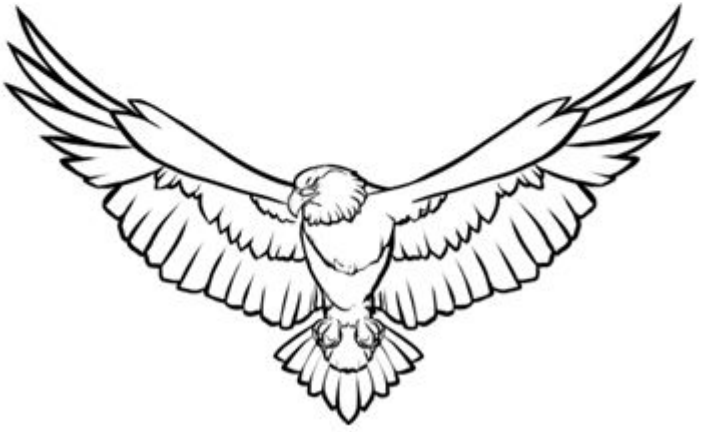
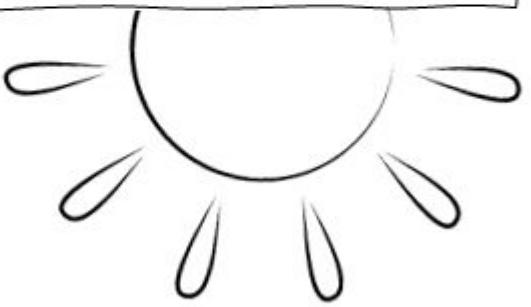
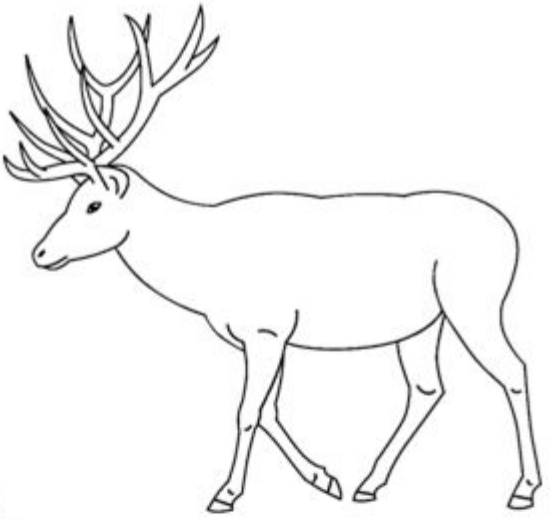
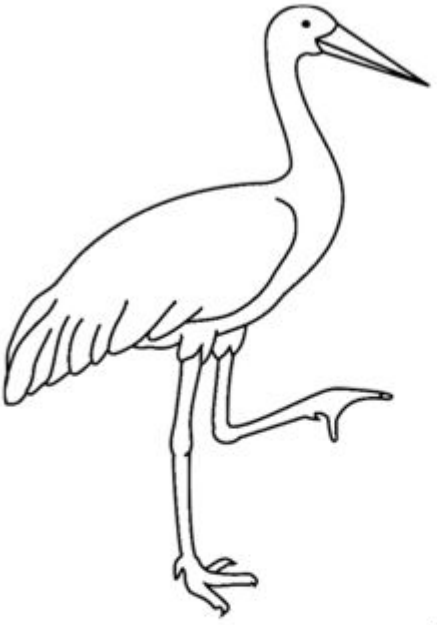
NAME: _____

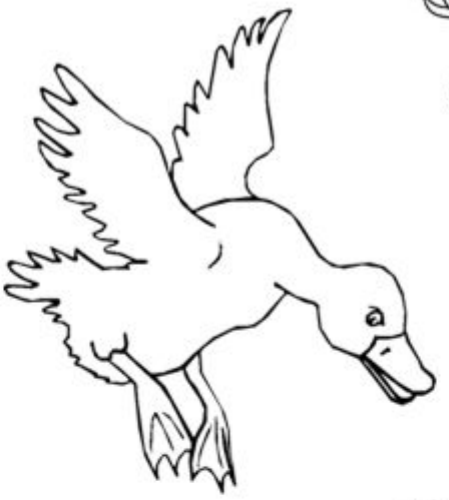
Biodiversity

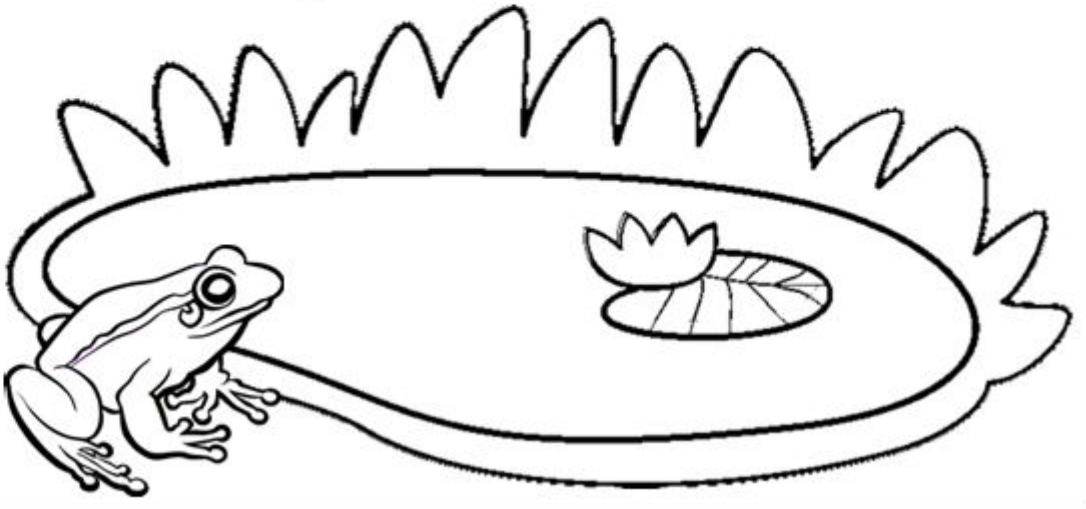












Name: _____ 5

Key Terms

Define Research the meaning of each of the key terms

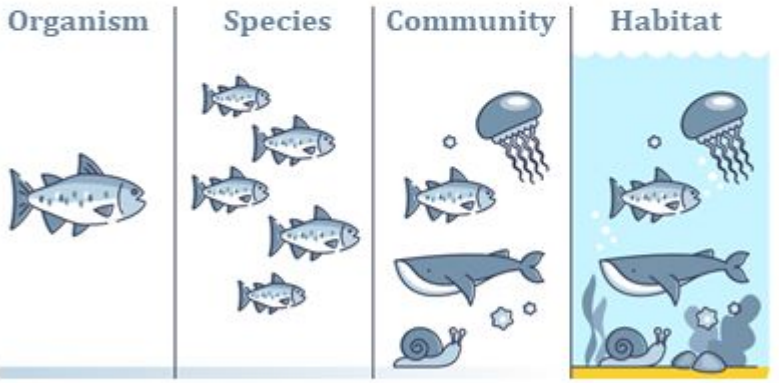
Habitat	
Survival Needs	
Organisms	
Species	
Producer	
Consumer	
Decomposer	

Curriculum Connection
B2.2

Organisms, Species, and Communities

What is a Habitat?

A **habitat** is the place where an organism or a community of organisms live.



An **organism** is a single plant or animal. Therefore, you are an organism.

A **species** is a group of organisms. Yes, humans are a species, and you are a single organism.

Lastly, a **community** is a group of different species that live in the same area (habitat). This means that you live in a community with other humans, other animal species like dogs and squirrels, as well as different plant species.

Habitats provide the basic needs for the organisms that live there. For example, humans live in areas where food can grow and where water can be found. No humans live in Antarctica because the habitat in Antarctica does not give the basic needs humans need to survive.

Example of a Habitat

In the photo of a habitat in an African savanna, three different species live together in the same community. The organisms share the watering hole so that can all survive.

You can see a single Kudu Antelope organism as well as two Suni Antelope organisms with no horns. A White-Backed Vulture also shares the watering hole. In the picture, there are no plant species visible.

Name: _____ 7

Curriculum Connection
B2.2

Organisms, Species, and Communities

Definitions

What do each of the terms below mean?

Organism	
Species	
Community	
Habitat	

Questions

Answer the questions below using evidence from the text

1) What animal species live in the community you live in?

_____

_____

_____

2) What kinds of non-living things can you find in your habitat?

_____

_____

_____

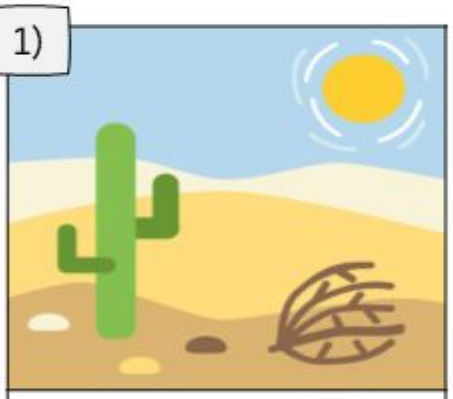
Name: _____ 8

Curriculum Connection
B2.2

Organism, Species, Community, Habitat

Label Is the picture an example of an organism, species, community or habitat

1)



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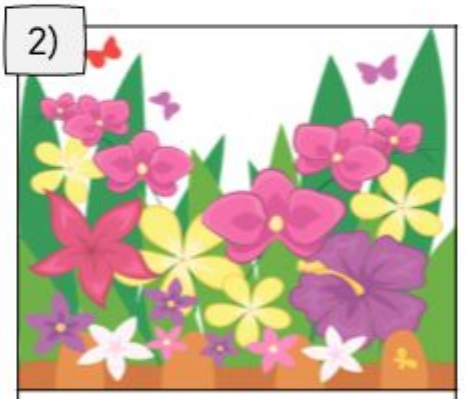

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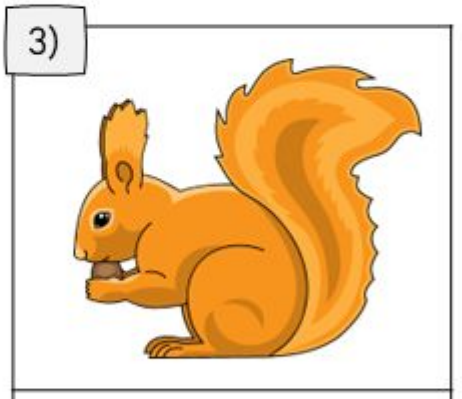

4)

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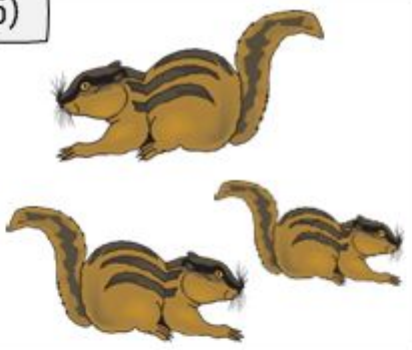

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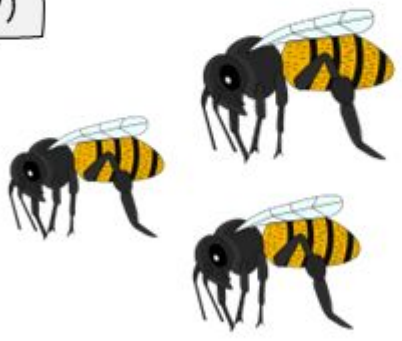

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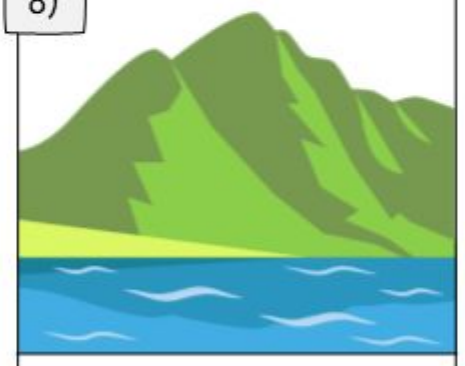


9)

Name: _____ 9

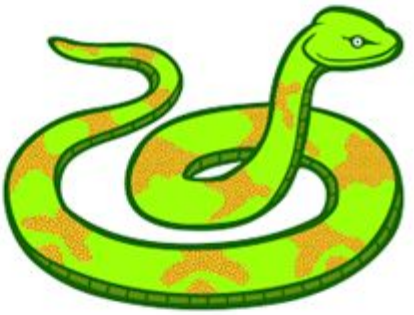
Curriculum Connection
B1.1, B2.2

What is Biodiversity?

What is Biodiversity?

When you look outside, you will see many different plants and animals. We need all of these different living things to keep the balance of life. **Biodiversity** is the variety of living things in a given place. Scientists study biodiversity in different areas to make sure plant and animal populations are healthy.

There are thousands upon thousands of plant and animal species living on the Earth. They are all changing so they can survive in the environment around them.



Why Study Biodiversity?

It is important to learn about the different species on our planet so we can understand how we all need each other. In order for all living things to be healthy on Earth, we need to understand the balance between species so we don't throw the balance out of whack.

For example, most consider snakes varmints that are often killed by humans. Snakes feed on rats, which means if we kill all of the snakes, we would have a growing rat population that could get out of control.

Therefore, we need biodiversity, and the variety of animals in our different environments to maintain the balance of life.

Another reason we need biodiversity is for human health. Around 80% of all medicine is derived from natural sources. If we disrupt the balance of biodiversity by killing snakes, we could potentially affect the growth of important plants that are needed for medicines.

Name: _____ 10

Curriculum Connection
B1.1, B2.2

What is Biodiversity? - Questions

Questions

Answer the questions below using evidence from the text

1) What is biodiversity? Why is it important to study biodiversity?

_____

_____

_____

2) What would happen if we killed off a species? Come up with your own scenario like the snake and rat example in the reading.

_____

_____

_____

Visualizing

Draw what you were picturing while you were reading. Explain the picture

_____

_____

_____

_____

_____

True or False

Circle whether the statement is true or false

1. Biodiversity is the study of one plant or animal in an environment	True	False
2. If one animal goes extinct, it can affect other plants and animals	True	False
3. Scientists study biodiversity to protect plants and animals	True	False
4. We need many different plants for medicines	True	False
5. We are only connected to the other humans in our environment	True	False

Curriculum Connection
B1.1, B2.2

Altering the Food Chain

IMPORTANCE OF THE FOOD CHAIN

Changing the Food Chain

When we change our ecosystems, we can sometimes cause unintended changes to food chains that can affect us in many different ways. In the basic example above, you can see that if we get rid of grasshoppers, the leaf population will grow drastically while the mice population will shrink. With less mice to hunt, the owl population will also shrink.

Altering the Food Chain – Real Life Example

In Borneo, DDT was used as a pesticide to kill mosquitos that carried malaria. Malaria is a disease caused by a parasite that mosquitoes spread to people. Malaria can be deadly, but usually causes flu-like symptoms.

The problem with using DDT was that it didn't just kill the mosquitos. It also killed all the other insects in the region it was used. This meant the cockroaches were killed, which were the main food for lizards. The number of lizards dropped dramatically, as well as the number of cats that ate the lizards. The cats kept the rat population under control. With less cats, the rat population grew tremendously.

The overpopulation of rats became a serious problem in Borneo. The rats ended up causing multiple epidemics that caused more deaths than malaria caused in the first place. To solve the problem of too many rats, the government of Borneo brought in thousands of cats from other countries. "Operation Cat Drop" was a success! With cats back in Borneo, they began to control the rat population.

Many lessons were learned from Borneo. Mainly that if you don't understand the inter-relationships between things, solutions often cause more problems.

Name: _____ 14

Curriculum Connection
B1.1, B2.2

Altering the Food Chain

Questions

Use information from the text to support your answer

1) What can happen if we alter a food chain?

2) Give your own example of a food chain. Discuss what would happen if humans affected one part of the chain.

Summarize

What happened in Borneo?

True or False

Circle whether the statement is true or false

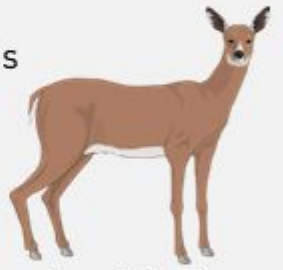
1) When humans get rid of pests, it can have an affect on other animals	True	False
2) In Borneo, the use of DDT was successful in eliminating mosquitos	True	False
3) Getting rid of mosquitos would have no other consequences	True	False
4) Eliminating one species will only affect the organisms that feed on them	True	False
5) One small change in an ecosystem can cause big changes to all organisms	True	False

Name: _____ 30

Curriculum Connection
B2.1

Herbivores, Carnivores, Omnivores

Herbivores
Consumers that are **herbivores** eat only plants. Examples of herbivores are cows, deer, goats, gorillas, butterflies, camels, horses, rabbits, rhinos, and sheep.



Carnivores
Consumers that are **carnivores** eat only other animals for energy. Examples are tigers, lions, sharks, walrus, platypus, penguins, wolves, owls, alligators, and foxes.

Omnivores
Consumers that are **omnivores** eat both plants and animals. They eat whatever they can find! Examples of omnivores include dogs, cats, pigs, chickens, squirrels, rats, bears, raccoons, coyotes, skunks, ants, and most humans.

Questions

Answer the questions below

1) Circle the animals that are herbivores.

2) Circle the animals that are carnivores.

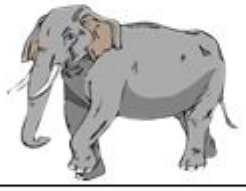
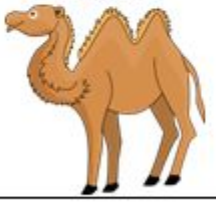
3) Circle the animals that are omnivores

Name: _____ 31

Curriculum Connection
B2.1

Herbivores, Carnivores, Omnivores

Directions Is the organism a carnivore, herbivore or omnivore?

Elephant 	Bird 	Turtle 
Snake - Cobra 	Skunk 	Chipmunk 
Frog 	Fish 	Spider 
Alligator 	Camel 	Beaver 

Name: _____ 32

Curriculum Connection
B2.1

Classifying Organisms

Research Fill in the table about the animal in the first column

Animals	Producer, Consumer, Decomposer	Herbivore, Omnivore, Carnivore	Primary Producer or Primary, Secondary, Tertiary, Quaternary Consumer
 Eagle			
 Grass			
 Rabbit			
 Bear			
 Fox			
 Deer			

Name: _____ 33

Curriculum Connection
B2.1

Classifying Organisms

Research Fill in the table about any animal that you want to learn more about

Animals	Producer, Consumer, Decomposer	Herbivore, Omnivore, Carnivore	Primary Producer or Primary, Secondary, Tertiary, Quaternary Consumer