** in the ecosystem.

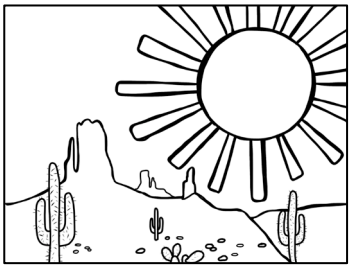
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Biomes

☆ Describe the difference between abiotic and biotic factors in an ecosystem.

Biomes

large area characterized by a specific climate, vegetation, and animal life



- **large group of similar ecosystems**
- similar plants, animals, and weather

5 Major Biomes

- **Aquatic**: freshwater and marine
- **Grassland**: tropical grasslands (savannas) and temperate grasslands
- **Forest**: temperate, tropical, and boreal (taiga)
- **Desert**
- **Tundra**

☆ A large area characterized by a specific climate, vegetation, and animal life is called a(n):
(bubble in answer)

◯ biome ◯ ecosystem

◯ climate watch ◯ community

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Biomes

Aquatic Biomes

freshwater and marine

Freshwater Biome: water with a low level of salt

Animals

- fish
- frogs
- turtles
- otters
- beavers
- snakes
- alligators



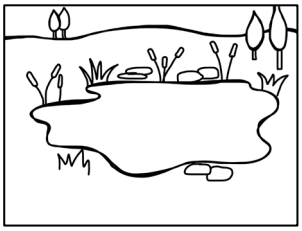
Plants

- water lilies
- algae
- duckweed
- eelgrass
- cattails
- aquatic mosses



ponds and lakes, streams and rivers, wetlands

- water temperature varies by season
- cooler at the bottom of lakes and rivers
- influenced by surrounding terrestrial climate



☆ Circle the correct answer.

Freshwater biomes are not influenced by the terrestrial environment around them.

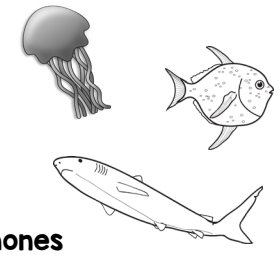
True

False

Marine Biome: oceanic ecosystem - about 75% of Earth's surface

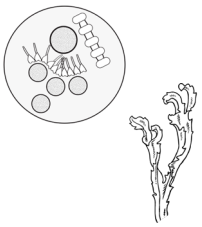
Animals

- fish
- sharks
- dolphins
- whales
- corals
- jellyfish
- sea anemones



Plants

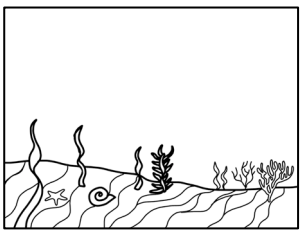
- phytoplankton
- algae
- kelp
- coral polyps
- seagrasses
- sea lettuce



largest biome on Earth

oceans, coral reefs, estuaries

- oceans have more stable temperature
- influenced by ocean currents and sunlight



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Biomes

☆ Explain why you think freshwater biomes and marine biomes have different animal and plant life.

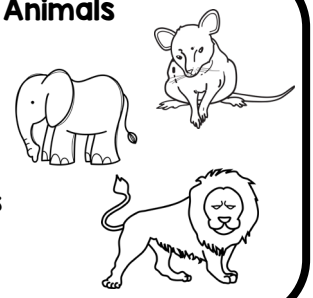
Grassland Biomes

tropical grasslands (savannas) and temperate grasslands

Tropical Grasslands (Savannahs): hot and dry climate

Animals

- mice
- snakes
- zebras
- giraffes
- elephants
- lions
- cheetahs

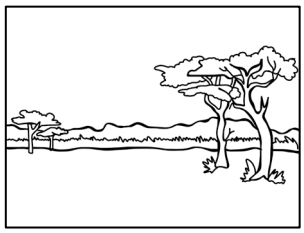


Plants

- tall grasses
- baobab tree
- acacia trees



- found closer to the equator
- warm to hot climate
- distinct wet and dry seasons



☆ Which of the following does not apply to tropical grasslands (savannahs)?:
(bubble in answer)

- ◯ Baobab trees are found here.
- ◯ The climate is warm to hot.
- ◯ There are distinct wet and dry seasons.
- ◯ They are found far from the equator.

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Biomes

Temperate Grasslands: vast, flat areas of land with a growth of grasses

Animals

- snakes
- rabbits
- bison
- pronghorns
- coyotes
- hawks
- prairie dogs



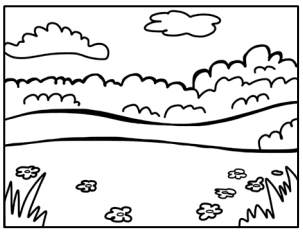


Plants

- buffalo grass
- wild indigo
- big bluestem
- purple coneflower



- low growing plants and flowers
- not enough rain to support trees, too much to be a desert
- four seasons with cold winters and warm summers



☆ Circle the correct answer.

There are a lot of tall trees in temperate grasslands.

True

False

Forest Biomes

temperate, tropical, and boreal (taiga)

Temperate Forests: has deciduous trees and four seasons

Animals

- white-tailed deer
- squirrels
- birds
- bears
- foxes
- reptiles





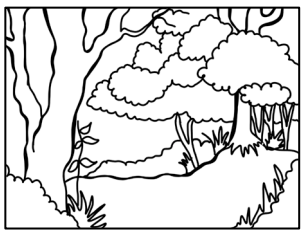


Plants

- deciduous trees like oak, maple, and beech
- shrubs
- ferns



- adequate rainfall throughout the year
- lots of water and nutrients available; lots of animals and plants
- can be found in regions with temperate climates



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Biomes

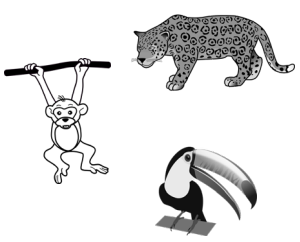
☆ Which of the following applies to temperate forests? (bubble in answer)

- ◯ There are two seasons.
- ◯ They can be found in cold climates.
- ◯ The majority of trees are coniferous.
- ◯ The majority of trees are deciduous.

Tropical Rainforests: vast biodiversity; hot and humid

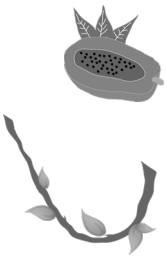
Animals

- monkey
- birds
- lizards
- sloths
- bats
- jaguars
- insects



Plants

- canopy trees
- emergent trees
- bamboo
- fruit trees
- vines



- found in hotter climates
- lots of rain!
- important producer of oxygen
- includes half of the world's species



☆ Explain why there is a lot of biodiversity in rainforest.

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Biomes

Boreal Forest (Taiga): coniferous trees; cold and dry with long winters

Animals

- moose
- wolves
- lynx
- bears
- caribou
- elk
- porcupines



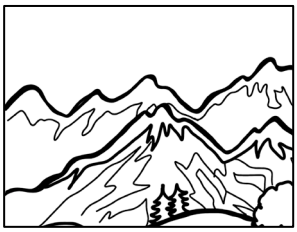


Plants

- coniferous trees like spine, spruce, and fir
- mosses
- lichens
- azaleas



- cold and forested region south of the tundra
- trees mostly cone-bearing and are green year-round
- found at higher latitudes



☆ Circle the correct answer.

Boreal forests are found at higher latitudes and are often associated with cold winters.

True

False

Desert Biome

Desert Biome: dry; some cold and some warm

Animals

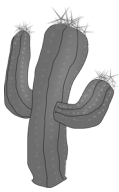
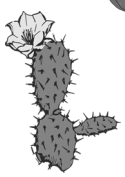
- camels
- desert foxes
- rattlesnakes
- scorpions
- desert tortoise
- lizards



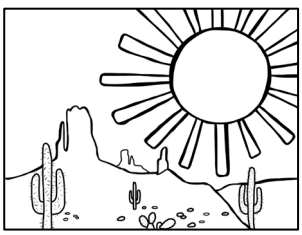


Plants

- cacti
- grasses
- shrubs
- small trees
- succulents

- extremely low rainfall
- wide temperature changes; very hot daytime to cold nights
- because of extreme conditions - not much biodiversity



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Biomes

The desert is characterized by:

Circle the correct answers.

some cold and some warm	a lot of rainfall
dry	rich biodiversity

Tundra Biome

Tundra Biome: extremely cold; short, cool summers

Animals

- arctic foxes
- snowy owl
- caribou
- polar bears
- reindeer
- ptarmigan
- lemmings

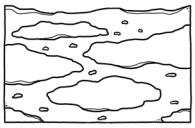






Plants

- mosses
- lichens
- small shrubs
- small trees such as the dwarf willow



- long, dark winters and short summers
- under topsoil, ground is frozen - permafrost
- few nutrients to sustain plants and animals



Which of the following is a characteristic of the tundra biome? (bubble in answer)

- ◯ high temperatures year-round
- ◯ dense forest with tall trees
- ◯ low-growing vegetation and permafrost
- ◯ frequent rainfall and a lot of greenery

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Biomes

How Biomes are Classified

You may notice that various resources **label biomes differently**. The number and names of biomes can vary because scientists use different criteria to find them.

Biome research involves many sciences like ecology and geography, so it can be complex. As scientists learn more and use better tools, they **might change how they classify biomes** to better understand our planet's diversity.

☆ **Which biome do you live in?**

☆ **Describe the most interesting thing you learned about biomes.**

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Biomes

Sort the following phrases into the appropriate category.
Draw/sketch animals and plants you may find in these biomes.

- very little rainfall
- bodies of water
- dominated by trees
- dominated by grass
- lowest temperatures

Aquatic Biome	Grassland Biome	Forest Biome	Desert Biome	Tundra Biome

DON'T FORGET TO REVISIT THE KWL CHART!

SUMMARY

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