Workbook Preview

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Grade 6 Science – Curriculum

Biodiversity

	Curriculum Expectations	Pages
B1.1	assess the benefits of biodiversity and the consequences of the diminishing of biodiversity	12-23, 31-32, 137-151, 153-154, 156-162
B1.2	analyse a local issue related to biodiversity while considering different perspectives; plan a course of action in response to the issue; and act on their plan	24-27, 143-149
B2.1	describe the distinguishing characteristics of different groups of organisms, and use these characteristics to further classify these organisms using a classification system	33-75, 88-91, 94-95, 99-105
B2.2		8-32, 114
B2.3		129
B2.4	describe ways in which biodiversity within and among communities is essential for maintaining the resilience of these communities	130-136
B2.5	describe interrelationships within species, between species, and between species and their natural environment, and explain how these interrelationships sustain biodiversity	137-142
B2.6	explain how invasive species reduce biodiversity in local environments	143-149
B2.7	explain how climate change contributes to a loss of biodiversity, and describe the impact of this loss	150-155
B2.8	describe the importance of biodiversity in supporting agriculture, including Indigenous agriculture around the world	156-159

Preview of 100 pages from this product that contains 242 pages total.

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BIODIVERSITY



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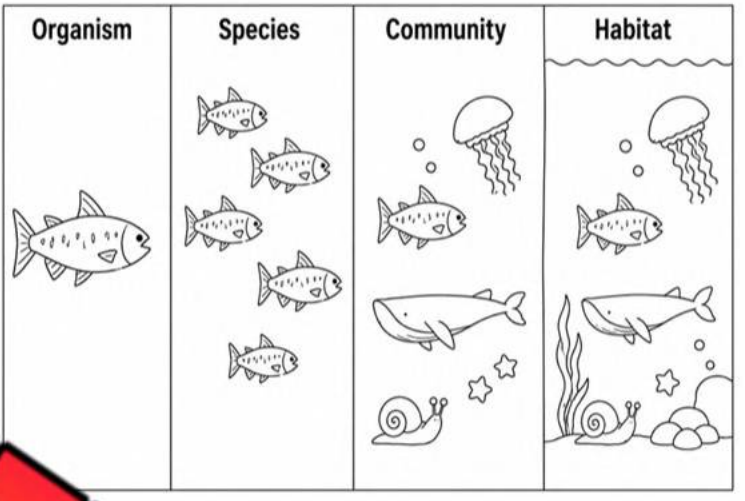
Curriculum Connection
B2.2

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. Th[illegible], you are an organism.

A [illegible] group of orga[illegible] species, and you are a sin[illegible]n.

Lastly, a c[illegible]y is a [illegible] of different species th[illegible] same area (habitat). This m[illegible] you [illegible]mmunity with other humans, other animal species like dogs and squ[illegible]els, [illegible] plant species.

Habitats provide the basic needs [illegible] orga[illegible] that[illegible]e there. For example, humans live in areas where food can grow and [illegible] water[illegible]nd. No humans live in Antarctica because the habitat in Antarctica does [illegible] ba[illegible] humans need to survive.

PREVIEW

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.

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Curriculum Connection
B2.2

Definitions

What do each of the terms below mean?

Organism	
Specie	
Community	
Habitat	

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Questions

Answer the questions below using evid m th

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

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

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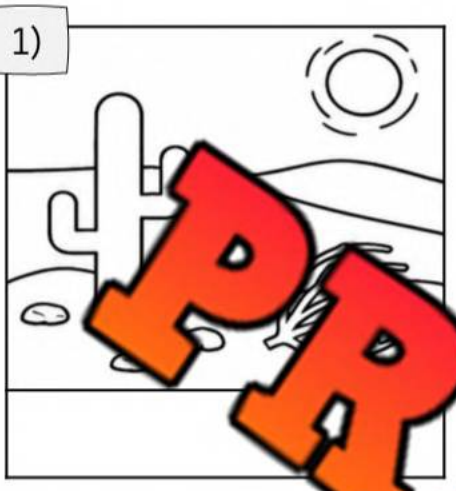
B2.2

Organism, Species, Community, Habitat

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

1)



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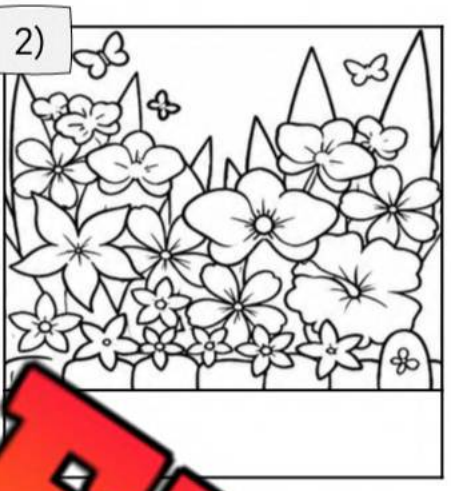


3)



4)

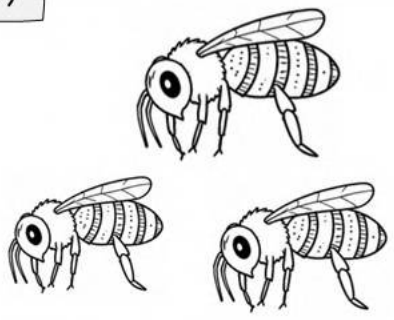




6)



7)



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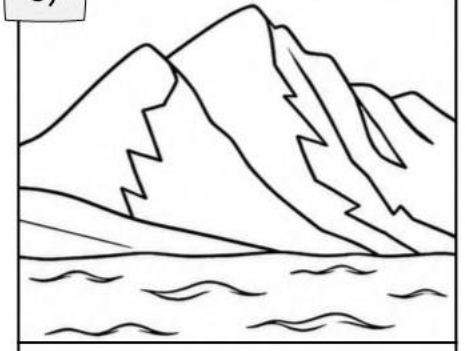

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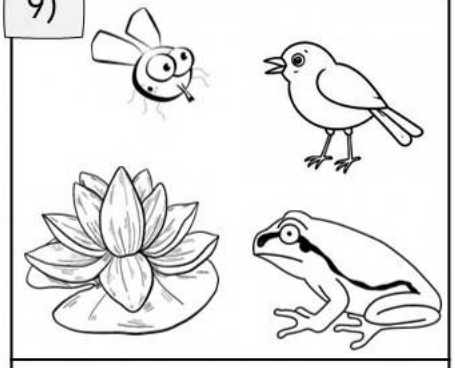

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Curriculum Connection
B1.1, B2.2

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 and can survive in the environment around them.

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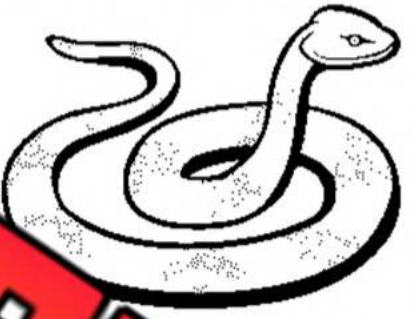

Why Study Biodiversity?

It is important to learn about the different species on our planet so we can understand how we affect 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 should be killed because humans. Snakes feed on rats, which means if we kill all of the snakes, we will 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.

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Curriculum Connection
B1.1, B2.2

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 [illegible]mple in the reading.

PREVIEW

Visualizing
Draw what yo[illegible]icturi[illegible]le 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

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Curriculum Connection
B1.1, B2.2

Activity – Making a Bird Feeder



Research Question

What are we learning more about?

If I build a bird feeder and put it in the right spot, can I promote the biodiversity of birds in a habitat near me?

Materials

What do we need for our experiment?

1) Depending on the type of bird feeder chosen. Common building materials include:
   - ✓ Wooden dowels
   - ✓ Rope
   - ✓ Wooden craft glue
   - ✓ Plastic plates
   - ✓ Milk carton
2) Bird seed

Method

How do we complete the experiment?

1) Research different types of bird feeders online.
2) Type in "homemade bird feeder" to find ideas.
3) When you find one that you think you can make, draw a picture to determine which materials you will need.
4) Collect materials and begin building your bird feeder.
5) Hang your bird feeder in an area
   - ✓ close to natural shelter, such as trees or shrubs. These places offer resting spots for birds while they are feeding on seeds.
   - ✓ About eye level or slightly above
   - ✓ High enough that squirrels can't jump on them
   - ✓ Away from noisy areas
   - ✓ Choose a different spot than your friends.
6) Observe your feeder. Take note what times birds enjoy your feeder.
7) Compare the biodiversity at your feeder versus your classmates. Why is it different?

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Curriculum Connection
B1.1, B2.2

Journal Observations | What did you notice each day?



Day 1 Observations – What did you notice today?

Day 2 Observations – What did you notice today?

Day 3 Observations – What did you notice today?

Day 4 Observations – What did you notice today?

Day 5 Observations – What did you notice today?

PREVIEW

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Curriculum Connection
B1.1, B2.2



Journal Observations | What did you notice each day?

Day 6 Observations – What did you notice today?

Day 7 Observations – What did you notice today?

Day 8 Observations – What did you notice today?

Day 9 Observations – What did you notice today?

Day 10 Observations – What did you notice today?

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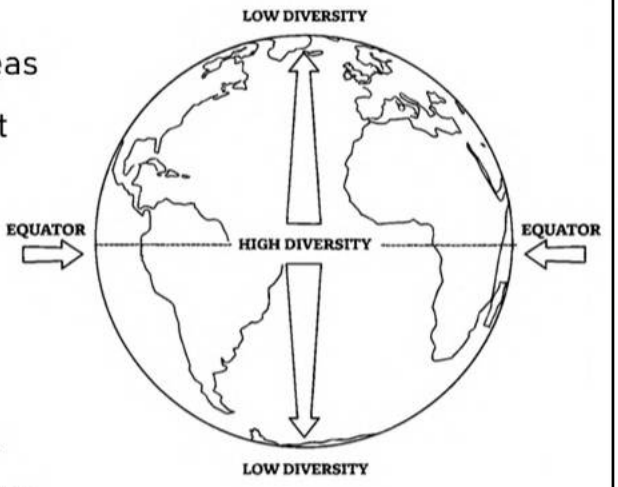
Curriculum Connection
B2.2

Longitudinal Biodiversity Gradient

Biodiversity on Earth



The **latitudinal biodiversity gradient** shows which areas around the globe have the most biodiversity, or most variety of different species.

As you can see from the gradient, the most biodiversity is found along the equator. This is because the climate along the equator is the most mild, meaning temperature, wind, and rainfall are all relatively warm and wet throughout the year.

As you get further from the equator, the climate changes from mild to extreme. The climate on the poles is very cold, where the temperatures go from -29°C to 23°C. Organisms that live in these climates are adapted so they can survive in extreme cold temperatures and relatively warmer temperatures as well.

PREVIEW

Biodiversity in Canada

In Canada, we live closer to the poles than to the equator. The climate is difficult for many different species to survive in. We don't have the biodiversity as found in countries closer to the equator. In Canada, there are around 80,000 different species of bacteria and viruses.

One major reason for this is our temperate climate with four different seasons. Humans use technologies to survive in the winter and summer (ex. furnaces and air conditioning), but other species and organisms do not have these luxuries. Instead, some migrate or hibernate to survive the extreme changes in weather.

Amazon Rainforest

The Amazon Rainforest is home to the most biodiversity in the world. In fact, there are over 2.6 million different species living on only 6.7 million square kilometres. Compare this to Canada's land area of almost 10 million square kilometres.

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Curriculum Connection
B2.2

Questions
Answer the questions below using evidence from the text.

1) Why is there more biodiversity in ecosystems closer to the equator?

2) Why is [illegible] plants and animals to live in mild climates than extreme climates?

PREVIEW

Questioning
Write 3 ques[illegible]u h[illegible]a[illegible]iodiversity.

1)	
2)	
3)	

True or False
Circle whether the statement is true or false.

1) The equator has extreme climates that change by season.	True	False
2) In Canada, we have a temperate climate with changing seasons.	True	False
3) The Amazon Rainforest has less biodiversity than Canada.	True	False
4) Wildlife can survive easier in climates near the equator.	True	False
5) Humans can only survive in mild climates.	True	False

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Curriculum Connection
B2.2

Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class.

Name: _____

Mark

Is the statement true (T) or false (F)?

1) Biodiversity is usually highest near the equator.	T	F
2) The climate near the equator is cold and dry for most of the year.	T	F
3) Biodiversity generally decreases as you move farther away from the equator.	T	F
4) Canada has more biodiversity than countries located close to the equator.	T	F
5) Some Canadian species migrate or hibernate to survive changes in weather.	T	F

Name: _____

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4) Canada has more biodiversity than countries located close to the equator.	T	F
5) Some Canadian species migrate or hibernate to survive changes in weather.	T	F

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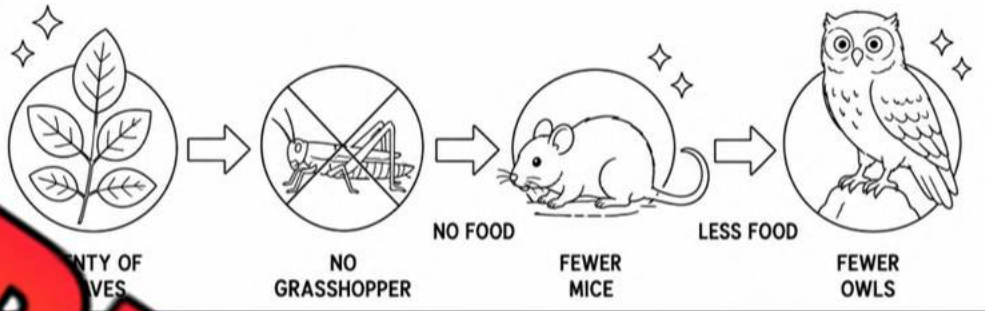
Curriculum Connection
B1.1, B2.2

Altering the Food Chain

IMPORTANCE OF THE FOOD CHAIN



PREVIEW

Chan[illegible]d C[illegible]

When we [illegible]hange [illegible]ems, we can sometimes cause unintended changes to food chains that ca[illegible]n man[illegible]nt ways. In the basic example above, you can see that if we get rid of g[illegible]hop[illegible]pulation will grow drastically while the mice population will shrink. Wi[illegible]e to h[illegible]wl population will also shrink.

Altering the Food Chain – Real L[illegible] Exa[illegible]

In Borneo, DDT was used as a pesticide [illegible] mosqu[illegible]rried malaria. Malaria is a disease caused by a parasite that mosquitoes sp[illegible] peop[illegible]a can be deadly, but usually causes flu-like symptoms.

The problem with using DDT was that it didn't just [illegible]osqu[illegible] also killed all the other insects in the region it was used. This meant the coc[illegible]ache[illegible]ch were the main food for lizards. The number of lizards dropped dram[illegible] as the number of cats that ate the lizards. The cats kept the rat population under [illegible]rol. 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.

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Curriculum Connection
B1.1, B2.2

Questions

Answer the questions below using evidence from the text.

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

2) Give y[illegible]ample of a food chain. Discuss what would happen if humans affected one p[illegible]

PREVIEW

Summarize

What happene[illegible] Bo[illegible]

True or False

Circle whether the statement is true or false.

1) When humans get rid of pests, it can have an effect 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

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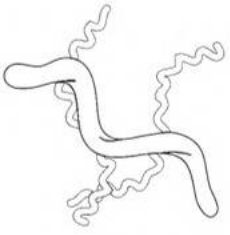
Curriculum Connection
B2.1

5 Kingdom of Living Things

5 Kingdoms of Living Things
All living things can be classified into 5 different categories: Monerans, Protists, Fungi, Plants, and Animals. That means that all living things will belong to one group.

Living Things

Mon	tists	Fungi	Plants	Animals
• Single cells • Have a cell wall • No chloroplasts • May or may not move • Example – Spirilla	• Have chloroplast • Example – Amoeba	• Multiple lls • Example Mushroom	• Multiple cells • Don't move • Have a cell • Cac s	• Multiple cells • Can move • No cell walls • Have no chloroplasts • Ex ple -



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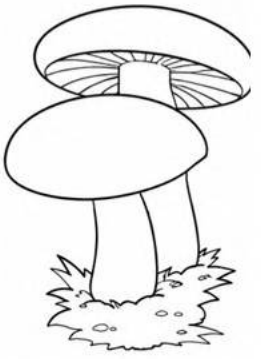

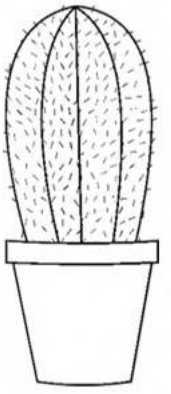



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Curriculum Connection
B2.1

Which Classification? Read the description of the living thing and write which classification you would put them in.

Description of Living Thing	Classification
1) Has no cell wall but is made of multiple cells	
2) Has a cell wall but is made of multiple cells and no chloroplasts	
3) Is a sim…lled organism with no chloroplasts or cell wall	
4) Ha… …made of multiple cells and chloroplasts	
5) Is ma… of m…, d…sn't move, and has cells walls	
6) Doesn't move …s ch…	
7) Single celled, may o… …mov… …chloroplasts	

Question Use information from the… …supp… …answer.

1) What are the five kingdoms of living things?

2) What is the difference between monerans and protists?

3) What is the difference between plants and animals?

PREVIEW

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Curriculum Connection
B2.1

Activity – Kingdoms of Life Jeopardy

Objective What are we learning about?

Students will deepen their understanding of the five kingdoms of living things—Monerans, Protists, Fungi, Plants, and Animals—through a fun and competitive Jeopardy-style game. They will identify characteristics and examples of organisms from each kingdom, reinforcing their knowledge of biological classification.

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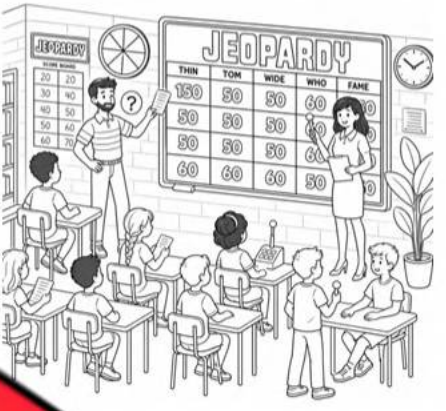
Materials What you need for the activity?

- Jeopardy board (the next page)
- Buzzer or bell



Instructions How will you complete the activity?

1. Print the Jeopardy board on the next page.
2. Divide the class into two teams.
3. Ask one team to go first by selecting a point value.
4. Read the question aloud from the point value.
5. The first team to ring the bell or buzzer gets to answer.
6. If they answer correctly, award them the points. If not, another team can answer.
7. Continue the game until all questions have been answered.
8. Tally the points to determine the winning team.
9. Conclude by discussing what they learned about the topics in the questions.

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Curriculum Connection
B2.1

Jeopardy Question | Ask students the questions below.

1 Points	2 Points	3 Points	4 Points	5 Points
What is the simplest type of living thing? (**Moner**)	What are single-celled organisms called? (**Protists**)	What kingdom includes mushrooms? (**Fungi**)	What kingdom includes flowering plants? (**Plants**)	What is the most complex kingdom? (**Animals**)
What kingdom includes bacteria? (**Monerans**)	**gd** **cludes** **oeb** **r**	What kingdom includes **olds?** **i**)	What kingdom includes conifers? (**Plants**)	What do plants have that fungi lack? (**Chloroplasts**)
Which two kingdoms have chloroplasts? (**Protists and Plants**)	What kingdom includes jellyfish? (**Animals**)	**What do** protists **u** **moveme** (**Cilia/flagella**)	**hat** **k** **ns** **nals**)	A spirilla belongs to which kingdom? **(Monerans**)
What do the simplest living things lack? (**Lack a nucleus**)	What do protists have that the simplest living things lack? (**Nucleus**)	What do fungi lack that plants have? (**Cell walls**)	What do plants have that animals lack? (**Prokaryotic**)	**t** do plants use for support? **(Cell walls)**
What kingdom includes ferns? (**Plants**)	Where do protists live? (**Water**)	What kingdom includes trees? (**Plants**)	Where do plants live? (**Chlorella**)	Which two kingdoms have no cell walls? **(Animals and Protists)**

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Curriculum Connection
B2.1

Microscopic Organisms

Microscopic Organisms



An **organism** is an individual animal, plant or single-celled life form. This means an organism is any living thing. That means we are all individual organisms.

A **microscopic organism** is an organism that is so small that people cannot see with their naked eye. Therefore, humans, cats, dogs, and snakes are not microscopic organisms because we can see them with our unaided eyes.

There are over 100 million different species of organisms that are microscopic! Wow, that is much more than the visible organisms we can see! We can classify microscopic organisms into different categories.

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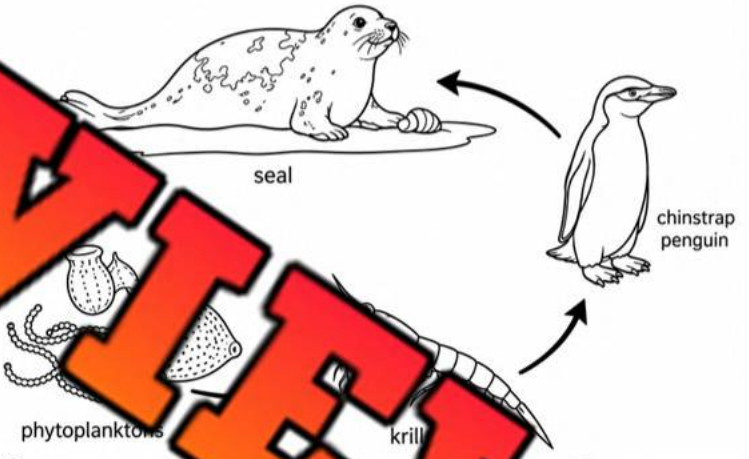
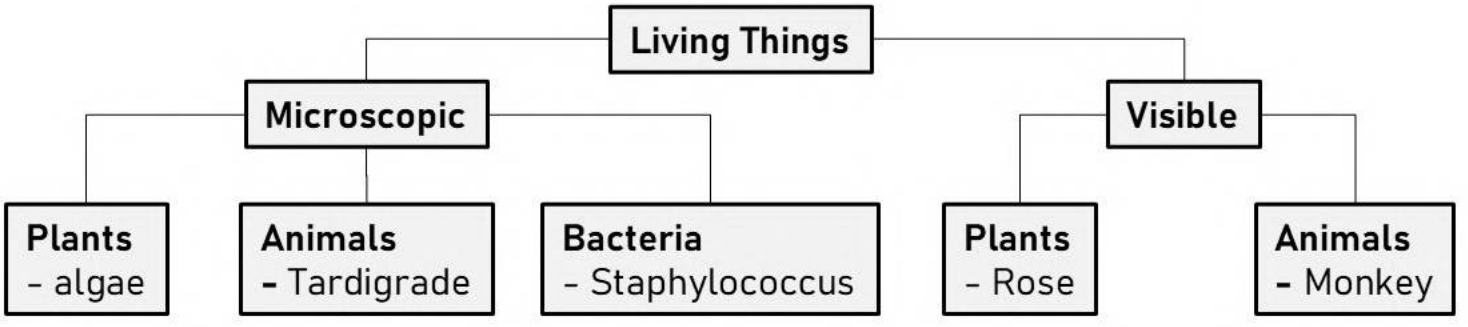
Using a Microscope

Just because we can't see microscopic organisms with our naked eye, doesn't mean we don't know they exist. Scientists use an instrument called a microscope to magnify their view by several hundred times.



Microscopes use lenses to make really small objects look bigger so we can see them to see microscopic organisms.

Scientists have discovered phytoplankton, which is a microscopic plant found in water. Phytoplankton is very important because it provides a food source to small fish at the bottom of the food chain. Without phytoplankton, larger animals would not survive!



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Curriculum Connection
B2.1

Questions Answer the questions below using evidence from the text.

1) What are microscopic organisms? How do we see them?

2) Why is the microscope such an important instrument? Explain.

PREVIEW

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

True or False Circle whether the statement is true or false.

1. All animals are visible.	True	False
2. All plants are microscopic.	True	False
3. A microscopic organism is one that we can't see with an unaided eye.	True	False
4. A microscope uses lenses to magnify our view by several hundred times.	True	False
5. We need microscopes to see most organisms in the world.	True	False

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Curriculum Connection
B2.1

Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class.

Name: _____

Are the statements below true or false?

1) Without microscopes, we would not be able to study cells in detail.

True False

2) Without phytoplankton, larger animals would still survive.

True False

3) All microscopic organisms are harmful to humans.

True False

Name: _____

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True False

3) All microscopic organisms are harmful to humans.

True False

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Curriculum Connection
B2.1

Animal Classification - Vertebrates

Animal Kingdom – Vertebrates vs Invertebrates

We can divide the animal kingdom into two categories: Vertebrates and Invertebrates.

Vertebrate animals have a backbone, while **invertebrate** animals do not.

Animal Classification - Vertebrates

Vertebrates include mammals, reptiles, birds, amphibians, and fish. Each classification has certain characteristics that make them belong to their classification.

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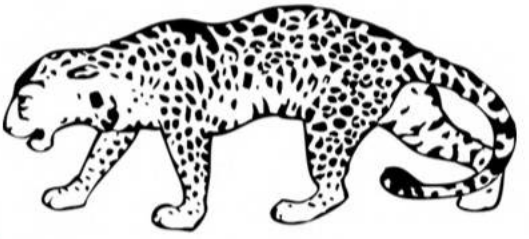


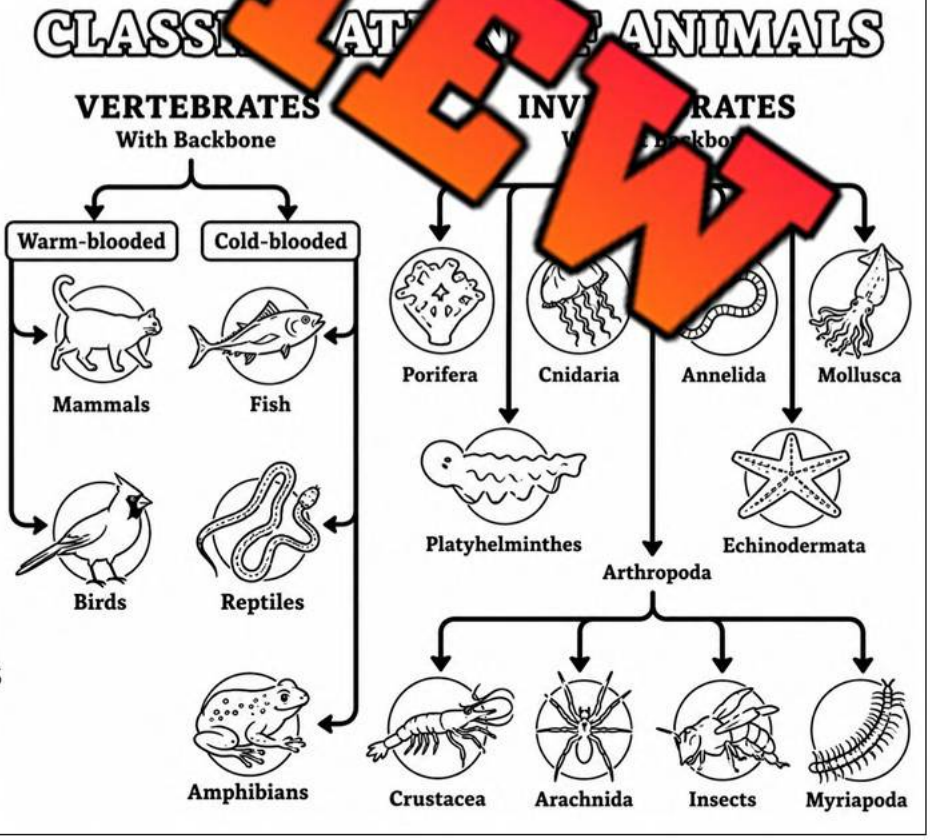
Mammals
- Have hair or fur
- Give birth to live young
- Mammal mothers nurse young with milk
- Warm-blooded

Reptiles
- Usually lay eggs but sometimes produce live young
- Have scales, not fur
- They have dry skin
- Cold-blooded

Birds
- Have feathers and wings
- Lay eggs
- Warm-blooded

Amphibians
- Live on land and in the water
- Cold-blooded
- Lay eggs
- Moist skin
- Webbed feet

Fish
- Breathe underwater using gills
- Have scales and fins
- Cold-blooded
- Lay eggs



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Curriculum Connection
B2.1

Characteristics of Vertebrate Animals

Compare Compare the different classifications of vertebrate animals.

1. Which animals have hair or fur?

2. Which animals give birth to live young?

3. Which animals have feathers or scales?

4. Whi[illegible]

5. Which animals are cold-blooded?

6. Which animals are warm-blooded?

Question What is the difference bet[illegible]n a vert[illegible]te a[illegible]invertebrate animal?

Draw Draw a picture of what you were picturing while you were reading.

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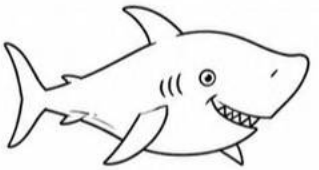
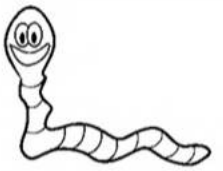
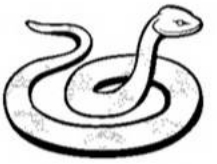
Name: _____ 52

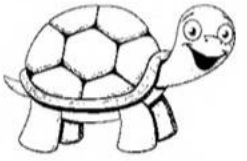
Curriculum Connection
B2.1

Vertebrate Animals

Backbone or Not? Circle the vertebrate animals.

1)   

2)  

3)  

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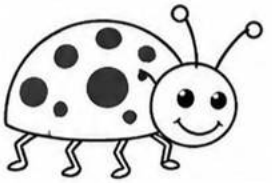
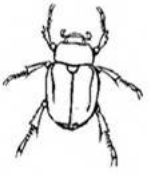
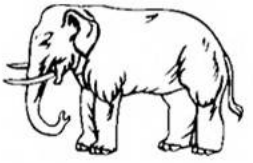
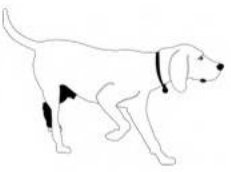
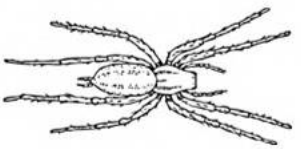
5)   

6)   

7)   

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Name: _____ 54

Curriculum Connection
B2.1

Characteristics of Invertebrate Animals

Invertebrates
Invertebrates are animals that do not have backbones. Vertebrate animals are mammals, amphibians, reptiles, fish, and birds. These animals have backbones and makeup only 4% of the total animal species in the world. That means 96% of the total animal population are invertebrates!

List of som vertebrate Animals
The follow list of some of the types of invertebrate animals.

Marin
Ther s of animals found exclusively in marine environments. These species lude s ls, jellyfish, anemones, and starfish.

Mollusks
The word mollusk f soft is to remember because mollusks are soft anim t have tons or exoskeletons. Some have shells made of Clam octopus, slugs, squids, and snails are all mollusks.



Crustaceans
Most crustaceans live in the sea and include anima ch as rs, shrimp, barnacles, and crabs. However, two types live on land – is and c staceans are arthropods because their skeletons are on the ou of



Worms
A worm is an elongated soft-bodied invertebrate animal. The thw is the most well known worm, however, there are hundreds of thou of different worm species that live in habitats other than soil.

Insects
Insects make up the largest group of invertebrates in the world. There are over 1 million species of insects! Insects have exoskeletons and three main body parts: head, thorax, and abdomen. Examples of insects are grasshoppers, dragonflies, and butterflies.



Spiders, Centipedes, and Scorpions
These animals are all part of the arthropod phylum, which means they have an exoskeleton. Spiders and scorpions are arachnids because they have eight legs. Centipedes and millipedes are myriapods and have lots of legs! Tarantula's and Black Widows are examples of spiders.

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Curriculum Connection
B2.1

True or False

Circle whether the statement is true or false.

1. Mollusks are soft animals who don't have a skeleton or exoskeleton.	True	False
2. There are over 1 million different marine species.	True	False
3. Arthropods are invertebrate animals who have an exoskeleton.	True	False
4. Mammals, amphibians, reptiles, fish, and birds are invertebrates.	True	False
5. 96% of t imal population are invertebrates.	True	False
6. The lar of invertebrates are insects.	True	False
7. Je mollusks.	True	False
8. Worms alwa	True	False
9. Crustaceans a pods often live in the water.	True	False
10. Insects have exoskele main rts: head, thorax, abdomen.	True	False

PREVIEW

Question

What are invertebrate org Are many on Earth?

Questioning

Write 3 questions you have about invertebrate animals.

1)	
2)	
3)	

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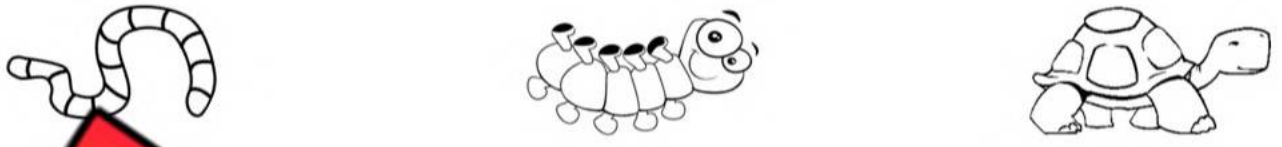
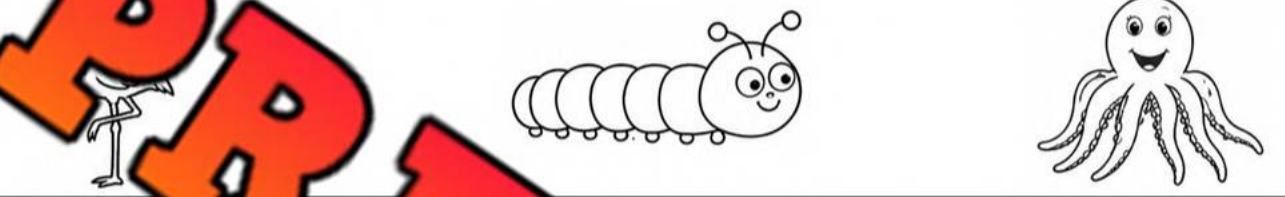
Curriculum Connection
B2.1

Invertebrate Animals

Backbone or Not? Circle the invertebrate animals.

1) 

2) 

3) 

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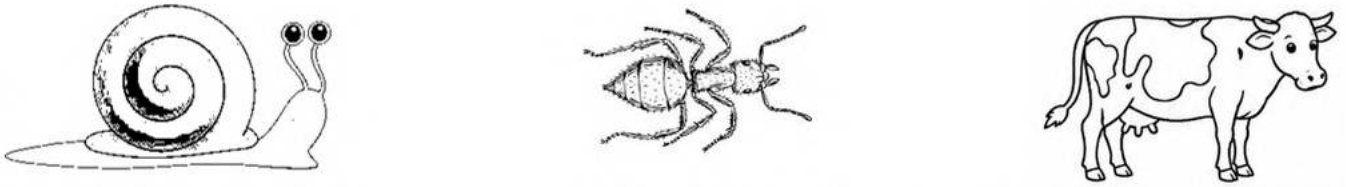
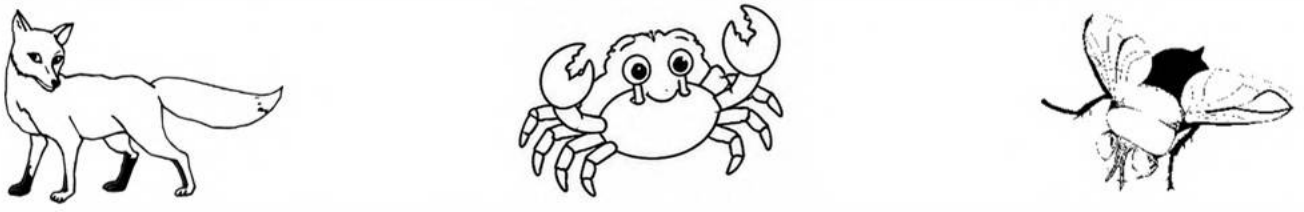
6) 

7) 

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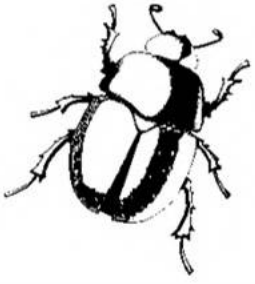
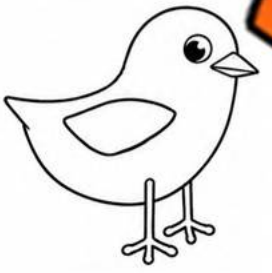
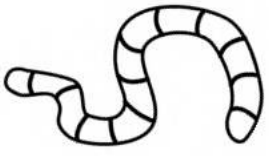
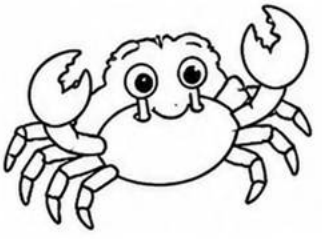
Curriculum Connection
B2.1

Vertebrate or Invertebrate?

Backbone or Not? Circle whether the animal is a vertebrate or invertebrate.

	Vertebrate Or Invertebrate		Vertebrate Or Invertebrate
	Vertebrate Or Invertebrate		Vertebrate Or Invertebrate
	Vertebrate Or Invertebrate		Vertebrate Or Invertebrate
	Vertebrate Or Invertebrate		Vertebrate Or Invertebrate
	Vertebrate Or Invertebrate		Vertebrate Or Invertebrate

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Curriculum Connection
B2.1

Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class.

Name: _____

Circle whether the animal is a vertebrate or invertebrate.



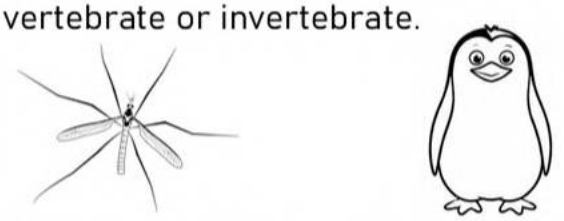
Vertebrate Invertebrate Vertebrate Invertebrate



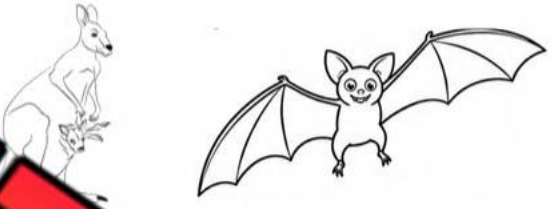
Vertebrate Invertebrate Vertebrate Invertebrate

Name: _____

Circle whether the animal is a vertebrate or invertebrate.



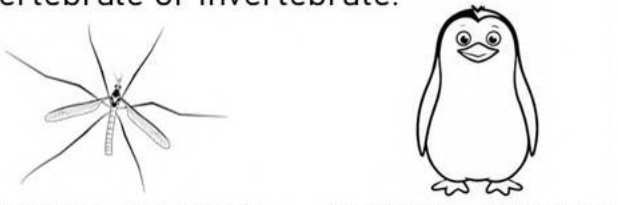
Vertebrate Invertebrate Vertebrate Invertebrate



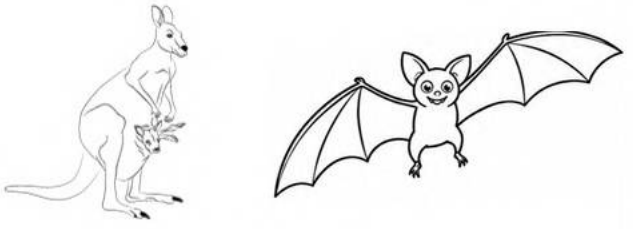
Vertebrate Invertebrate Vertebrate Invertebrate

Name: _____

Circle whether the animal is a vertebrate or invertebrate.



Vertebrate Invertebrate Vertebrate Invertebrate



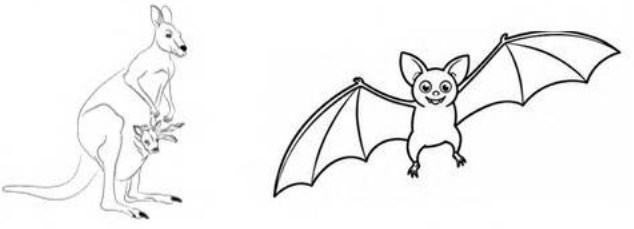
Vertebrate Invertebrate Vertebrate Invertebrate

Name: _____

Circle whether the animal is a vertebrate or invertebrate.



Vertebrate Invertebrate Vertebrate Invertebrate



Vertebrate Invertebrate Vertebrate Invertebrate

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Name: _____ 59

Curriculum Connection
B2.1

Crossword Complete the crossword puzzle by using the clues to fill in the correct words about vertebrate and invertebrate animals.



Word Bank

INSECTS
MAMMALS
BIRDS
INVERTEBRATES
AMPHIBIANS
WORMS
VERTEBRATES
REPTILES
[illegible]USKS
[illegible]

PREVIEW

Across	Down
3. These vertebrates can live on land and water and have moist skin.	1. Animals without a b[illegible]kbone are called
6. Animals that have a backbone are called __.	2. These vertebrates have hair or fur and feed milk to their young.
7. Snails, clams, mussels, and octopuses belong to this group.	4. These vertebrates have feathers and wings.
8. These cold-blooded vertebrates have scales but no fur.	5. These soft-bodied invertebrates include earthworms.
10. These animals have scales, breath using gills, and live in water.	9. These invertebrates have six legs and three main body parts.

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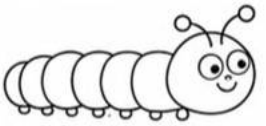
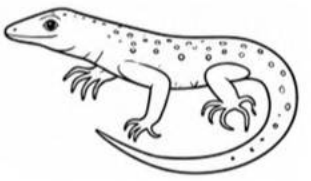
Curriculum Connection
B2.1

Experiment – Vertebrates vs Invertebrates

Research Question — What are we learning more about?

Can invertebrates or vertebrates support more weight?





Materials — What we need for our activity?

1) Playdough to make two animals
2) One pipe cleaner
3) Weights – wooden blocks or wo



Method — How do we complete the experiment

1) Make an animal like the one in the picture above
   i. Make 4 legs
   ii. Make a body
   iii. Attach the legs to the body
   iv. Put a head on the body



2) Make another animal using the same steps as above.

3) Put a pipe cleaner through the body to act as a backbone.

4) Put one block on each animal and observe.

5) Keep adding blocks until one of the animals collapses.

PREVIEW

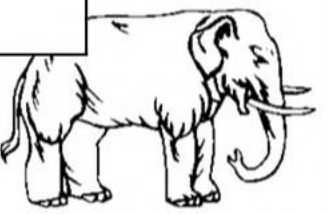
Name: _____ 61

Curriculum Connection
B2.1

Observations How many blocks did each type of animal hold?



	Number of Blocks
Vertebrates	
Invertebrates	



Results ...the questions below.

1) Which type... more weight?

...tes	Invertebrates

2) Which type of anim... think ...ually bigger?

Vertebrates	Invertebrates

3) Why do you think the bigger anim... all ve...tes?

4) If an invertebrate animal gained a lot of weight, what could h...ppe...

5) Write examples of both vertebrates and invertebrate animals below.

Vertebrates	Invertebrates

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Curriculum Connection
B2.1

Memory Game: Animal Kingdom Memory Match

Objective

What are we learning about?

To help students understand and recall various terms related to the diversity within the Animal kingdom, focusing on both vertebrates and invertebrates.

Materials

What will you need for the activity?

- Me y gam rovided) with the terms on one set a nitio another set.
- A flat surface like t he fl lay out the cards.



Instructions

How will you complet the acti

1. Divide the class into groups of 3 or 4. Give ch s mory Game cards. (Provided)
2. Have each group lay all the cards face down in a gri n a h .
3. The students take turns flipping over two cards at a time, t ing a matching term and its definition.
4. If a student finds a match, they remove those cards from the grid and keep them.
5. If the cards do not match, they are turned back over, and the next student takes a turn.
6. The game continues until all the cards have been matched.
7. After the game, review the terms and definitions with the class.
8. Discuss why these terms are important to understand and how they relate to the diversity of animal types in various environments.

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Curriculum Connection
B2.1

Cards | Terms related to animal kingdom

Terms	Definition
Vertebrates	Animals with a backbone, like birds, fish, and mammals.
In[illegible]rates	Animals without a backbone, like insects and worms.
Sponges	[illegible]uatic animals [illegible] water [illegible]
Worms	Long, slender [illegible]als without legs, like earthworms.
Mollusks	Soft-bodied animals, often with shells, like snails.

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Name: _____ 64

Curriculum Connection
B2.1

Cards | Terms related to animal kingdom

Terms	Definition
Arthropods	Animals with jointed legs and segmented bodies, like spiders and insects.
Warm[illegible]d An	Keeps a steady body temperature on its own
Cold-blooded Animal	[illegible]re[illegible]e that cannot cont[illegible]wn inner [illegible]emp[illegible]ure
Crustaceans	Hard-shelled art[illegible]opods, like crabs and lobsters.
Amphibians	Vertebrates that live on land and water, like frogs.

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Curriculum Connection
B2.1

Cards | Terms related to animal kingdom

Terms	Definition
Reptiles	Cold-blooded vertebrates with scales, like snakes.
[illegible]	Vertebrates with feathers and beaks.
Mammals	[illegible]m-b[illegible]d vertebrates [illegible] fur.
Primates	A member of the [illegible]mmal group that includes humans, apes, monkeys, and lemurs
Insects	Make up the largest group of invertebrates in the world

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Curriculum Connection
B2.1

Cards | Terms related to animal kingdom

Terms	Definition
Fish	Animals that swim and breathe with gills.
[illegible]s	Shellfish that have two matching shells.
Snails	[illegible]w-m[illegible] animals with [illegible]a si[illegible]d shell.
Spiders	Bugs with eigh[illegible]tegs and no wings.
Tapeworms	Long, flat worms that can live inside other animals.

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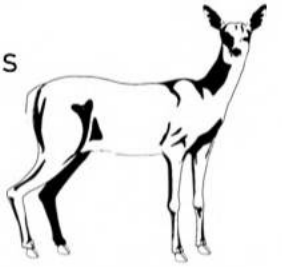
Curriculum Connection
B2.1

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 ers, lions, sharks, walrus, platypus, penguins, wolves, owls, alligators, and foxes

Omni
Cons that ar es eat both plants and animals. They eat whatever they can find! Exa ples o in de dogs, cats, pigs, chickens, squirrels, rats, bears, raccoons, coy s, ant ost humans.

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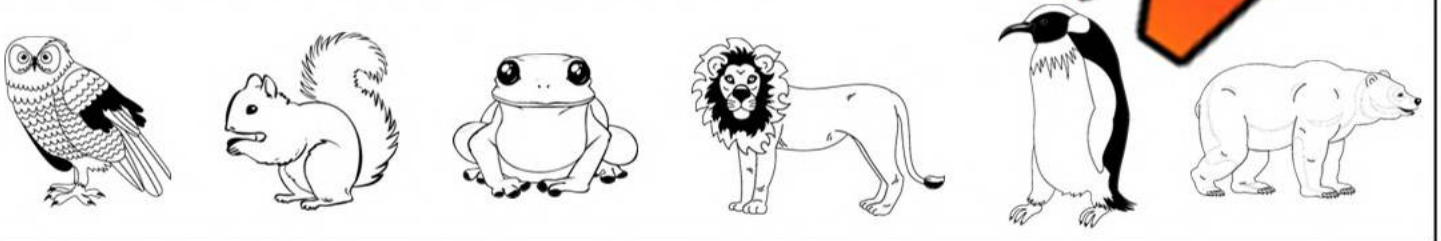
Questions Answer th stions be

1) Circle the animals that are herbiv



2) Circle the animals that are carnivores.



3) Circle the animals that are omnivores



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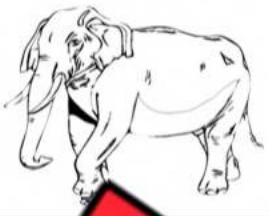
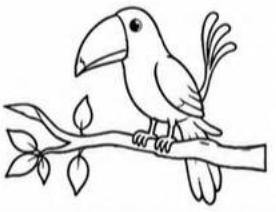
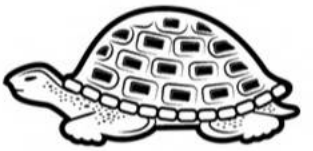
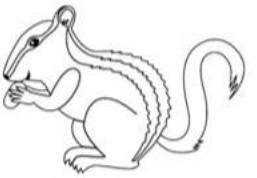
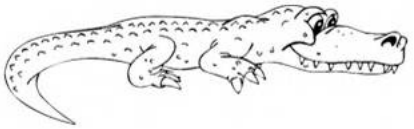
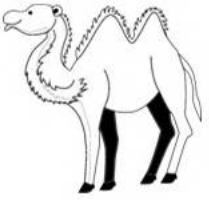
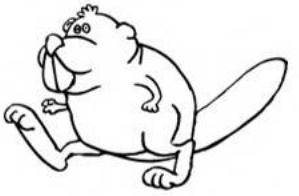
B2.1

Directions Is the organism, a carnivore, herbivore or omnivore?

Elephant 	Bird 	Turtle 
Sn[illegible]e - Co[illegible] 	Skunk 	Chipmunk 
Frog 	Fish 	Spider 
Alligator 	Camel 	Beaver 

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Curriculum Connection
B2.1

Exit Cards

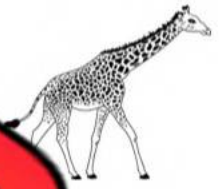
Cut Out Cut out the exit cards below and have students complete them at the end of class.

Name: _____

Is the organism a carnivore, herbivore or omnivore?



Shark



Giraffe



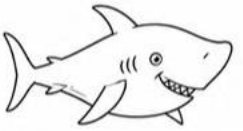
Human



Chimpanzee

Name: _____

Is the organism a carnivore, herbivore or omnivore?



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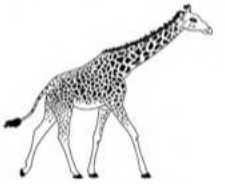
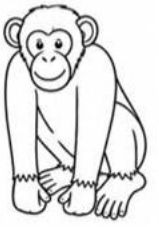


Giraffe

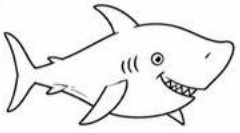




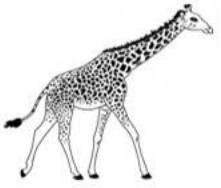
Chimpanzee

Name: _____

Is the organism a carnivore, herbivore or omnivore?



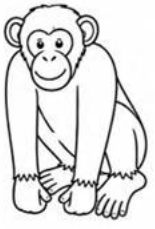
Shark



Giraffe



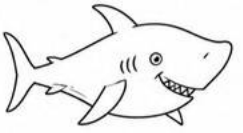
Human



Chimpanzee

Name: _____

Is the organism a carnivore, herbivore or omnivore?



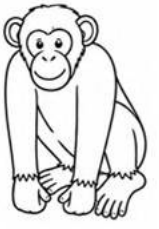
Shark



Giraffe



Human



Chimpanzee

PREVIEW

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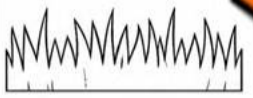
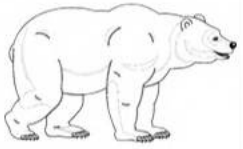
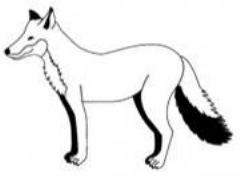
Name: _____ 71

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
 Eag			
 Grass			
 Rabbit			
 Bear			
 Fox			
 Deer			

PREVIEW

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Name: _____ 72

Curriculum Connection
B2.1

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

PREVIEW

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Name: _____ 76

Curriculum Connection
A1.1, A1.3, A1.4

Experiment – Designing a Zoo Enclosure

Research Question What do animals need to survive?

You work at a zoo and need to choose an animal to buy to bring to the zoo. You'll need to understand what that animal needs in their enclosure to survive.

Materials t do we need for our activity?

1)
2) A box – sh he mall box
3) Pipe clean
4) Toothpicks or w ts
5) Straws
6) Construction paper



PREVIEW

Method How do we complete the experime

1) Decide which animal you want to buy for your zoo
2) Research what the animal needs to survive.
3) Write down things on the backside of the page that you want to include in your enclosure.
4) Draw a plan of your zoo enclosure.
5) Complete the checklist to make sure the animal has everything it needs.
6) Begin making the model of your zoo enclosure.
7) Complete the extension activity – math connection.

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Curriculum Connection
A1.1, A1.3, A1.4

Planning Answer the questions below.



1) What does your animal need to survive?

2) What will you put in your enclosure so that your animal can survive?

3) What could you put in the enclosure so that the animal has fun?

PREVIEW

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Name: _____ 80

Curriculum Connection
A3.2

Materials are not free! How many materials did you use? Find out how much your enclosure cost to make.

Math Answer the questions below.



Material	Cost
Pipe Cleaners	$1.25 each
ardboard Boxes	$5 each
y	$6 for one piece
pic	$0.30 each
en D	$2.50 each
St	$0.75 each
Pieces of Paper	$1.50 each

How many of each material did you u rite er below.

Material	Number Used	t
Pipe Cleaners		
Cardboard Boxes		
Clay		
Toothpicks		
Wooden Dowels		
Straws		
Pieces of Paper		
Total Cost		

PREVIEW

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Curriculum Connection
A3.2, A3.3

Zoo Enclosures – Real World Problem

Lions are carnivores. They only eat meat. Also, lions are predators. They hunt and stalk their prey.

Think Look at the picture and answer the questions.



1) Is it fair to lions to have humans behind glass in their enclosure? Explain.

2) [illegible] used?

3) How do you think the lions feel in this picture?

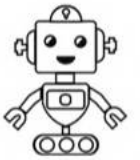
PREVIEW

Name: _____ 82

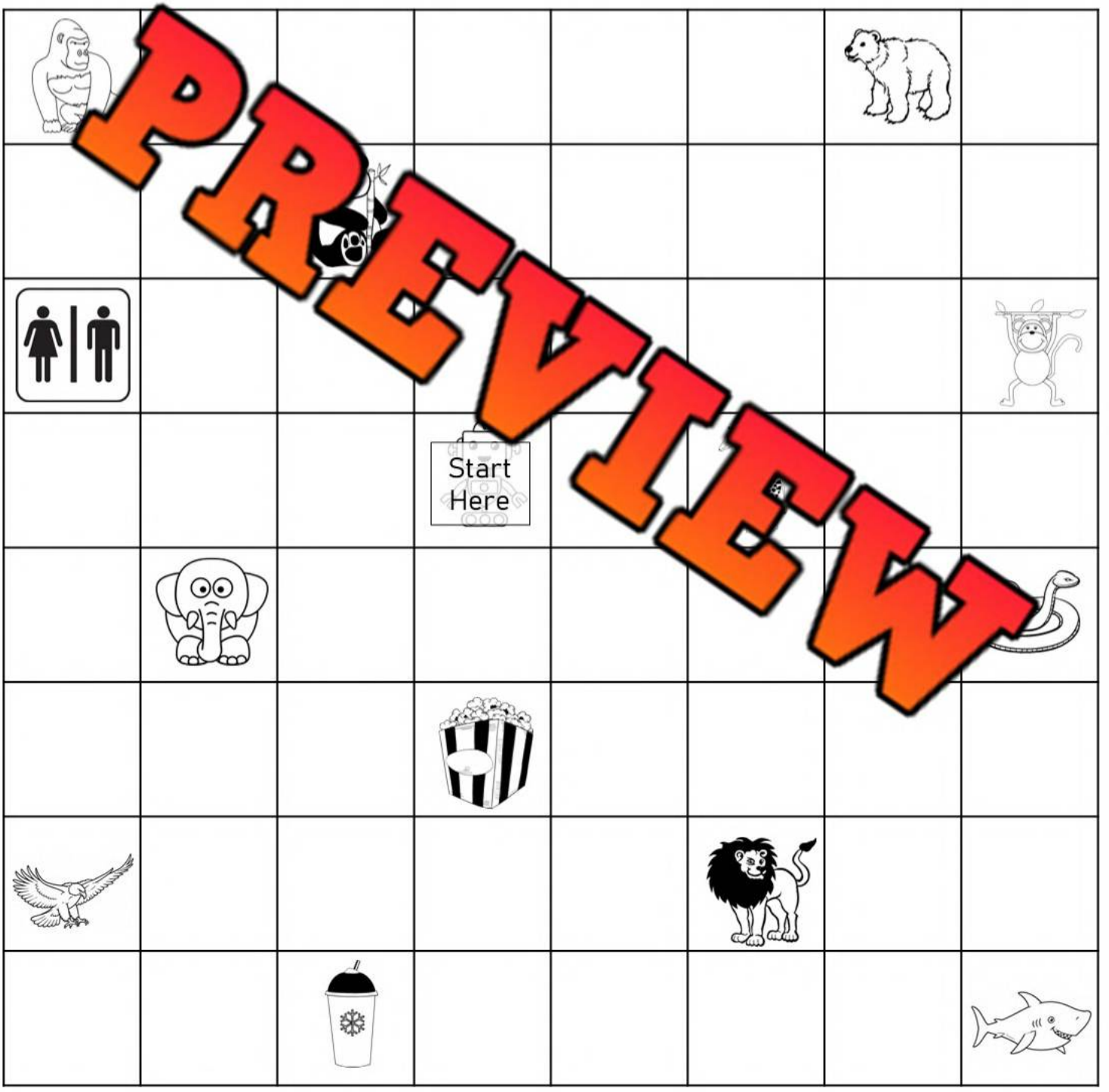
Curriculum Connection
A2.1

STEM – Working at the Zoo - Coding

EVA is a robot that works at the zoo. The staff needs your help to program her to get her work done. Write commands for EVA to do.



Zoo Use this map to write code on the next page.



PREVIEW

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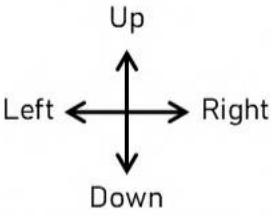
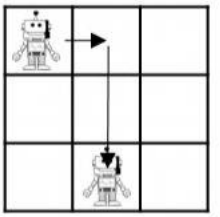
Curriculum Connection
A2.1



Commands – Use the example below to learn the code.

Move 1 right
Move 2 down



Directions Tell EVA where to go to get her work done.

1) EVA needs to check on the bears and then feed the snakes.

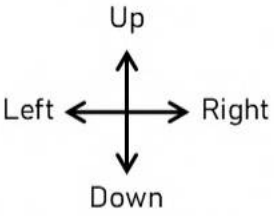
2) EVA needs to make mo rn d the lions.

3) EVA needs to get a drink, ride an elephant, and get bamboo for th da.

PREVIEW

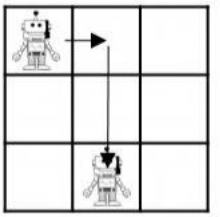
Name: _____ 84

Curriculum Connection
A2.1



Commands – Use the example below to learn the code.

Move 1 right
Move 2 down



Directions Tell EVA where to go to get her work done.

4) EVA needs to play with the giraffes, feed the lions and sharks, and then clean the bathr[illegible]

5) EVA needs to check on the gorillas, sharks, bea[illegible]ys, sn[illegible]pandas, and then get a drink. Write as few lines of code to get all [illegible]ork[illegible]

PREVIEW

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Curriculum Connection
A2.2



Coding | How does coding help zoos?

1) How does having a robot like EVA help the workers at the zoo?

2) Timers are used at zoos to keep track of when animals need to be fed. Codes are used to [illegible] to go off at different times.

If you were to feed monkeys, lions, and otters, what times would you feed them?

Monkeys	
Lions	
Otters	

3) For some animals, they can press a button to receive food or water. The code to work the machine would be:

If animal presses button
then open door to food

How would using a code like this help zoo workers?



4) When you buy tickets to the zoo, you can now buy them online. Write what the code could be below.

PREVIEW

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Curriculum Connection
A1.3, A1.4, A1.5

Experiment – Animal Scat

Research Question

What is the difference between carnivores, omnivores, and herbivores?

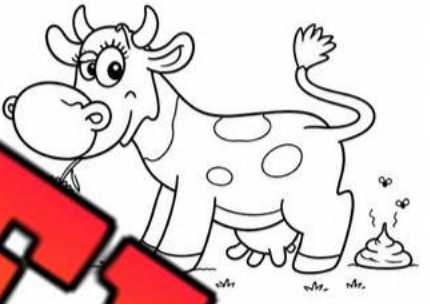
Animal **scat** is the poop that animals produce as waste from the food they eat. Depending on your diet, animals will have differently sized, coloured, and shaped scat.

PREVIEW

Mate... do we need?



- ✓ Brown pl... or cla...
- ✓ Plastic toy insect... sma... animals
- ✓ Grass clippings and/or leaves
- ✓ Raisins or other dried fruits



Method How do we complete the experimen...

1) Mold the brown playdough into scat. You can think of an animal and research their size of scat or model something like the one in the picture.
2) If it is an herbivore, add plants to the scat.
3) If it an omnivore, add plants and animals to the scat.
4) If it is a carnivore, add just the animals to the scat.



Herbivore Scat

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Curriculum Connection
A1.1, A1.3, A1.4, A1.5

Observations | What happened?

1) What size of scat did you make? What animal might have scat that looks like this?

_____

_____

_____

2) Describe the scat for each of the consumers below.

Herbivore	
Carnivore	
Omnivore	

PREVIEW

Research | Answer the questions below.

1) Can hunters track animals based on their scat? Explain.

_____

_____

_____

2) Draw the animal's scat below.

Rabbit – Herbivore	Fox – Carnivore	Racoon – Omnivore

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Curriculum Connection
B2.1

Seed Plant – Life Cycle

Seeds vs Bulbs



All plants begin their life as seeds, however, some plants will live underground in the form of a bulb. A **bulb** is a plant that lives underground and has its leaves grow up through the surface. Garlic is an example of a bulb. All other forms of plants are seed plants.

Most bulb plants live one or two seasons, and most bulb plants are perennials, which means they live more than 2 seasons. This is because they have different life cycles.

PREVIEW

Life Cycle of a Seed Plant



1. **Seed –** The seed plant will begin its life as a seed. The seed has a hard shell that protects the embryo inside.



2. **Germination –** The seed falls to the ground and absorbs the water and warmth from the air and the soil. This starts the process of germination, which is when a plant grows from a seed to a young plant. The seed will swell and split in the soil and a sprout will form.



3. **Growth** – The plant will keep growing through the process of photosynthesis. The plant provides its own food and will grow if it receives its basic needs.



4. **Reproduction –** The flowers on a plant will produce seeds when they have been pollinated. In fruit producing plants, fruit will grow on the flowers at this stage.



5. **Spreading Seeds** – The seeds from the fruit or from the flowers will spread as animals eat them or as the wind blows them away. This begins the life cycle of a plant all over again!

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Curriculum Connection
B2.1

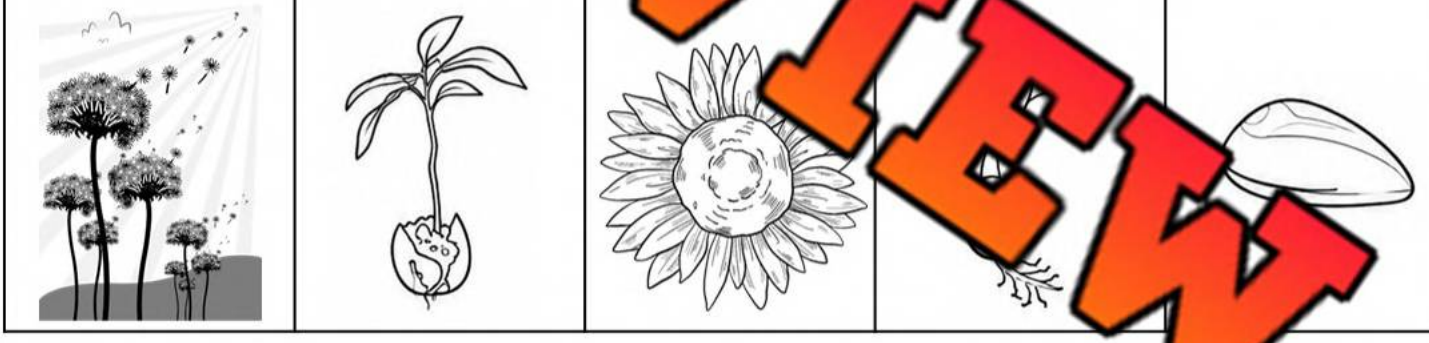
Questions
Answer the questions below using evidence from the text.

1) What is the difference between a bulb plant and a seed plant?

2) What do[illegible]ermination of a seed mean?

PREVIEW

Ordering
Put the[illegible]es o[illegible]in order from first to last – 1 to 5.



True or False
Circle whether the statement is true or false.

1) Germination is when the seed coat splits open.	True	False
2) A seed plant will continue to grow year after year.	True	False
3) A perennial plant is a plant that grows for more than 2 seasons.	True	False
4) A plant will continue growing even if it doesn't have its basic needs met.	True	False
5) Only the wind spreads seeds on the soil.	True	False

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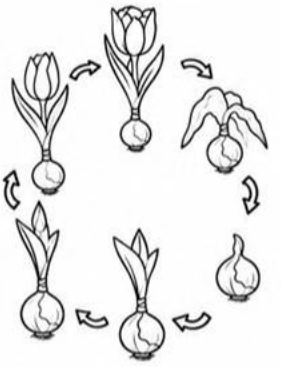
Curriculum Connection
B2.1

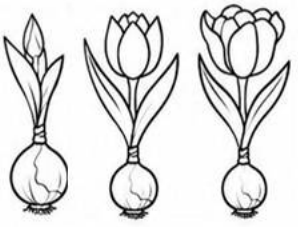
Bulb Plant – Life Cycle

Bulb Plants

A bulb plant lives through the winter inside the ground. A bulb will continue to grow year after year until it is harvested (pulled out of the ground). Bulb plants complete their life cycle underground.



Life Cycle of Bulb Plants – Stages

1) Dormant 	The bulb prepares for winter by forming roots in the ground. It gathers energy from the soil around it. The bulb is in the dormant stage. It is like a half-asleep as they don't grow in size or above ground. But they do quietly work away at growing more and stronger roots.
2) Waking Up 	As the temperature warms up in the spring, the bulb begins to grow. You will see the shoots start to grow through the soil.
3) Bloom 	The bulb blooms after spending the winter and spring months gathering energy. It has rested and gotten enough light, water, and warmth to bloom. This means it will turn into a plant that we can see above the ground.
4) Falling Asleep 	The bulb plant will fade into the ground as the temperatures get colder. The bulb is not dying! It is saving and gathering energy so it can grow again next year.

PREVIEW

Name: _____ 95

Curriculum Connection
B2.1

Matching Write the letter from the description beside each stage.



	Dormant	a) The bulb feels the warmer weather. It will grow a shoot.
	Waking Up	b) The bulb prepares for winter. It is half asleep as it doesn't grow.
	Bloom	c) The plant grows bigger. The flower will open up.
	Falling Asleep	d) The bulb feels the cold air and the shorter days.

Questions A[illegible] quest[illegible]low.

1) Where does a bulb p[illegible]rough[illegible]ant life cycle?
Under[illegible]nd [illegible]e Ground
2) What is the difference between a [illegible]plant a[illegible]e[illegible]lant?
_____
_____
_____

Visualizing What were you picturing in your head while you were re[illegible]ing?

Describe your picture.

_____

_____

_____

_____

PREVIEW

Name: _____ 96

Curriculum Connection
A1.3, A1.4, A1.5

Experiment – Basic Needs of Plants

Research Question
What do plants need to survive?

Will plants survive in any environment? Will seeds grow better in the dark or in the light? Will they grow better with water or without?



Materials
What do we need for our experiment?

1) 6 sm plant seeds
2) Soil
3) W ng can
4) Frid
5) Shredded
6) Seeds – lett coli, h d cauliflower germinate the fastest

PREVIEW

Method
How do w te th ent?

1) Fill 5 cups with soil.
2) In the 6th cup, do not add soil. Instead add shre pap
3) Add your seeds to the soil, about 2 cm dee es th he seed).
4) In one of the cups with soil, add a lot of seeds r.
5) Place one cup in a closet, where it won't get sun or li
6) Place another cup in the fridge, where it is cold.
7) Place four cups in a window where it will get the most sun. One th should be the one with a lot of seeds and one should be the shredded paper
8) Water each of the cups two times a day. Do not water one of the two cups that are in the window (you should water the one cup with a lot of seeds).
9) Monitor the results by checking the cups each day.

Hypothesis
In which cup will the seed(s) grow the fastest?

Cup 1 In the Closet	**Cup 2** In the Fridge	**Cup 3** A lot of Seeds	**Cup 4** Window with Water	**Cup 5** Window no Water	**Cup 6** Shredded Paper

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Curriculum Connection
A1.3, A1.4, A1.5

Observations Have any of the seeds sprouted? Put a ☑ or an ☒



Day	Cup 1	Cup 2	Cup 3	Cup 4	Cup 5	Cup 6
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
15						
20						

PREVIEW

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Curriculum Connection
A3.1, A3.2

Needs of Plants – Making Connections

Help! Andy needs help solving the problems below so his plants can grow.



1) It is supposed to be very cold tonight. It might even snow! Andy has a plant outside getting sunshine. What should he do?

2) Andy has a pla pot ow. He put it under a big tree so it would have a friend. Why wo gr t should he do?

3) Andy loves corn! He wants a lot of corn plants, so he p 00 seeds in his small pot. Oh no, no corn is growing! What should h



4) Andy's sunflower is growing well in a pot in his house. Andy is going on vacation for 2 weeks. He wants his sunflower to keep growing. What should he do?

PREVIEW

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Curriculum Connection
B2.1

Plant Classification – Flowering/Non-Flowering

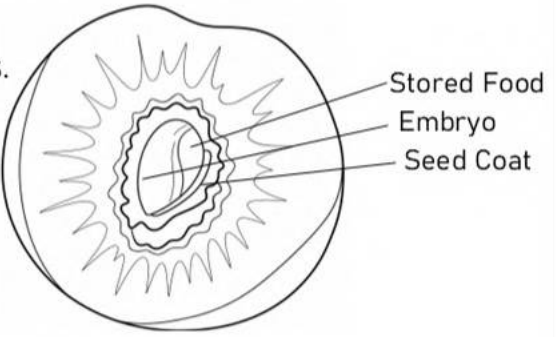
What are Flowering Plants?

Simply put, **flowering plants** are plants that make a flower. Some of these flowers are bright and beautiful, while others are dull and small. Either way, flowers have the important purpose of making seeds. More specifically, flowering plants produce fruits that have seeds them. Producing seeds allows flowering plants to , making new plants from their seeds.

known as angiosperms.

Angios s have enclosed inside a fruit.

Around of ant l flowering plants. Most trees are flow plant f me from flowering plants. So ables a flowers, like broccoli.



PREVIEW

What are Non-Flowering Plants?

Non-flowering plants are plants that d roduce wers. They usually reproduce through spores.

Non-flowering plants include cryptogams a mn s **ams** have no flowers, fruits, or seeds. Examples of cryptogams are fe es, li ts, lichens, algae, and fungi. **Gymnosperms** have seeds, but with no fruit, t see Instead, the seeds are on the outside of the plant. Examples of gymn e woody shrubs and trees like pine, spruce, firs, and ginkgoes.

Differences Between Flowering and Non-Flowering Plants

Flowering Plants	Non-Flowering Plants
▪ Commonly known as angiosperms	▪ Include cryptogams and gymnosperms
▪ Have seeds and flowers	▪ Cryptogams have no seeds or flowers
▪ Seeds are protected in a fruit	▪ Gymnosperms have unprotected seeds
▪ Have roots, leaves, and stems	▪ Most have no stems, roots, or leaves
▪ Examples: orchids, grasses, sedges	▪ Examples: mosses, ferns, conifers

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Curriculum Connection
B2.1

Questions What is the difference between a flowering plant and a non-flowering plant?

Flowering **Flowering** Is the description flowering or non-flowering?

1) Inc gymno	Flowering	Non-Flowering
2) Known as a p	Flowering	Non-Flowering
3) Has their seeds tect	Flowering	Non-Flowering
4) Has their seeds protect uit	Flowering	Non-Flowering
5) Has roots, leaves, and a stem	Flowering	Non-Flowering
6) Mosses, ferns, and conifers	ering	Non-Flowering
7) Examples include spruce, pine, and firs		Non-Flowering
8) Grasses are an example	erin	n-Flowering
9) 80% of all plants are...		ring
10) Includes cryptogams that have no seeds	Flower	owering

PREVIEW

Flowering or Non-Flowering? Is the plant flowering or non-flowering?


White Pine


Spruce


Grass


Fern


Strawberry

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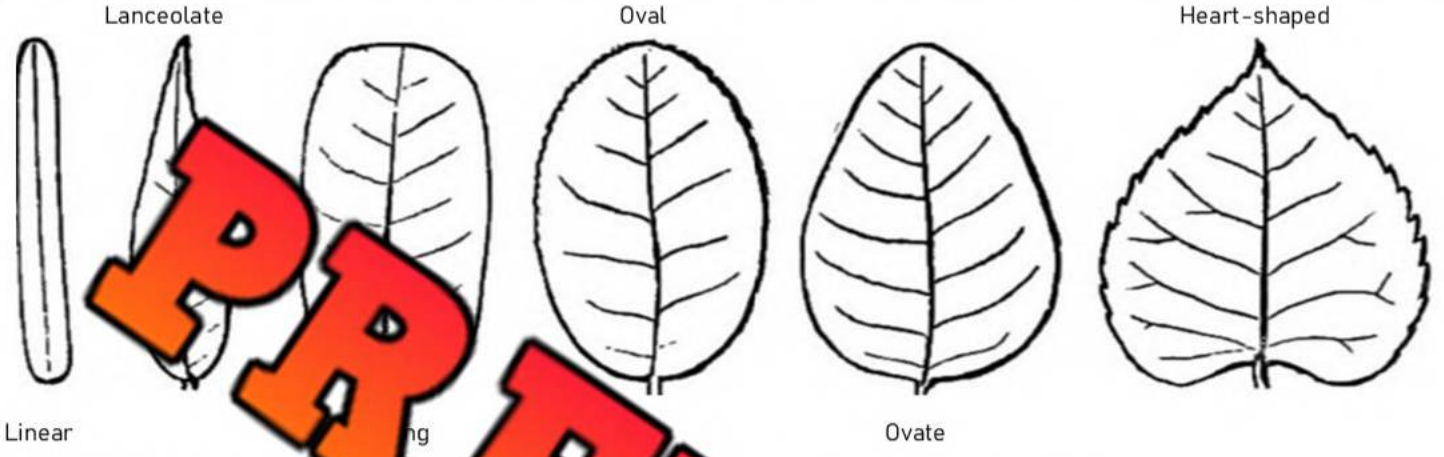
Curriculum Connection
A1.2, A1.4, A1.5

Classifying Leaf Shapes

Leaf Shapes
Check out the different leaf shapes below. There are many different leaf shapes, but here are six examples of common leaf shapes we see in our environment.



PREVIEW

Describe Describe wh[illegible] the l[illegible] look like below.

Shape	**Description** (poin[illegible], rou[illegible]p[illegible]in, symmetrical, long, short, etc.)
Linear	
Lanceolate	
Oblong	
Oval	
Ovate	
Heart-shaped	

Label Label the leaves below. Do not use a name more than once.



_____ _____ _____ _____ _____ _____

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Name: _____ 107

Curriculum Connection
A1.2, A1.4, A1.5

Investigating Leaf Shapes

Go outside and search for differently shaped leaves. Draw pictures of the leaves and describe their shape.

Investigate Find differently shaped leaves and draw/describe them below.

	Drawing	Description
1)		
2)		
3)		
4)		

PREVIEW

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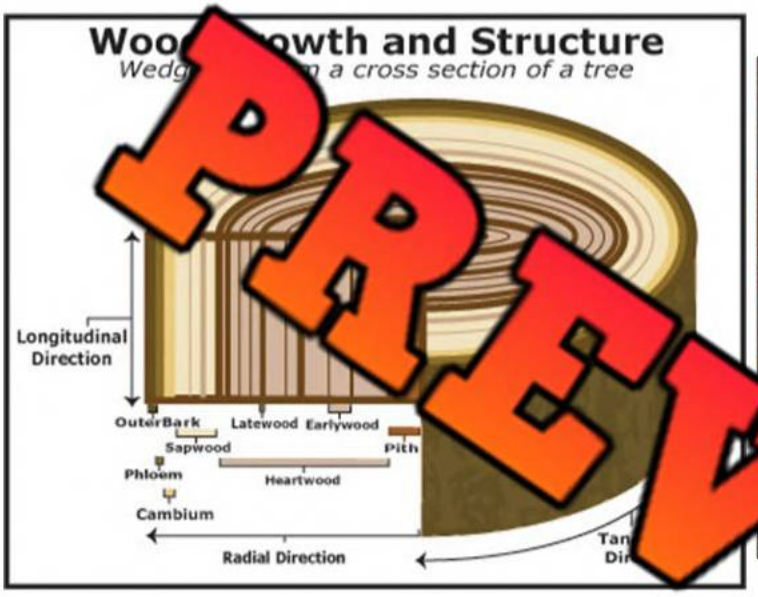
Name: _____ 108

Curriculum Connection
A1.1, A1.2, A1.4, A1.5

Growth and Scars of Trees

Tree Cookies
A scientist can learn a lot about the history of a tree by examining a tree cookie. A **tree cookie** is a cross-section slice of a tree trunk. Tree cookies are also called **dendrodiscs.** We can determine the tree's age, growing conditions, and how the tree was treated by looking at the tree's dendrodisc.





PREVIEW

Feature	Wi[illegible]
Rings	The number of rings on the tree tells [illegible] th[illegible] year of growth is one light ring and one dark ri[illegible] One [illegible]nts how the tree grew in the spring and summer. The [illegible] represents it growing in the winter and fall.
Growing Conditions	If the rings are close together, it means the tree grew in poor conditions like less sunlight, moisture, and nutrients. This means the tree grew slowly. Wider rings meant the tree had optimal sunlight, water, and nutrients.
Scars	We can see scars in a tree cookie that tell us if the tree was in danger. If a tree was on fire, a scar will be circular. If there was insect damage, the tree will show a scar that cuts through a couple layers. Even a branch being broken off will leave a scar. The photo above to the right shows a scar of a tree that had a dead branch broken off.

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Curriculum Connection
A1.1, A1.2, A1.4, A1.5

Questions Answer the questions below using evidence from the text.

1) How do we know how old a tree is?

2) How ca[illegible]ll what growing conditions a tree lived through? How do we know if the tree was [illegible]?

PREVIEW

Questioning What questions d[illegible]you [illegible]g the information?

1)	
2)	

True or False Circle whether the statement is true or false.

1. One ring is one year of growth for a tree.	True	False
2. When a branch is broken off a tree, the tree will show a scar.	True	False
3. A wider ring means the tree struggled to get enough sunlight, water, or nutrients.	True	False
4. A narrow ring means the tree grew slowly.	True	False
5. A tree cookie is known as a dendrodisc.	True	False

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Curriculum Connection
A1.2, A1.4, A1.5

Tree Rings - Investigation

Research Question — What are we learning about?

We can learn a lot about a tree by looking at its rings. When a tree has been cut down, you can examine the tree stump to see how old the tree was, how much [illegible]uma the tree experienced, and the trees gro[illegible]nditions.

Us[illegible]ding to help you investigate a stum[illegible]ea



Materials — W[illegible]l[illegible] neec[illegible]he investigation?

- ❑ An old tree stump
- ❑ A computer if no tree stump
- ❑ The recording page
- ❑ The reading on page 94



PREVIEW

Procedure — How will you complete the investigation?

1) Go outside and find a tree stump. If you can't find one outside, search for a tree stump online.
2) Look for a stump that has clear rings that you can investigate to learn more about.
3) Use the reading to help tell you about what the rings means.
4) Answer the questions on the next page.



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Curriculum Connection
A1.2, A1.4, A1.5

Observations Fill in the table explaining what you learned about the tree.

	How Do You Know?
Age	
Grow Conditi	
Trauma	

PREVIEW

Diagram Draw the tree stump showing the numbe and ars present.

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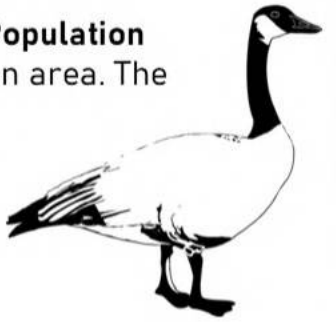
Curriculum Connection
B2.2

Wildlife Population and Communities

Wildlife Population

Scientists that study biodiversity are interested in wildlife population. **Population** means how many members of the same type of living thing there is in an area. The population of your city or town is how many humans live there.



Scientists need to track the population of plants and animals so they can see if any are at risk of extinction. **Extinction** means that an entire species is no longer living. Sometimes we need to help plants and animal[illegible]hich is why scientists monitor their populations.

Wildlife Co[illegible]es

A wildlif[illegible]the different populations living in an area together. In your comm[illegible]vironment with many different plants and animals. You all belong[illegible]e same[illegible]y.

PREVIEW

S[illegible]imal P[illegible]ns in Ontario			
	Ye[illegible]2000	[illegible]10	Year - 2020
Beavers	3,60[illegible]	3,8[illegible]	4,000
Raccoons	22,000	17[illegible]	[illegible],000
Canada Geese	34,000	3[illegible]	[illegible]0
Coyotes	4,500	2,800	2,300
Black Bears	140,000	160,000	150[illegible]



Reflection Which two animals are in danger of extin[illegible]pla[illegible]you[illegible]now.

True or False

Circle whether the statement is true or false.

1. Population is the number of different animal communities in an area.	True	False
2. Population is how many members of one species live in an area.	True	False
3. Extinction is when the population of a species is healthy and steady.	True	False
4. Scientists study populations in communities so they can help them.	True	False
5. A community is how many different populations live in an area.	True	False

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Curriculum Connection
B2.2

Direction Start at the top left box. Read each statement and choose TRUE or FASLE to follow the path. Keep going until you reach the FINISHED box.



PREVIEW

Name: _____ 120

Curriculum Connection
B2.3

Adapting Species

What Does Adapting Mean?

Plants and animals are designed to live and thrive in their habitat. They have **adapted**, which means their bodies have changed to allow them to survive in the conditions they live in.

Over [illegible] species will change so they have characteristics that help them survive. Evolution [illegible] that explains how animals adapt. **Evolution** is the process by which [illegible] and adapt into more advanced versions that allow them to survive in the [illegible] live in.

PREVIEW



Charles Darwin

In 1859, Charles Darwin [illegible] the th[illegible] evolution. He believed that e[illegible] wo[illegible] natural selection. **Natural selection** is th[illegible] where certain individuals of a species ar[illegible] better at surviving than others and will therefore, surviv[illegible] have more children (reproduce).

When they have children, their children are like thei[illegible]s. F[illegible]ple, rabbits live all over and have dark or white fur. In places where there is a lo[illegible]r would be an advantage as the rabbits could hide from predators easier. W[illegible]re white rabbits surviving in places with heavy snowfall, more white furred rabbits have babies and their babies will also have white fur. Eventually all the rabbits living in a cold place will have white fur as they are the ones who survive.

Survival of the Fittest

The phrase **survival of the fittest** refers to the animals who are best able to survive in their environment. The white furred rabbits are the fittest bunnies for an environment that receives heavy snowfall.

The white furred rabbit has adapted to its habitat. Its adaptation is its white fur.

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Curriculum Connection
B2.3

True or False

Circle whether the statement is true or false.

1. Adapting to an environment means animals change so they can survive.	True	False
2. Not all plants and animals can survive in all environments.	True	False
3. A white furred rabbit will survive best in desert environments.	True	False
4. Charles Darwin came up with his theory of evolution in 1859.	True	False
5. All anim a species are the same (all rabbits are the same).	True	False

Questi

Wh stions do you have after reading the information?

1)	
2)	

PREVIEW

Questions

Use information from the text to support y nsw

1) How do animals adapt to be able to survive in their environment?

2) What does natural selection and survival of the fittest mean?

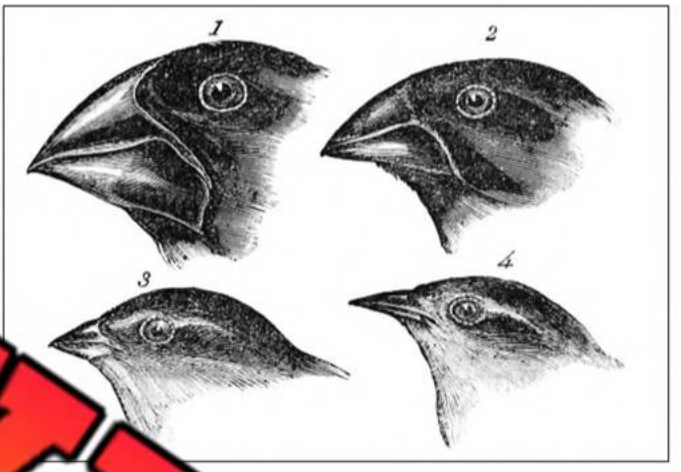
Name: _____ 122

Curriculum Connection
B2.3

Darwin's Finches

Charles Darwin

In 1831, a naturalist named **Charles Darwin** boarded a ship called the Beagle from England to South America. When he landed in the Galapagos Islands, he noticed very similar looking songbirds on each of the different islands. These birds looked a lot like a finch he had seen on the main island of South America. He collected these birds to examine them more closely.



Darwin's Finches

Upon further examination, Darwin noticed that each of these birds had slight differences between them. The finches on each island showed distinct variations in overall beak shape, and claw size. These differences in the bird's traits were a result of the food available on each island.

For example, on one of the islands, only small seeds were available to eat. The finch on this island had short claws and a long beak that helped them dig into the ground to eat the insects. On another island, the finches had large powerful beaks that were suitable for cracking tough nuts to eat.

Evolution by Natural Selection

Since the islands were quite far apart, breeding between finches was unlikely. Instead, Darwin realized that only the finches who could find food would survive. He founded the idea of evolution as he explained that only the animals that could survive would reproduce and have children.

Within a species, individual organisms are slightly different. On each island, only the organisms that had the suitable traits for their environment survived. This is what Darwin named **evolution**, and more specifically, **natural selection.**

PREVIEW

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Name: _____ 123

Curriculum Connection
B2.3

True or False

Circle whether the statement is true or false.

1. Charles Darwin was a naturalist from Spain.	True	False
2. Darwin collected finches and brought them back to England.	True	False
3. Darwin coined the terms evolution and natural selection.	True	False
4. Darwin figured the different finches must have reproduced together.	True	False
5. Each finch had traits that allowed them to survive on their island.	True	False

Summarize

ortant points from the reading in jot notes (not full sentences).

1)	
2)	
3)	
4)	

Questions

Use information from the text to support your answers.

1) Why is it important that organisms in a species are a bit different? What would happen if everyone was the exactly the same?

2) If all rabbits were brown, what might happen to the rabbits in the arctic?

PREVIEW

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Name: _____ 124

Curriculum Connection
B2.3

Genetic Variation – Evolution

What is Genetic Variation?

We use the term **genetic variation** to describe the variation in the DNA sequence in each of our genomes. Genetic variation is what makes us unique individuals with different hair colour, skin colour, body shapes and more. Organisms of a species have similar characteri[illegible] but they are rarely identical.

Inherited [illegible]

The [illegible]ou[illegible], skin[illegible]d face shape are all determined by our genes. We inherit our genes from our p[illegible]t is [illegible]dom which genes we will inherit from which parent. This is why we te[illegible]k like[illegible]ts.

Genetic Variation – Natur[illegible]ction

If all the organisms of a speci[illegible]the [illegible]natural selection would not exist. No changes could happen over time as eve[illegible]ould look the same. Without natural selection, species w[illegible] not adapt to their changing environment. There[illegible] be less biodiversity as many species would go extinct.



Wh[illegible]ered Moth

Over time, the habitat a species lives in can change. This can impact which organisms in a species will survive, a[illegible]

For example, the Black Peppered Moth survived more than the Whi[illegible]ppered Moth after the Industrial Revolution due to pollution. The black moths could hide on carbon covered trees better than white moths.



Black Peppered Moth

This genetic variation led to the black moths becoming more successful and evolving from the traditional white moths. Their genetic differences allowed the Peppered Moth to survive. If all the Peppered Moths were white, they would have went extinct as their predators would have eaten them all as they stood out against the black carbon soot.

PREVIEW

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Curriculum Connection
B2.3

True or False

Circle whether the statement is true or false.

1) The White Peppered Moth survived better than the Black Peppered Moth.	True	False
2) Natural selection leads to more biodiversity.	True	False
3) Without natural selection, species wouldn't adapt to changing habitats.	True	False
4) The Peppered Moths adapted to their new carbon covered habitats.	True	False
5) Humans have the same genetics with no genetic variation.	True	False

Genetic

share any genetics from anyone in your family?

Hair	
Eye-Colour	
Skin Tone	
Body Shape/Height	

PREVIEW

Questions

Use information from the text to supp answ

1) Why do we not all look the same?

2) What would have happened to the Peppered Moth if they were all white and had no genetic variation?

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Curriculum Connection
B2.3

Newspaper Article: Discovering Our Feathered Past

Ancient Wings Take Flight: Discovering Our Feathered Past

Publish Date: June 15, 2024

In an exh[illegible] discovery that brid[illegible]en[illegible]with our present, [illegible]esearc[illegible]une[illegible]rthed striking simila[illegible]ween [illegible] archaeopteryx, a di[illegible] [illegible]et[illegible] be among the earliest bir[illegible] modern-day birds. This remarkable connection sheds light on the evolutionary lineage leading to the birds we see today.

The archaeopteryx, with its blend of dinosaur-like teeth and bird-like feathers, has long fascinated scientists. Recent fossil studies show that this creature not only had feathers but also wings similar to those of contemporary birds. "The archaeopteryx's wings were highly developed, suggesting it could glide or even fly short distances, much like many birds today," explained Dr. Helena Barr, a paleontologist at the National Museum of Natural History.

Further analysis reveals that, unlike most modern birds, archaeopteryx had teeth and a long bony tail, features that were common among dinosaurs. "These features highlight a significant evolutionary transition from reptiles to [illegible]" Dr. Barr added.

As [illegible]sts [illegible]u[illegible] to study these ancient creatures, the pieces of our planet's vast historical puzzle gradually come together, offering a glimpse into the transformations over millions of years that led to the wildlife we know and love today.



PREVIEW

Name: _____ 129

Curriculum Connection
B2.3

True or False

Is the statement true or false?

1. Archaeopteryx had feathers like modern birds.	True	False
2. Fossils can show evolutionary transitions.	True	False
3. Paleontologists have found direct descendants of archaeopteryx alive today.	True	False
4. The study of fossils can reveal animal behaviour.	True	False
5. Fossil e[illegible] does not support bird evolution from dinosaurs.	True	False

Questi[illegible]

Write [illegible]stions you have about the text.

1)	
2)	

PREVIEW

Questions

Answer the questions below.

1) What evidence do paleontologists use to study ancient ani[illegible]s?

2) Why is the discovery of archaeopteryx important for understanding bird evolution?

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Curriculum Connection
B2.4

Biodiversity Between Species

Biodiversity Between Species

In a community, many different species of organisms live together. In many instances, an animal will have many different species.

For example, a bear is an animal with 8 different species. The biodiversity between these species ensures bears can live in many different living conditions. Check out the genetic variations between these different species of bears below.



PREVIEW

Bears	Colour		Diet
Polar	White	00 kg	ivore (seals)
Sun	Black with horseshoe shaped orange coloured patch on its neck	60 kg	honey,
Sloth	Black long fur that is shaggy	80 – 112 kg	e (ants, , termites)
Brown	Brown	152 – 217 kg	Omnivore (mice, fish, berries)
Spectacled	Black with white face	65 – 115 kg	Herbivores (nuts, fruit, bamboo)
Giant Panda	White head with black eyes. White and black bodies	100 – 115 kg	Herbivore (bamboo)
Asian Black	Black	85 – 135 kg	Omnivore
American Black	Black	41-250 kg	Omnivore

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Curriculum Connection
B2.4

True or False

Circle whether the statement is true or false.

1) There is only one species of bear.	True	False
2) There are 8 species of bears that allow bears to live in different habitats.	True	False
3) All bears are carnivores	True	False
4) Carnivores would have the easiest time surviving in any environment	True	False
5) The larg[illegible] species of bear is the Brown Bear	True	False

Paraphra[illegible]

[illegible]e 4 things you learned from the reading in your own words.

1)	
2)	
3)	
4)	

PREVIEW

Questions

Use information from the text to supp[illegible]ans

1) What would happen if all bears had the same characteristics? Co[illegible] different environments?

_____

_____

_____

2) Which bear would not survive in a habitat that has no snow and not many other animals, only plants? Explain why.

_____

_____

_____

Name: _____ 137

Curriculum Connection
B1.1, B2.5

Relationships Within Species

Interrelationships Between Plants and Animals

All species are interconnected, meaning they depend on each other. Forests, which are plants, provide homes for animals. Animals eat plants and the plants need healthy soil to grow. Fungi helps to decompose organisms to fertilize the soil. Bees and other insects carry pollen from one plant to another, which allows them to reproduce and create more plants.

The diversity in an ecosystem allows these important connections. If a species (humans over picking, hunted a plant or animal population, they could disrupt the biodiversity in the ecosystem. As you can imagine, the connections between plants and animals could weaken and break which would harm all the species in the ecosystem.

PREVIEW

Examples of Interrelationships within a Species

Within a species, the relationship between plants and animals is important. For example, wolves travel in packs to defend their territory. Each wolves in the pack depend on each other to survive.



In a wolf pack, the alpha wolf makes the important decisions for the pack. The beta wolf is second in command, taking over if the alpha wolf dies.

On the bottom rung of the ladder, the omega wolf is the weakest and the least cared for in the pack. They are bullied by other members, but they have the important role of easing tensions when things get out of control. They do this by starting to play when tensions get high between wolves.

The interrelationships within a species is important for their long-term survival. The organisms in the wolf pack all have their specific roles that allow the species to survive. If these organisms didn't fulfil their role, their species could die off which would decrease biodiversity.

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Curriculum Connection
B1.1, B2.5

Questions

Answer the questions below using evidence from the text.

1) Describe the relationships in a wolf pack?

2) How do relationships within species help biodiversity?

PREVIEW

Questioning

Write questions about relationships within species.

1)	
2)	
3)	

True or False

Circle whether the statement is true or false.

1) The alpha wolf gets bullied.	True	False
2) The omega wolf gets the least amount of respect.	True	False
3) The omega wolf does not have an important role.	True	False
4) The beta wolf will take over if the alpha wolf dies.	True	False
5) The beta wolf is in charge of the wolf pack.	True	False

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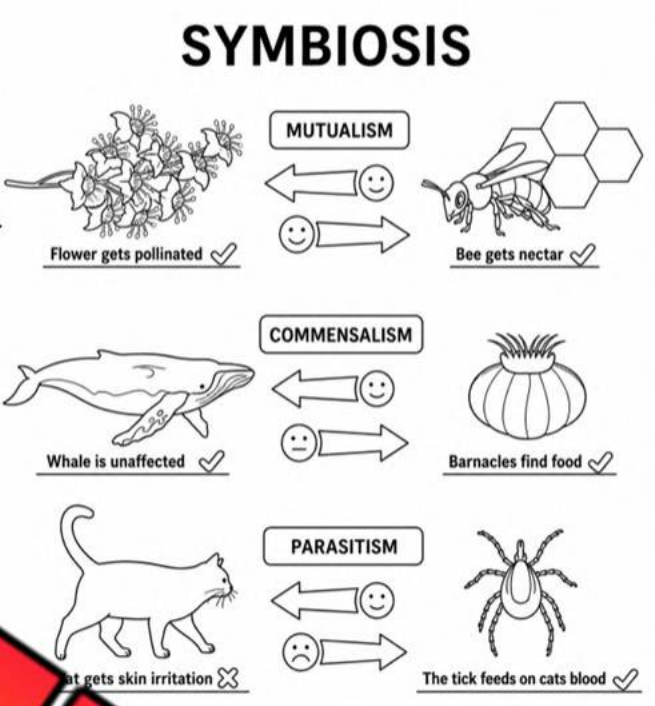
Curriculum Connection
B1.1, B2.5

Symbiotic Relationships

Examples of Interrelationships between Species

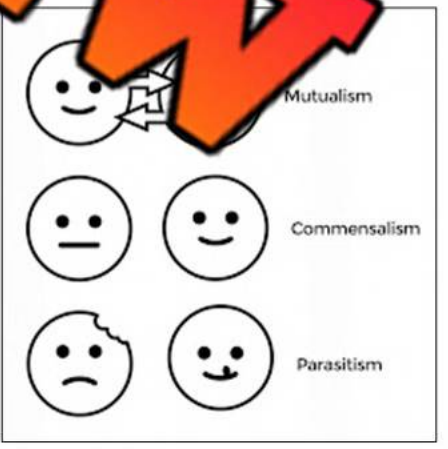
Just like we need our best buddies, animals have friends as well! Sometimes, they have friends from other species. Have you ever seen a squirrel playing wi[illegible]ipmunk?

A **s[illegible]elationship** is when two or more [illegible]ga[illegible]ithin an ecosystem have a re[illegible]tionshi[illegible]ot[illegible]r. There are three types of s[illegible]fi[illegible]elatio[illegible] *mutualism*, *commens[illegible]m*, a[illegible]



Mutualism – Both partners in th[illegible]latio[illegible] benefit. One example of a mutualistic re[illegible]ship is [illegible]th oxpecker (a kind of bird) and the rhinoceros or zebra. Oxpeckers land on r[illegible]or ze[illegible]eat ticks and other parasites that live on their skin. The oxpeckers ge[illegible]d, a[illegible]zebras get pest control.

Commensalism – One organism benefits from the other without harming it. Tree frogs have a commensalism relationship with plants because they hide behind plants. They do not damage them but need them to survive. Another example is that Goby fish live on other sea animals, often changing colour to blend in with their host. This gains them protection from predators.



Parasitism – One organism (the parasite) gains, while the other (host) suffers. The deer tick is a parasite that attaches to a warm-blooded animal and feeds on its blood.

PREVIEW

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Name: _____ 140

Curriculum Connection
B1.1, B2.5

Questions

Answer the questions below using evidence from the text.

1) What are symbiotic relationships between species?

2) When female mosquitos bite humans, what is the relationship between humans and mosquitos? Explain.

PREVIEW

Making Connections

Write about a symbiotic relationship you have seen

Relationships

Which type of symbiotic relationship is
Mutualism, Commensalism, or Parasitism

1) Grey wolves and striped hyenas hunt together – both get to eat.	
2) Lice live off the blood of another animal.	
3) Crabs carry venomous sea urchins on their backs – Free ride for the sea urchins and protection for the crab.	
4) The *remora fish* rides attached to sharks and other types of fish.	
5) Golden jackals, once they have been expelled from a pack, will trail a tiger to feed on the remains of its kills.	

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Curriculum Connection
B1.1, B1.2, B2.6

Invasive Species Reducing Biodiversity

What is an Invasive Species?

An **invasive species** is a species that causes problems in a new environment where it is not native. Quite often, an invasive species is a species that grows and spreads quickly in a new area.



The r[illegible]on they spread quickly in a new are[illegible]use they often do not have t[illegible]hat control their p[illegible]tion. T[illegible]he invasive species popula[illegible]w ou[illegible] control.

Invasive Species - Zebra M[illegible]

Zebra Mussels are an invasive sp[illegible]s in[illegible]e from the Black and Caspian Seas. The Zebra Mussels came in the ba[illegible]ater of [illegible]ravelling from a European port.

When the ballast water was released into t[illegible]Mussels were accidently brought into a new environment where they [illegible]ked h[illegible]

1) Zebra Mussels eat phytoplankton which causes clearer w[illegible], al[illegible]ight to penetrate deeper. This forces light-sensitive fish, such as wa[illegible]er and darker waters.
2) The phytoplankton were food for many other species, which means they now have less food to eat
3) The fish and birds who eat Zebra Mussels are struggling to digest the invasive species.

With the Zebra Mussels putting other species at risk, they are reducing the biodiversity in Ontario. The Walleye have been directly affected as they have had to move environments. The birds and fish who feed on Zebra Mussels are dying. Also, many species at the bottom of the food chain now have less food to eat as the phytoplankton is eaten by Zebra Mussels.

PREVIEW

Name: _____ 144

Curriculum Connection
B1.1, B1.2, B2.6

True or False

Circle whether the statement is true or false.

1) An invasive species is an organism that lives in a new area.	True	False
2) A native area is an area that an organism already lives in.	True	False
3) Invasive species help biodiversity by bringing new species to an area.	True	False
4) Invasive species usually have a lot of predators.	True	False
5) Zebra Mussels are an invasive species in Ontario.	True	False

Visualizing

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

Questions

Use information from the text to support your answ...

1) What is an invasive species? How do they affect biodiversity?

2) How were the Zebra Mussels introduced to the waters in Ontario? Why are they an invasive species?

PREVIEW

Name: _____ 150

Curriculum Connection
B1.1, B2.7

Climate Change - Biodiversity

What is Climate Change?

Climate change is the changes in the Earth's weather patterns for a long period of time. Having an unseasonably cool few days in the summer is not part of climate change as it is only a few days. But, when we notice changes in weather over the past year, we can chalk it up to climate change.

In fa[illegible]ver the last 100 years, the Earth has warmed 1°C. This number is increasin[illegible] degrees Celsius per decade. At this rate, you can see that we are warmin[illegible]et[illegible]an unsustainable rate.

2020	[illegible]100	[illegible]	[illegible]00	2400	2500	2600	2700	2800	2900	3000
±0	+1.6	[illegible]	5.6	[illegible]	9.6	11.6	13.6	15.6	17.6	19.6

Effects of Climate [illegible]

We have learned that pl[illegible]nd anima[illegible]good at surviving in their ecosystem. They have characteristics t[illegible]w t[illegible]t[illegible]e in certain conditions. But, if we cause changes to their environ[illegible]ent, [illegible]nditions might not be suited for them to survive. Below are some[illegible]s prob[illegible]f climate change affecting living things:

- ❑ More forest fires that destroy plant and a[illegible] hab[illegible]
- ❑ Melting glaciers and arctic ice, making it harde[illegible]r[illegible]anisms[illegible]olar bears to hunt
- ❑ More extreme weather – droughts, floods, and severe storm[illegible]ts
- ❑ Animals must adapt to new temperatures. Warm-blooded organ[illegible]an regulate their temperature, but it has been discovered that animal[illegible] like the possum cannot control its body temperature when it rises above 30°C. An extended heat wave could kill off many possums
- ❑ Warmer ocean temperatures are causing coral bleaching. **Coral bleaching** is the whitening of coral. When corals are stressed, they release algae, which gives them their colourful look. When they've released too much algae, they turn white. Bleached white corals are not dead but are at risk of starvation and disease. Without corals, scientists believe that more than one million species around the world will be homeless!



PREVIEW

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Name: _____ 151

Curriculum Connection
B1.1, B2.7

True or False

Circle whether the statement is true or false.

1) Climate change is increasing temperatures by 2 degrees every decade.	True	False
2) Droughts and floods are extreme weather that destroy habitats.	True	False
3) Corals are home to over one million different species.	True	False
4) Melting glaciers and sea ice reduces biodiversity.	True	False
5) Extreme weather will not affect biodiversity.	True	False

Making Connections

What does the reading remind you of in your life?

Questions

Use information from the text to support your answers.

1) How much is the climate changing? What does this mean for organisms?

2) Which effect of climate change do you think is the worst for organisms? Explain.

PREVIEW

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Curriculum Connection
B2.7

Human Activities – Greenhouse Gases

The infographic below shows which human activities are polluting our atmosphere, causing global warming.



PREVIEW

Research How do the human activities create g… se gas… plain below.

Buildings	
Transportation	
Agriculture	
Electricity	
Manufacturing	

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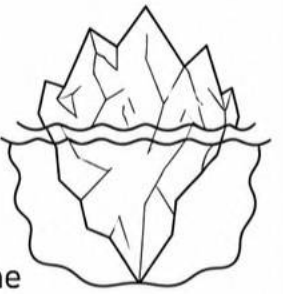
Name: _____ 153

Curriculum Connection
B1.1, B2.7

Effects of Melting Glaciers

Effects of Melting Glaciers



🌊 Rising Sea Levels

Since 1961, glacial melting has caused the sea levels to rise 2.7 cm. The world contains around 670,000 islands that are home to thousands of different sp... With many endangered species living on these islands, the rising sea ...s them at risk of extinction. If the sea level rises too high, it will flood many ... and ...oastal regions around the world will also be underwater.

🌞 Impact on th...

As glaciers are m... the n...outh poles, the oceanic currents are slowing, causing a changing glo... ...more extreme weather events, like hurricanes, typhoons, floods, ...ght... ...nts are destroying habitats and making living conditions unbearable for ...ganis...



🐧 Disappearance of Species

Glacier melting is causing the extinction of many ...es. Glaciers provide a natural habitat to many animals, including penguins, seals, and polar bears. Almost all penguins are found in Antarctica, where they live on glaciers. Icebergs provide habitats for these animals to take a rest as they ... around their ecosystem. Without these glaciers, many of these animals will become extinct.

💧 Less Freshwater

The slow melting of glaciers helps supply the river systems on our Earth with freshwater that we use to drink. Scientist believe that by the year 2100, 85% to 100% of all arctic ice in Canada will be lost. When this water quickly melts, a lot of it will end up in oceans, where it will mix with undrinkable saltwater.

With less freshwater, animals including humans, will have less drinking water. This will cause problems for many species, leading to less biodiversity as species go extinct.

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Curriculum Connection
B1.1, B2.7

Questions

Use information from the text to support your answer.

1) How are rising sea levels causing less biodiversity?

2) Why wil[illegible]nimals become extinct if glaciers continue to melt?

PREVIEW

Summarize

Paraphrase [illegible]ead [illegible] one sentence.

Rising Sea Levels	
Impact on Climate	
Disappearance of Species	
Less Freshwater	

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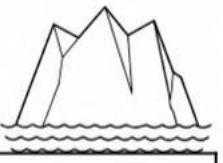
Curriculum Connection
B2.7

Activities – Glaciers and Climate Change



Word Search

Find the words from the word bank.

Ice	Cap	Shelf	Iceberg	Sea
Fossil	Fuels	Carbon	Emissions	Cryosphere
Glaci	Melting	Freshwater	Climate	Change

F K U L Z J Y I D G K J A A K
A I T G M G K L G X G C Q W
Y P F H C H S R R H A I R P
F O K L T E L D J E E Z
I W E E T I I T E P E
R E I L H S S A Q U G A S L
E R V U S K O R B Q Q Q J L
W I S P L C L F G R V H E
P O L L U T I O N W Z H W
F N D E P K D R V K B N F

PREVIEW

Word Scramble

Unscramble the words from the word bank.



IFOSSL		BERECGI	
HESCEORPYR		ABCORN	
HEARSTWRFE		ENGILTM	
ELHSF		AELIGRC	
SEOINSISM		ULFSE	

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Curriculum Connection
B1.1, B2.8

Biodiversity and Indigenous Groups

Importance of Biodiversity for Indigenous Groups



The Indigenous groups in Canada have relied on the biodiversity in their home territories for the last 10,000 years and probably longer. This is because they live off the land and utilize the resources they have direct access to.

The [illegible]enous had diets based on a combination of salmon and other fish[illegible], gamebirds and birds' eggs, berries and other fruits, root veget[illegible]ve[illegible]les, and the inner bark of trees.

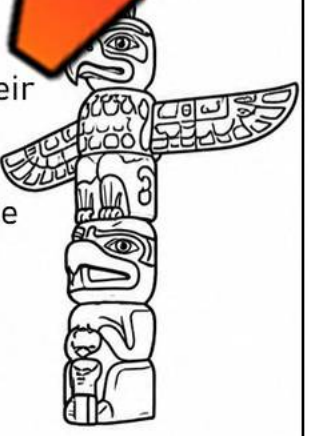
T[illegible]ariety [illegible]s was essential in providing energy, medicine, building materials, and [illegible]plant o[illegible]l was no longer available to them due to over-hunting or over-pic[illegible]hey [illegible]e option to order more online or ship some[illegible]m differ[illegible]It would mean that they would live with[illegible] and [illegible]r move locations.


Cedar Tea

Biodiversity as Medicine

Plants and some animals as well as fungi are used [illegible]p[illegible]ope[illegible]host of medicines for maintaining health and for treating injuries [illegible]ent[illegible]any [illegible]nds. Therefore, biodiversity was important in providing health and wellne[illegible]us.

Biodiversity as Tradition and Culture



The Indigenous have a strong connection to the plants and animals in their territory. Some plants, animals, and fungi are prominent in the belief systems of the Indigenous. Their art, songs, and ceremonies often include wildlife that are important to them.

The Northwest Coast First Nation have an intense connection with biodiversity as their artforms represent stylized animals, birds, fish and other beings in wooden sculptures, totem poles, masks and dishes, as well as jewelry and paintings.

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Curriculum Connection
B1.1, B2.8

True or False

Circle whether the statement is true or false.

1) More biodiversity means more different medicines and food.	True	False
2) The Indigenous didn't really use wildlife in their lives.	True	False
3) The Indigenous lived off the land and used wildlife available to them.	True	False
4) The Indigenous honoured different animals on totem poles and in art.	True	False
5) Cedar te dar leaves mixed with hot water.	True	False

Makin nection

at does the reading remind you of in your life?

Questions

Use information from the text to s ur an

1) How does biodiversity help Indigenous groups find medicine

2) In what ways is biodiversity used in the traditions and culture of Indigenous groups?

PREVIEW

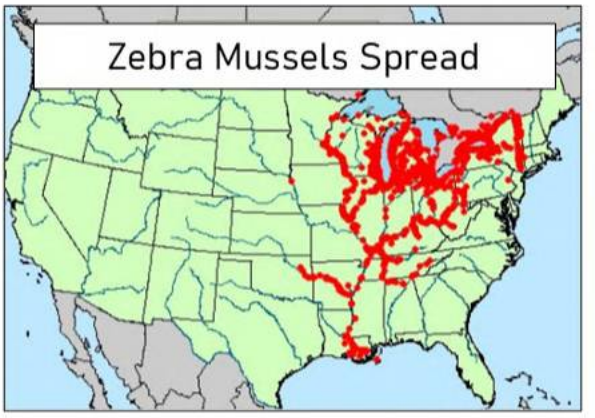
Name: _____ 163

Curriculum Connection
A2.1, A2.2, A3.1, A3.2, A3.3

Technologies Stopping Invasive Species

What is the Invasive Species Forecasting System ISFS?

The Invasive Species Forecasting System (ISFS) is a technology used to predict where invasive species will spread. The ISFS is a supercomputer that uses tens of thousands of field sampling r[illegible]urements to see where past invasive species h[illegible]d, which allows it to predict wher[illegible]ec[illegible]grow in the future.



Th[illegible]uperc[illegible]o us[illegible]s NASA satellite images in com[illegible]o[illegible]th the [illegible]l data mentioned above. To[illegible]r, th[illegible] scientists where invasive species will spread to so that we can manage[illegible]d and[illegible]sive species from harming our biodiversity.

PREVIEW

Questions Answer the questions below.

1) How is the ISFS helping manage the spread of i[illegible]e species

_____

_____

_____

2) How is science and technology helping biodiversity in this example?

_____

_____

_____

3) Finish the If/Then statements below to either place a dot on the map or not.

If zebra mussels are found in location 1	If no zebra mussels are found in location 2
Then _____	Then _____

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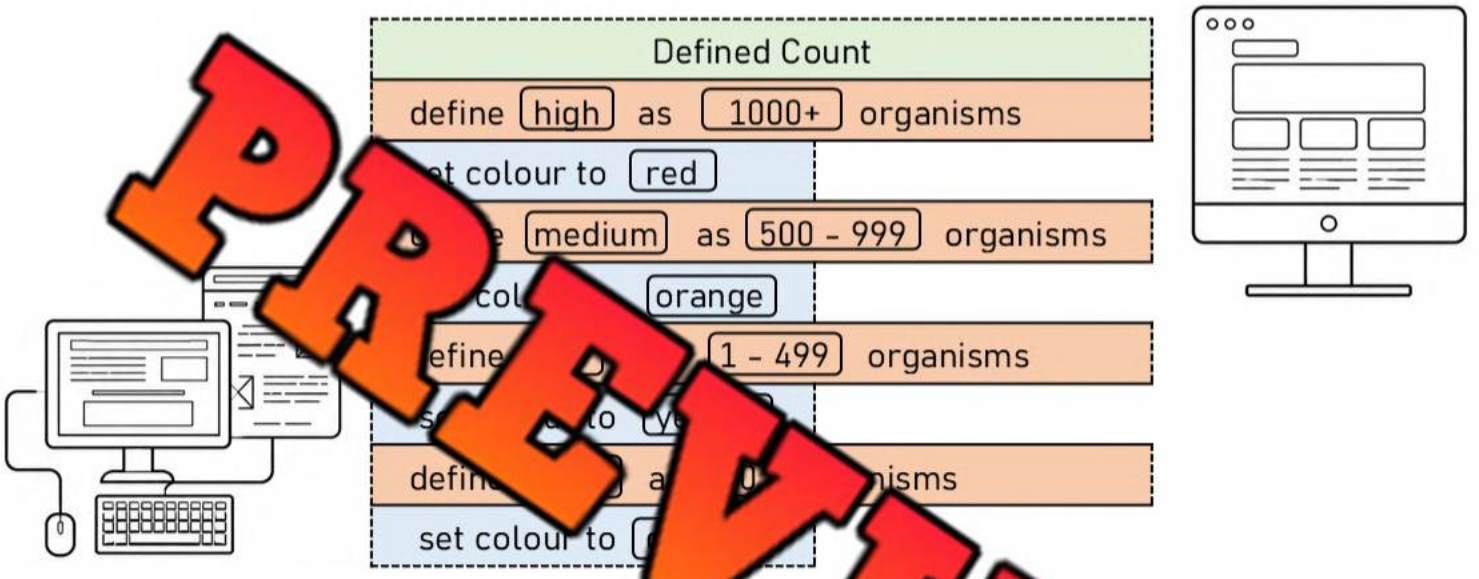
Curriculum Connection
A2.1, A2.2, A3.1, A3.2, A3.3

Reading Code – Invasive Species

We can use a defined count to help write our code that will make a map for us. Use the defined counts below for each variable to fill in the map and colour it appropriately.

Defined Counts Use the defined counts to run the program below.



PREVIEW

Program Colour the squares on the next pa ed on am below.

Data – Location and Number of Organisms	
1)	(1, 4) = 207
2)	(3, 7) = 1115
3)	(9, 9) = 654
4)	(7, 2) = 712
5)	(11, 5) = 522
6)	(5, 8) = 1387
7)	(6, 7) = 671
8)	(2, 10) = 378
9)	(12, 5) = 0
10)	(10, 6) = 500

Data – nd N of Organisms	
11)	(3
12)	(2,) =
13)	(8, 4)
14)	(10, 10) = 405
15)	(13, 5) = 978
16)	(11, 9) = 94
17)	(14, 7) = 0
18)	(1, 8) = 42
19)	(4, 4) = 1254
20)	(7, 6) = 917

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Name: _____ 165

Curriculum Connection
A2.1, A2.2, A3.1, A3.2, A3.3

The map below of North America shows a coordinate plane. Using computer programming, we can create a model that shows the whereabouts of invasive species in North America.

Mapping Colour the squares using the program on the previous page.



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Name: _____ Date: _____

Unit Test - Biodiversity

Multiple Choice /10

1. Vertebrate animals have... a) No backbone b) A backbone c) 2 legs d) More th gs	2. Birds... a) Have fur b) Lay eggs c) Are cold-blooded d) None of the above
3. Mollus e a) An lor legs b) Anima with sh the outsides c) Soft animals d) All of the above	4. A primate is a type of... a) Insect b) Reptile c) Mammal d) Bird
5. Which of the following is ive species? a) Zebra Mussels b) Tree Frogs c) Wolves d) Starfish	hen both organisms in a relationship) Com lism b) M ism c) sitism d) None ove
7. Which type of plant can't grow tall? a) Vascular b) Non-Vascular c) Flowering d) None of the above	8. Which of t owi a invertebrate org nism a) Fish b) Sponges c) Worms d) Mollusks
9. A group of organisms that have similar characteristics is called a... a) Species b) Organism c) Population d) Community	10. An individual animal is called a... a) Species b) Organism c) Population d) Community

PREVIEW

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Definitions – What does the term mean (1 mark each) /3

Term	Definition (what does it mean)
Biodiversity	
Invasive Specie	
Organism	

Short Answer Questions (2 m h)

1) How do invasive species damage b sity?
2) Describe the biodiversity in your local area. Which plants an ere?
3) Why is biodiversity important? What could happen if too many plants or animals went extinct?

PREVIEW