



Preview - Information



Thank you for your interest in this product. Within this preview, you will see:

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Google Slides Lessons Preview





Alberta Science Curriculum Living Systems Unit – Grade 2

3-Part Lesson Format

Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Quotes
- And More!

GROUPS OF ANIMALS - VERTEBRATES

LEARNING GOAL

We are learning to identify vertebrates and their backbones so we can understand how animals are grouped and what makes them different.

SORTING ACTIVITY - BACKBONE OR NO BACKBONE
(PLACE A ✓ IN THE CORRECT COLUMN.)

Animal	Has a Backbone	No Backbone
1 Worm		
2 Fish		
3 Bird		
4 Dog		
5 Jellyfish		
6 Snake		
7 Spider		
8 Butterfly		

Use this to complete the activity

Part 2 – Action!

- Writing
- Matching
- Drag and Drop
- Drawing
- And More!

Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!

Exit Card: Vertebrates and Backbones

Before you leave class, answer the following questions about what you learned today.

- ✓ What is one body part that all vertebrates have?
- ✗ Which group of animals are vertebrates: mammals, birds, or insects?
- ☐ Do animals like snakes have short or long backbones?



Alberta Science Curriculum Living Systems Unit – Grade 2

METAMORPHIC OR NON-METAMORPHIC LIFE CYCLE?

Look at each animal. Drag or place the animal under the correct heading to show how it grows.

		Metamorphic	Non-Metamorphic

DOGS: A DOG'S LIFE CYCLE

Read each statement about how dogs grow and change. Decide if the statement is True or False.

- 1) Dogs are mammals that are born from eggs.
- 2) Puppies are baby dogs that need help to survive.
- 3) Dogs stay the same size their whole life.
- 4) Senior dogs may need more rest than young dogs.
- 5) Adult dogs are usually stronger than puppies.
- 6) As dogs grow, their bodies and needs change.
- 7) Older dogs do not need care from people.
- 8) All dogs are puppies for their whole life.

True False

Read what happens on the left side of the life cycle.

Column A		
Baby	1	A Growing faster and changing
Child	2	B Needs help and drinks milk
Teenager	3	C Goes to school and plays
Life cycle	4	D A person who is grown up
Adult	5	E The stages of life



Alberta Science Curriculum Living Systems Unit – Grade 2

TIMELINE: THE SNAKE LIFE

Drag the pictures to build the snake life cycle and place them in the correct order to show how a snake grows.

CHOOSE THE CORRECT ANSWER

Read each sentence. Drag the correct letter to the box.

1. What do fish use to breathe?	A) Lungs	B) Gills	C) Nose	A
2. Where do fish live?	A) On land	B) In trees	C) In water	B
3. What do most fish lay?	A) Eggs	B) Babies	C) Fur	C
4. Which body part helps fish swim?	A) Legs	B) Fins	C) Arms	
5. What is the first stage of a fish's life?	A) Adult	B) Egg	C) Juvenile	

ANT LIFE CYCLE

Drag the pictures to show how an ant grows and changes.

Stage 1: Ant lays an egg

Stage 2: Larva hatches and is fed by workers

Stage 3: Pupa rests while changing

Stage 4: Adult ant comes out fully grown



Workbook Preview



Grade 2 – Science Unit

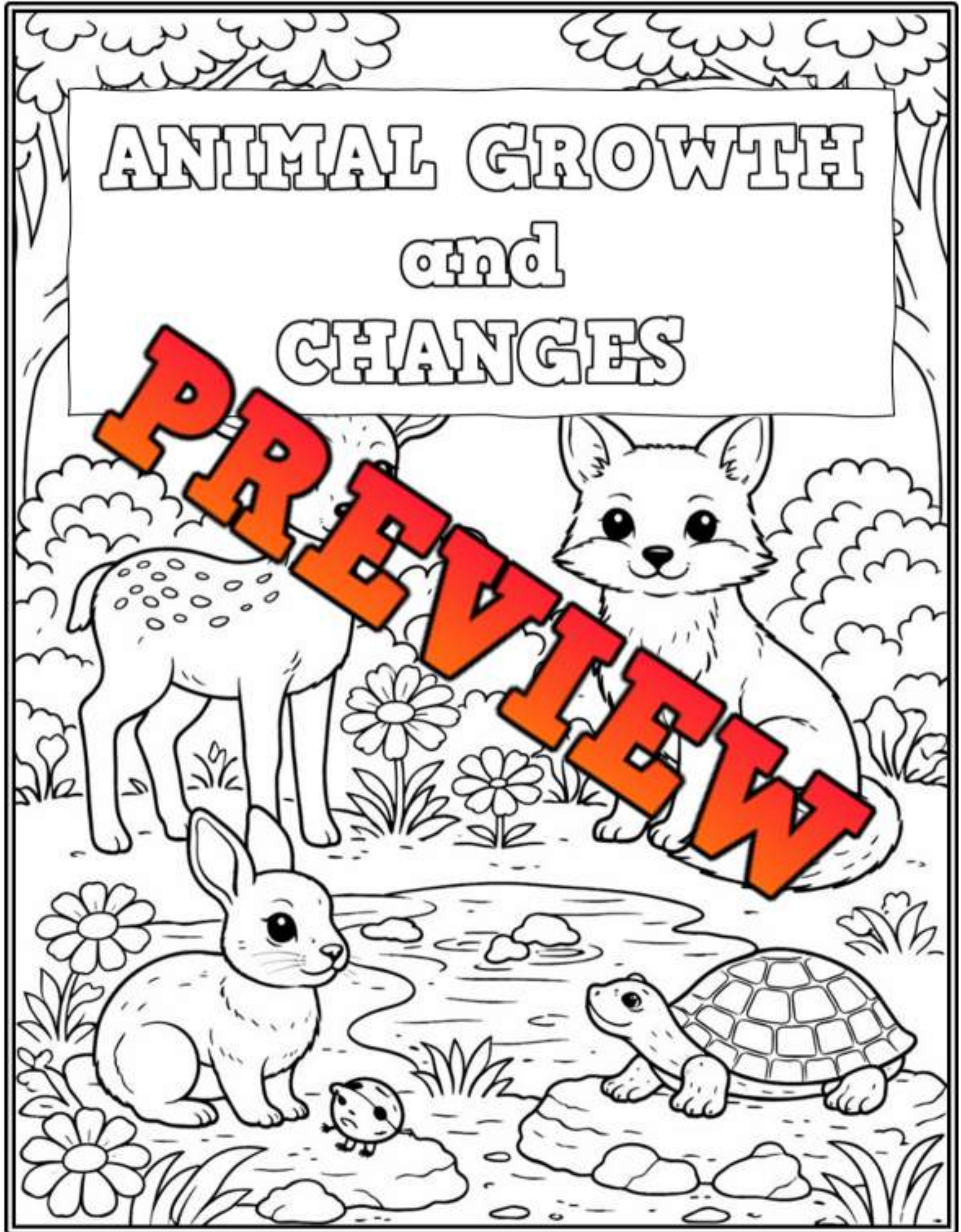
Organizing Idea Matter: Living Systems: Understandings of the living world, Earth, and space are deepened by investigating natural systems and their interactions.

Guiding Question: How do plants and animals live and grow?

	Learning Outcome - Students investigate the growth and development of plants and animals and consider their relationship to humans.	Pages
LS.1	Some human behaviours can positively affect plants and animals, such as <ul style="list-style-type: none">▪ reducing, reusing, recycling, and repurposing▪ recovering natural areas▪ protecting natural spaces	82 – 87, 90 – 96
LS.2	Preview of 80 pages from this product that contains 177 pages total.	- 81, - 89
LS.3		- 64
LS.4		A life cycle shows the different stages of life that a plant or an animal goes through. Life cycles can be represented in many ways, such as illustrations diagrams models stories
LS.5	First Nations, Métis, and Inuit relate to land, plants, and animals as equals. <ul style="list-style-type: none">▪ Care and consideration for land, plants, and animals can be demonstrated through cultural practices, such as▪ taking only what is needed▪ using the whole plant or animal▪ protecting water and soil▪ treating land, plants, and animals as relatives	104 - 12
Computer Science:		
CS.1	Students apply creativity when designing instructions to achieve a desired outcome.	97 – 103

ANIMAL GROWTH and CHANGES

PREVIEW



Groups of Animals - Vertebrates

Animal Kingdom - Vertebrates vs Invertebrates

We can split the animal kingdom into two groups: Vertebrates and Invertebrates. **Vertebrate**

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



Horses

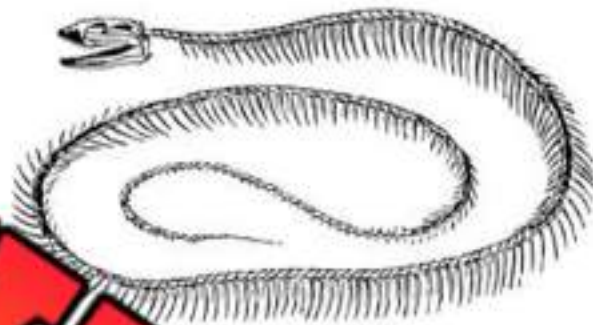
Grouping Animals - Vertebrates

Vertebrate animals include mammals, reptiles, birds, amphibians, and fish. Each of these animals have backbones.

What are backbones?

A **backbone** is the part of the skeleton that we have in our neck and we have spines. It runs from the back of your head, down your neck and back, and into your hips. Humans have around 33 bones in our spines. These are called vertebrae.

Snakes are reptiles and they have backbones, too. Their backbone has way more bones than we have. Snakes have between 200 and 400 vertebrae. A lot of bones!



Search and Find

Follow the instructions below

1. Circle all of the numbers in the text. How many bones in a human spine? _____
2. Circle the word backbone. How many times do you see it in the text? _____
3. What two words make up the word backbone? _____ + _____

True or False

Is the statement true or false

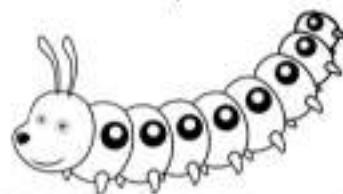
1. Humans have more backbones than snakes	True	False
2. Snakes have between 200-400 bones	True	False
3. Mammals, fish, reptiles, birds, and amphibians all have backbones	True	False
4. Humans are not vertebrates	True	False
5. Horses are vertebrates with long spines	True	False

Metamorphic Life Cycles

Metamorphic vs Non-Metamorphic Life Cycles

Some animals have a metamorphic life cycle. A **metamorphic life cycle** means the animal's body changes completely. A **non-metamorphic life cycle** means the animal keeps their same body structure but their size changes as they grow.

An animal that goes through a metamorphic life cycle undergoes **metamorphosis**. This means their body changes.



Examples of Metamorphic Life Cycle

- ✓ From caterpillar to butterfly
- ✓ From tadpole to frog
- ✓ From larva to pupa to adult
- ✓ From zoea to crab

Examples of Non-Metamorphic Life Cycle

- ✓ Humans - baby to adult
- ✓ Dogs - puppy to adult
- ✓ Chicken - chick to adult
- ✓ Turtle - juvenile to adult

Draw

Draw an example of a metamorphic and non-metamorphic animal

Metamorphic	Non-Metamorphic

Yes/No

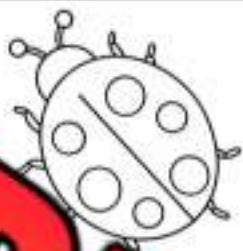
Is the answer yes or no?

1) Does a butterfly go through a non-metamorphic life cycle?	Yes	No
2) Does a metamorphic life cycle mean the animal doesn't change its body?	Yes	No
3) Will you go through a non-metamorphic life cycle?	Yes	No
4) Does metamorphosis mean change?	Yes	No
5) Is an adult the last stage in many non-metamorphic life cycles?	Yes	No

Metamorphic or Non-Metamorphic Life Cycles

Choose

Does the animal have a metamorphic or non-metamorphic life cycle?



Metamorphic



Metamorphic

Non-Metamorphic



Metamorphic

Non-Metamorphic



Metamorphic

Non-Metamorphic



Metamorphic

Non-Metamorphic



Metamorphic

Non-Metamorphic



Metamorphic

Non-Metamorphic



Metamorphic

Non-Metamorphic

Types of Animals - Amphibians

What are Amphibians?

Amphibians are vertebrate animals that are born in the water. As amphibians get older, they will grow lungs that allow them to breathe outside of the water. This means that adult amphibians can live on land or in the water.

Amphibians are animals that have these things in common:

Cold-blooded	Lay eggs	Moist skin	Webbed feet
--------------	----------	------------	-------------

Amphibians are cold-blooded

Like fish and reptiles, amphibians are cold-blooded. Being cold-blooded means their bodies don't adjust to change their temperature. They need to use their surroundings to cool off or warm up. Humans are warm-blooded. This means our bodies change our temperature to keep it at a steady level. As Celsius. When we get too warm, we release water as sweat to cool our skin.

Examples of Amphibians

- Frogs, salamanders, newts, and toads

Search and Find

Follow the instructions below.

- Underline the word cold in the text. How many times did you find it?
- What are four types of amphibians?
 - _____
 - _____
 - _____
 - _____
- Shade in the boxes with the 4 things amphibians have in common. Write one thing below

Questioning

What questions do you have after reading the information?

1)	
2)	

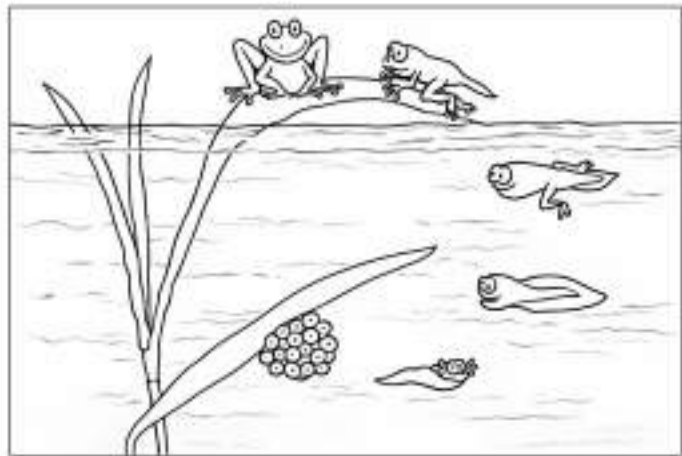
Frog Life Cycle – Stages of Development

Life Cycle of a Frog

A life cycle refers to the stages or changes an animal goes through while it is alive.

A frog goes through four stages throughout its life.

- **Stage 1: Egg** - A frog begins life as an egg. A female frog lays a lot of eggs at one time in a pond. The eggs float on the water in a jelly mass or cluster. The eggs will hatch into tadpoles.
- **Stage 2: Tadpole** - When the tadpole hatches, it looks more like a fish than a frog. It has gills instead of lungs and a long tail that allows it to breathe underwater. A tadpole will survive by eating plant matter from the water. Over several weeks, a tadpole will grow two hind legs so it can jump instead of only swimming.
- **Stage 3: Young Frog** - The tadpole grows two front legs and the tail becomes shorter and shorter. The tadpole uses the nutrients from its tail as food. It doesn't need any other food until its tail is gone. Now it looks like a young frog. It hops right out of the water to find food for the first time. The frog is very small.
- **Stage 4: Adult Frog** - The young frog's tail will completely disappear and it will start to eat insects instead of plants from the water. A young frog needs to grow for 2-4 years before it becomes an adult. The female adult frogs then lay their eggs and more tadpoles hatch to begin the cycle again.



True or False

Circle whether the statement is true or false

1. A frog will grow its front legs first	True	False
2. A frog begins its life as a tadpole	True	False
3. Frog eggs are commonly laid in a pond	True	False
4. A young frog takes 2-4 years to develop into an adult frog	True	False
5. Tadpoles are more like fish than frogs	True	False

Describe each stage of a frog's life cycle

Egg	Tadpole	Young Frog	Adult Frog

Questions

Use information from the text to answer the questions.

1) What does a life cycle mean? What is our life cycle?

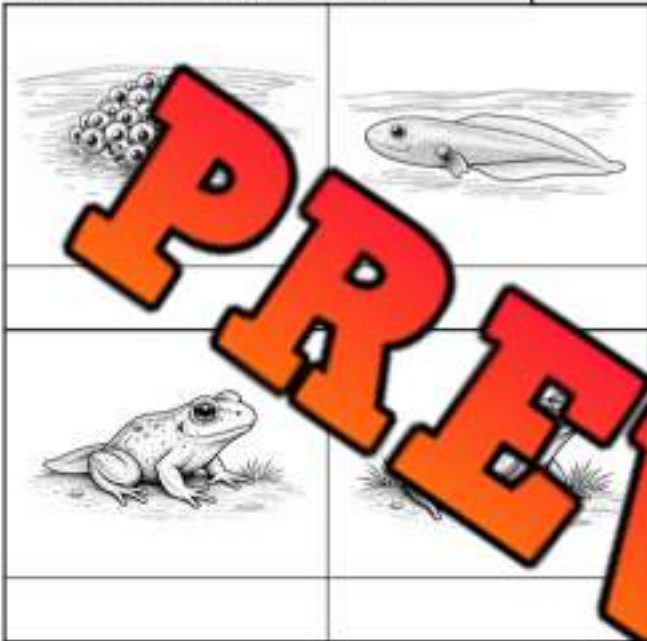
2) What is the life cycle of a frog? Explain the stages they go through.

Exit Cards

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

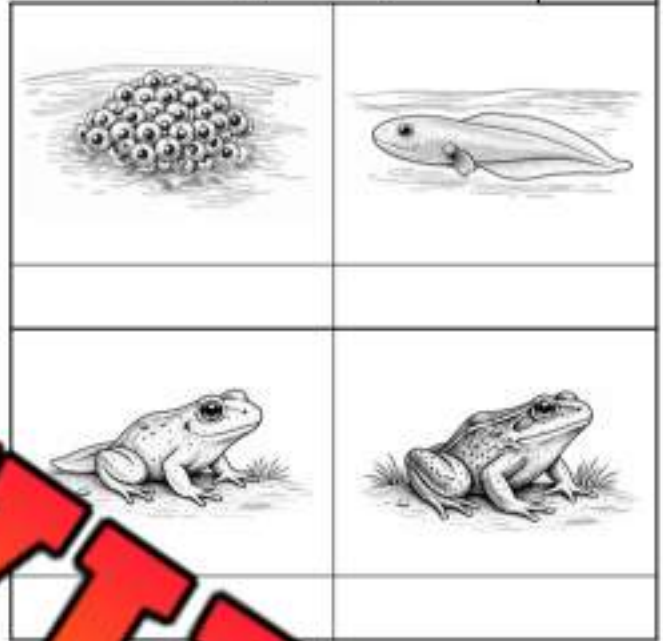
Name: _____ Mark

Label each frog life stage.



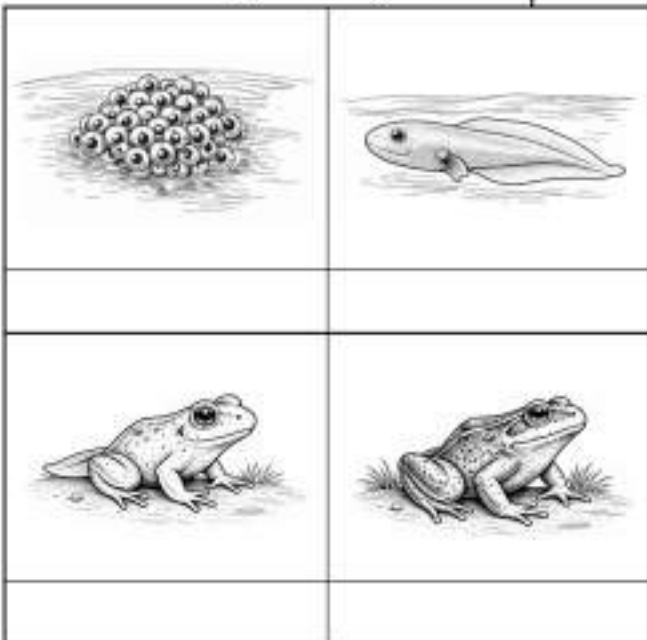
Name: _____ Mark

Label each frog life stage.



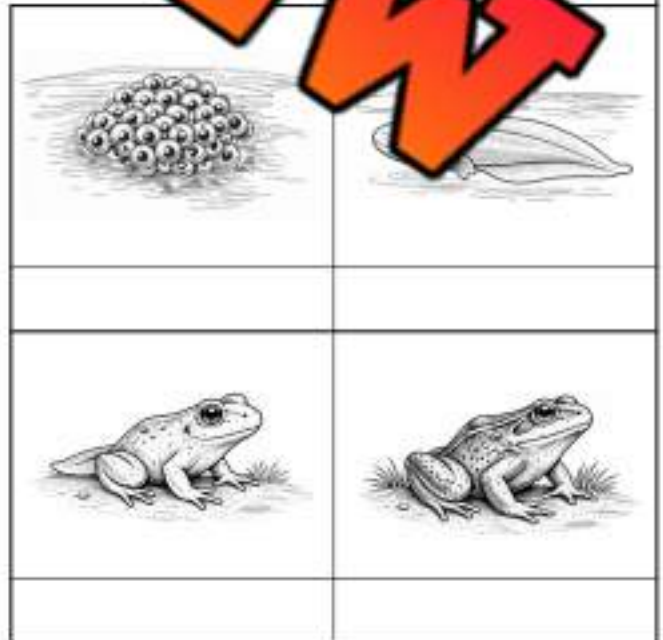
Name: _____ Mark

Label each frog life stage.



Name: _____ Mark

Label each frog life stage.



Types of Animals - Mammals

Mammals

A mammal is a type of animal. We know if an animal is a mammal if it can:

- Breathe air
- Has a backbone
- Grows hair or fur
- Give birth to live young
- Drink milk from their mothers



Mammals are the most diverse animals on earth. We are mammals. You were born from your mother, not from an egg. You are warm-blooded, and have a backbone. Almost all humans have hair and we all have the ability to make us milk when we were babies.

Examples of Mammals

There are over 6,000 different types of mammals. Here is a list of some mammals: humans, gorillas, rats, mice, dogs, cats, whales, dolphins, lions, tigers, cows, bats, horses, and more!

Fill in the Blanks

Write the missing word in the line.

1. There are more than _____ types of mammals.
2. Mammals are the _____ animals on earth.
3. Mammals are born from their mothers, not from an _____.
4. Mammals are warm-blooded _____ animals.



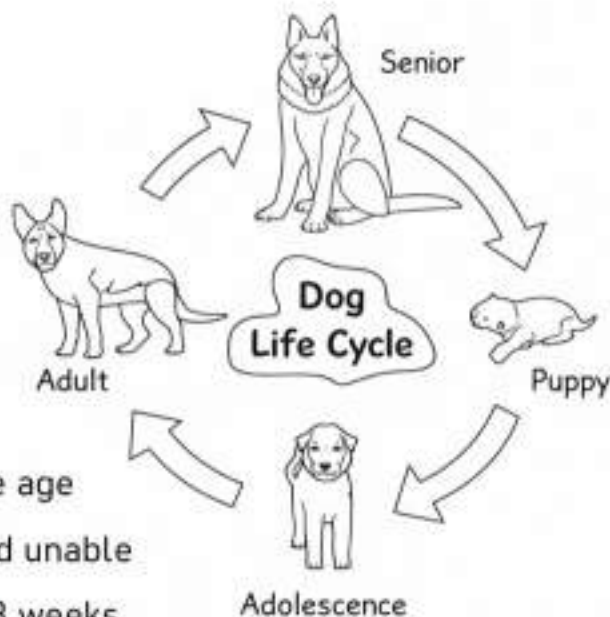
Making Connections

What does this reading remind you of in your life?

Dog Life Cycle

Dog Life Cycle

Dogs are mammals who are not born from eggs. Instead, mothers give birth to live young. Dogs go through a non-metamorphic life cycle that has four stages.



Stage 1: Puppy

The puppy stage starts at birth and lasts until the age of 6-18 months. Puppies are blind, and unable to regulate their body temperature. At around 2-3 weeks, they begin to see and hear. They grow rapidly.

Stage 2: Adolescence

Begins around the age of 6-18 months. The hormones that are produced during this stage change a dog's behaviour. They will want to explore more during this stage. They may also begin to mark their territory. They are still growing.

Stage 3: Adult

A dog becomes an adult at the age of 1. This is much faster than humans, who become adults at the age of 18. Dogs will become more mature, as they begin to understand the world around them better. They do not grow as much in this stage.

Stage 4: Senior

The senior stage begins between 6 and 10 years of age. Dogs are fully grown by this stage. They may begin to have health issues that stop them from being as active.

True or False

Circle whether the statement is true or false

1) Dogs have 4 stages in their life cycle	True	False
2) Dogs undergo a metamorphic life cycle	True	False
3) Dogs grow a lot during their senior and adult stages	True	False
4) Dogs slow down in their senior stage of life	True	False
5) Adolescents listen well and do not like to explore	True	False

Color and label the stages in a dog's life cycle



Humans – Growth and Changes

How Humans Change

As we get older, some body parts change and grow and some do not. Check out some of the things about our bodies that change and some that do not.

What Changes

- We get taller
- We get older
- Our hands and feet grow
- We grow more teeth

What Doesn't Change

- Our eye colour
- The shape of our head, arms, and legs
- The number of organs we have:
1 heart, 2 lungs, 1 stomach, etc.

Yes or No

Write 'yes' or 'no' in the box.



1) Do we grow more organs as we get older?	Yes	No
2) Do our hands and feet grow?	Yes	No
3) Do we grow more teeth as we get older?	Yes	No
4) Does our eye colour change as we get older?	Yes	No
5) Does the shape of our head change as we age?	Yes	No

Draw

Draw a kid and an adult version keeping in mind what you learned above.

Kid	Adult

Humans – Growing Rate

Why Do We Grow Differently?

1) Everyone is different - Some people may be taller or shorter than others, and some people may develop muscles at different times in their lives.

2) We have different genes - Our genes tell our bodies how to grow.

Everyone has a different set of genes that they get from their parents. If your parents are tall, you will likely get their tall genes.

3) Eating healthy - A person who eats a healthy diet and exercises may grow faster than someone who doesn't eat healthy. Eating healthy doesn't mean you will grow tall though.

We are all different. Whether you grow fast or slow, remember that you are special just the way you are.



Yes or No

Is the answer yes or no?

1) Can you eat healthy food and expect to grow tall?	Yes	No
2) Can you eat healthy food and expect to grow short?	Yes	No
3) Can we change the genes we get from our parents?	Yes	No
4) If your parents are short, will you likely be really tall?	Yes	No
5) Are we all different?	Yes	No

Growing Rate

Answer the questions below about your growing rate

- | | |
|---|--|
| 1) Are your parents short, tall or average height? | |
| 2) Do you eat healthy foods - fruits, vegetables, proteins? | |
| 3) Do you exercise for at least 60 minutes a day? | |
| 4) Are your grandparents, aunts, or uncles tall or short? | |

Human Life Cycle

Human Life Cycle

- **Baby (0-2 years):** When we are born, we are called babies. Babies drink milk and sleep a lot. They learn to crawl and then walk. They also learn to talk and play with toys.
- **Preschooler (2-5 years):** Next, we become preschoolers. Preschoolers can run, play, and talk. They go to preschool, daycare, or stay at home. They learn about colours, shapes, and numbers.
- **Elementary Student (4-12 years):** After preschool, we become elementary students. This is when we go to a bigger school. We learn to read, write, and do math. We make lots of friends and play fun games.
- **Teenager (13-19 years):** Then, we become teenagers. Teenagers go to high school. They grow a lot and start looking like grown-ups. They learn about many things and start to figure out what they want to do when they are older.
- **Adult (18-65 years):** A teenager becomes an adult when they turn 18. It is a big age group. Young adults often go to school. As adults get older, they may start families where they take care of their children. They may get a job or stay home, or both.
- **Senior (65+ years):** Finally, we become seniors. Seniors are older adults who have worked for many years. They might retire, which means they stop working. They enjoy their hobbies, spend time with family and friends, and share stories about their lives.



PREVIEW

True or False

Circle whether the statement is true or false

1) Babies learn to crawl and walk.	True	False
2) Preschoolers go to school when they are 2	True	False
3) Teenagers grow a lot	True	False
4) The adult stage is longer than the teenager stage	True	False
5) The adult stage is the last stage	True	False
6) Seniors are everyone over 65 years old	True	False
7) Seniors often retire and they stop working	True	False
8) Preschoolers start school	True	False

Label

Label each stage of the life cycle

Word Bank

Senior

Teenager

Student

Babe

Baby



Exit Cards

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

Name: _____	Baby	Student	Adult	Mark
Guess who I am and write the answer!	Preschooler	Teenager	Senior	
1) I go to school to read, write, and learn math.				
2) I like to play, run, and learn new things at home or daycare.				
3) I drink milk, sleep a lot, and cannot walk yet.				
4) I may have a job and take care of my family.				
5) I am an older adult who may be retired.				

Name: _____	Baby	Student	Adult	Mark
Guess who I am and write the answer!	Preschooler	Teenager	Senior	
1) I go to school to read, write, and learn math.				
2) I like to play, run, and learn new things at home or daycare.				
3) I drink milk, sleep a lot, and cannot walk yet.				
4) I may have a job and take care of my family.				
5) I am an older adult who may be retired.				

Name: _____	Baby	Student	Adult	Mark
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1) I go to school to read, write, and learn math.				
2) I like to play, run, and learn new things at home or daycare.				
3) I drink milk, sleep a lot, and cannot walk yet.				
4) I may have a job and take care of my family.				
5) I am an older adult who may be retired.				

Types of Animals - Reptiles

What are Reptiles?

Reptiles are vertebrate animals that share these things in common:

- Four legs (snakes do not, but use to)
- Most lay eggs but some have live young
- Are cold-blooded
- Have scales for skin, not fur or hair
- Breathe air with their lungs
- Have dry skin



What Do Reptiles Eat and Hunt?

Most reptiles are carnivores. They eat mostly insects. Larger reptiles like lizards and snakes will hunt birds and small mammals. Snakes kill their prey with venom before they eat them.

When some reptiles are in danger, they will hide or camouflage themselves to look like their surrounding environment. Some reptiles change the colour of their skin to hide from predators.

Examples of Reptiles

There are about 10,000 types of reptiles. Some examples are lizards, turtles, snakes, crocodiles and alligators.



Search and Find

Follow the instructions below.

1. Underline the word reptile in the text. How many times did you find it?
2. Put a circle around the food that reptiles eat? Write 3 things they eat.
 1. _____
 2. _____
3. Put a box around the 6 things reptiles have in common. Write one thing you know.

Multiple Choice

Circle the best answer.

1. Do reptiles have dry or moist skin?	Dry	Moist
2. Reptiles are cold or warm blooded?	Cold	Warm
3. Reptiles eat mostly...	Mice	Insects
4. There are how many types of reptiles?	2,000	10,000
5. Which animal changes their colour?	Snakes	Chameleons

Reptile Life Cycle - Snakes

Reptile Life Cycle

Most female reptiles lay eggs, meaning snakes are born from eggs. Check out the life cycle of a snake below.

Stage 1: Eggs

Snake parents lay embryos in eggs. Eggs are often buried in the ground to keep them warm.

Stage 2: Hatching

When a snake is ready to hatch, it will use its egg tooth to break through the shell of the egg. Once the shell is cracked open, the hatchling will stay in the shell for 12-48 hours. The little hatchling can defend itself and take care of itself at birth.

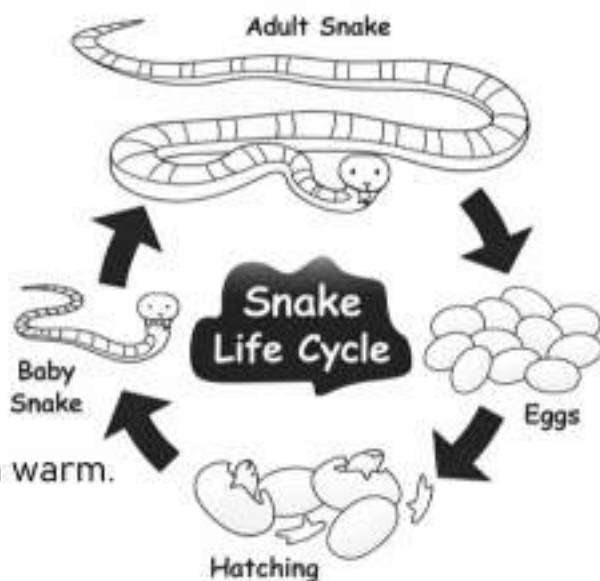
Stage 3: Baby Snake

Baby snakes look like small adult snakes. They grow until they become adults, which can take about 2-4 years. A growing baby snake grows its skin up to 4 times a year!

Stage 4: Adult Snake

It can take a baby snake 2-4 years to become an adult snake. Adult snakes only shed their skin once a year. They do not grow as much as baby snakes as they have reached their full size.

Adult female snakes will lay about 10-15 eggs in shallow holes or under rocks. The female adult snake will guard the eggs and look after them until they hatch.



PREVIEW

True or False

Circle whether the statement is true or false

1) Most female reptiles lay eggs	True	False
2) Most snakes are born out of eggs	True	False
3) When a snake hatches, it needs its mom to take care of them	True	False
4) Adult snakes grow the fastest	True	False
5) Adult female snakes lay about 10-15 eggs	True	False

Draw your own version of a snake life cycle



Types of Animals - Fish

What are Fish?

Fish are animals that live in the water. Fish come in many different shapes and sizes. All fish have these things in common:

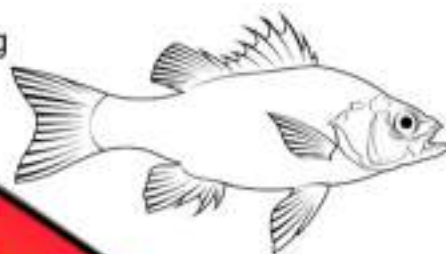
Cold-blooded	Vertebrates - have backbones	Have fins
Have scales, not fur	Breathe underwater using gills	Lay eggs

How Fish Breathe

All fish have gills that allow them to breathe water. When we breathe, we use our lungs to breathe oxygen. Fish use their gills to do the same thing. Fish still need oxygen to live, but they get their oxygen from the water.

Fun Fish Facts

- The longest fish is the blue whale which is over 40 feet long
- The smallest fish is the dwarf gourami that is only 1 inch long
- Fish are great pets
- Whales can't swim backwards



Search and Find

Follow the instructions below.

1. Underline the word breathe in the text. How many times did you find it?
2. What do fish use to breathe? _____
3. Fish are vertebrate animals. What does that mean they have? _____
3. What do fish need from the water to breathe? _____

Visualizing

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

	<hr/> <hr/> <hr/> <hr/>
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Fish Life Cycle

Colour the fish life cycle below

adult fish

juvenile fish

eggs

embryo

larva



Types of Animals - Birds

What are Birds?

Birds are very cool animals that are a lot different than other animals. There are over 9000 different types of birds. Birds have these things in common:

- ✓ Have feathers
- ✓ Warm-blooded
- ✓ Lay eggs
- ✓ Have wings but not all birds fly
- ✓ Vertebrates – have backbones

How Do Birds Fly?

Almost all birds fly because they have wings. Birds flap their wings to change the air pressure and lift their wings. This gives them lift, just like an airplane.

The peregrine falcon is one of the fastest birds. It can fly at speeds of over 160km per hour! Some birds like penguins can't fly.

Examples of Birds

- Parrots, penguins, hummingbirds, finches, toucans, swallows, herons, woodpeckers, eagles, owls and geese.



Search and Find

Follow the instructions below

- Underline the word birds in the text. How many times did you find it?
- What do all birds have that no other animals have? _____
- How fast does the peregrine falcon fly? _____ km
- Put a box around the 5 things birds have in common. Write one thing below.

Multiple Choice

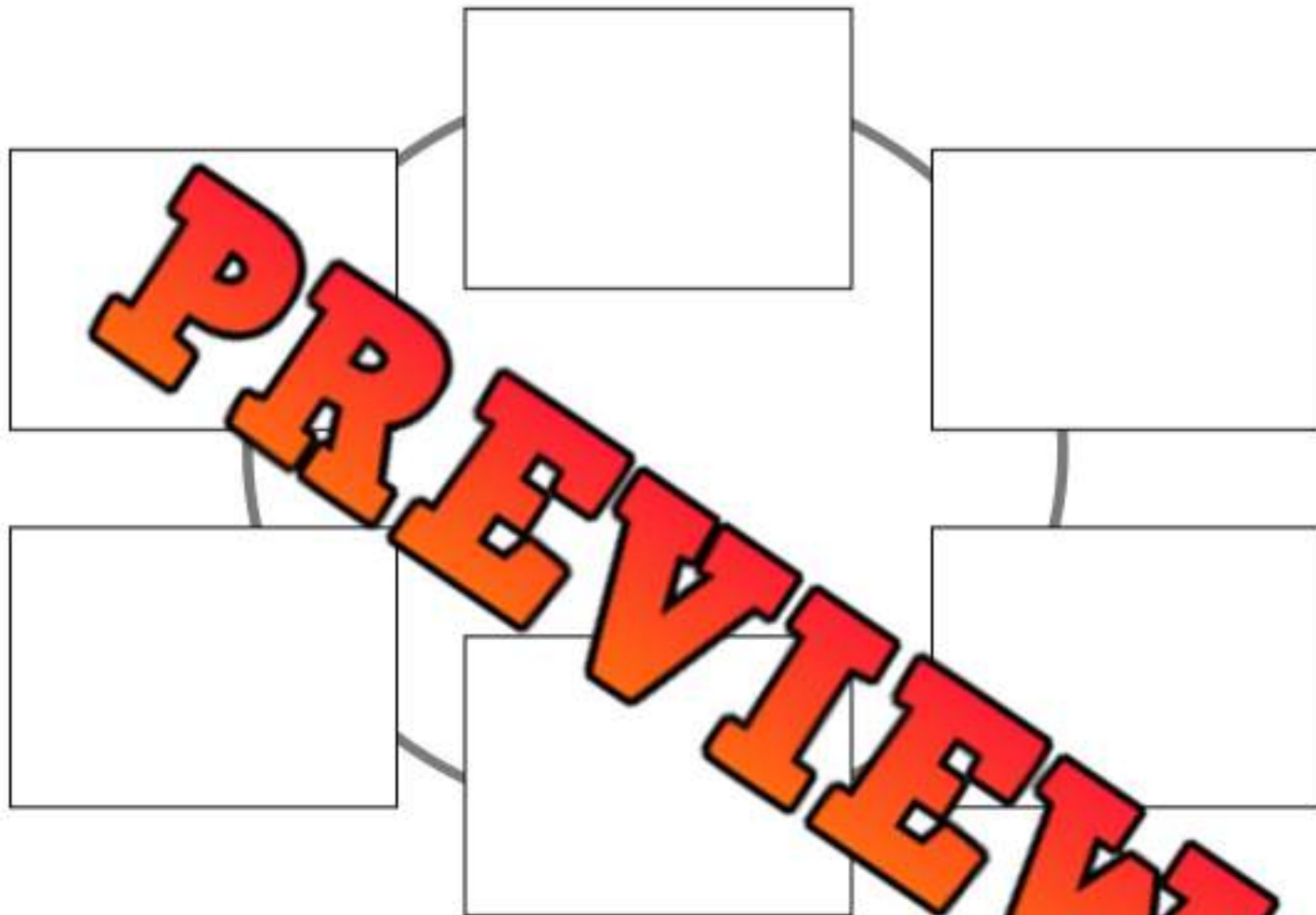
Circle the best answer

1) Which bird cannot fly?	Toucan	Penguin
2) Which bird is one of the fastest?	Peregrine Falcon	Eagle
3) All birds have	Feathers	Scales
4) All birds have	Fins	Wings
5) Birds can fly because of changing	Air pressure	Weather

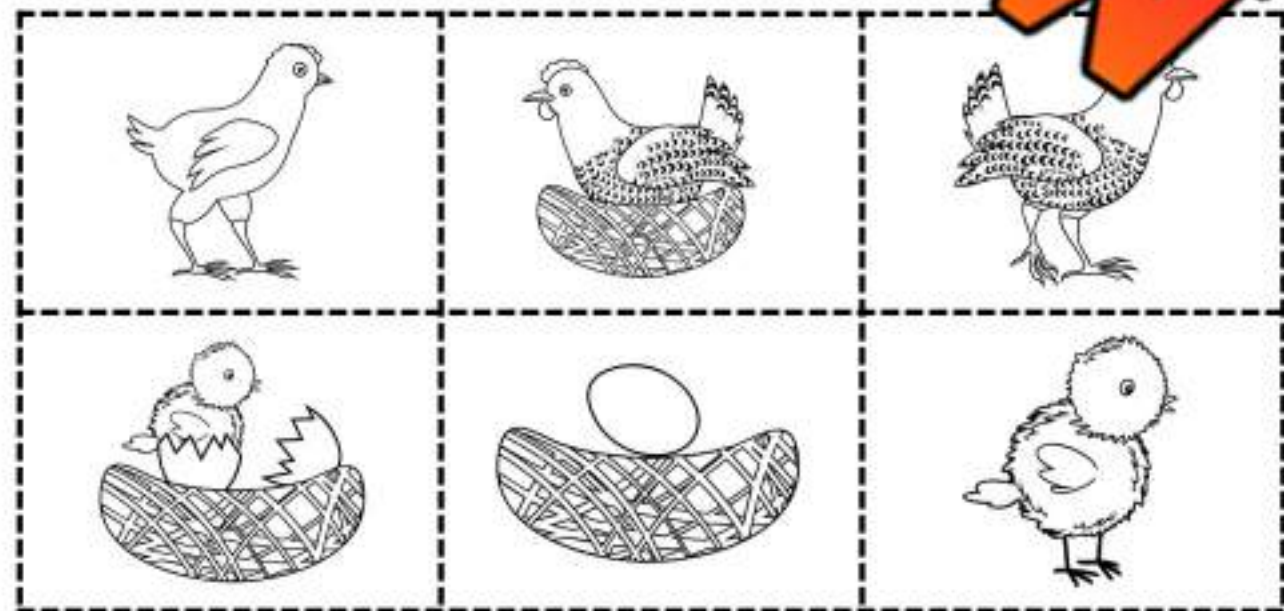
Birds Life Cycle

Instructions

Cut and paste the stages of a bird's life cycle in the correct order



PREVIEW



Exit Cards

Cut Out

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

Name: _____

Mark

Check only the correct statements.

- Birds lay eggs.
- All birds can fly.
- Birds are warm-blooded animals.
- Birds breathe with gills.
- Birds have fur, not feathers.
- Birds have backbones.
- All birds have wings.
- The peregrine falcon flies very fast.

Name: _____

Mark

Check only the correct statements.

- Birds lay eggs.
- All birds can fly.
- Birds are warm-blooded animals.
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Name: _____

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- All birds have wings.
- The peregrine falcon flies very fast.

Groups of Animals - Invertebrates

What are Invertebrates?

Invertebrates are animals that do not have backbones. This means they have no spine or bony skeleton. Most of the animals in the world are invertebrates that have no spine. In fact, 97 percent of all animals are invertebrates.



Types of Invertebrates

Worms, insects and spiders are the most common types of invertebrates. These animals are small and have no backbones. Insects make up the largest group of invertebrates in the world. There are over a million different types of insects.

There are also many types of invertebrate animals living in water. Jellyfish, sponges, starfish, and corals are all examples of invertebrates living in water.

Exoskeletons

Spiders, insects and scorpions have an **exoskeleton** is a skeleton on the outside of their bodies. It protects the animal's insides. It may seem like they have a backbone, but they just have an exoskeleton.



Search and Find

Follow the instructions below.

- Underline the word invertebrate in the text. How many did you find? _____
- How many different types of insects are there? _____
- Circle the types of invertebrate animals living in water. Write one here: _____
- Underline where it tells us what an exoskeleton is.

Multiple Choice

Circle the best answer

1. Spiders, insects, and scorpions have...	backbones	exoskeletons
2. Jellyfish are...	vertebrates	invertebrates
3. What percent of animals are invertebrates?	97	87
4. Invertebrates have no...	backbone	skeleton
5. The largest group of invertebrates are...	worms	insects

Invertebrates Animals**Backbone or Not?**

Circle the invertebrate animals

Which animals are invertebrates (have no backbone)? Circle 2 for each question.

1)



2)

PREVIEW

3)



4)



5)



6)



7)



Experiment - Vertebrate or Invertebrates

Research Question

What are we learning more about?

Can invertebrates or vertebrates support more weight?



Materials

What do we need for our activity?

- 1) Clay or dough to make two animals
- 2) One pipe cleaner
- 3) Weights - wooden blocks will work



Method

How do we complete the experiment?

- 1) Make an animal like the one in the picture
 - 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

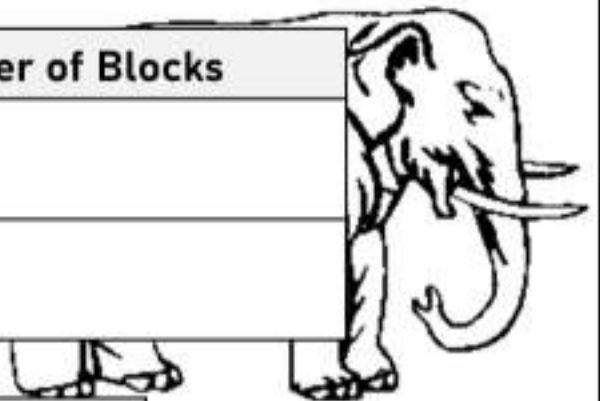


Observations

How many blocks did each type of animal hold?



	Number of Blocks
Vertebrates	
Invertebrates	



Respond by answering the questions below

1) Which type of animal could hold more weight?

Vertebrates

Invertebrates

2) Which type of animals do you think are usually bigger?

Vertebrates

Invertebrates

3) Why do you think the bigger animals are able to hold more weight?

4) If an invertebrate animal gained a lot of weight, what could happen?

PREVIEW

Butterfly Life Cycle

Butterfly Life Cycle

Stage 1: The Egg

A butterfly will begin its life cycle as an egg. It all starts when a female butterfly lays her eggs, usually on the leaves or stems of plants. Inside the egg is where caterpillars grow.

Stage 2: Caterpillar

When the egg hatches, the caterpillar will leave its egg home and begin its life in the outside world. A caterpillar's main job is to eat as much as they can. They will grow into the next stage. Caterpillars eat leaves from the plant that the egg was laid on.

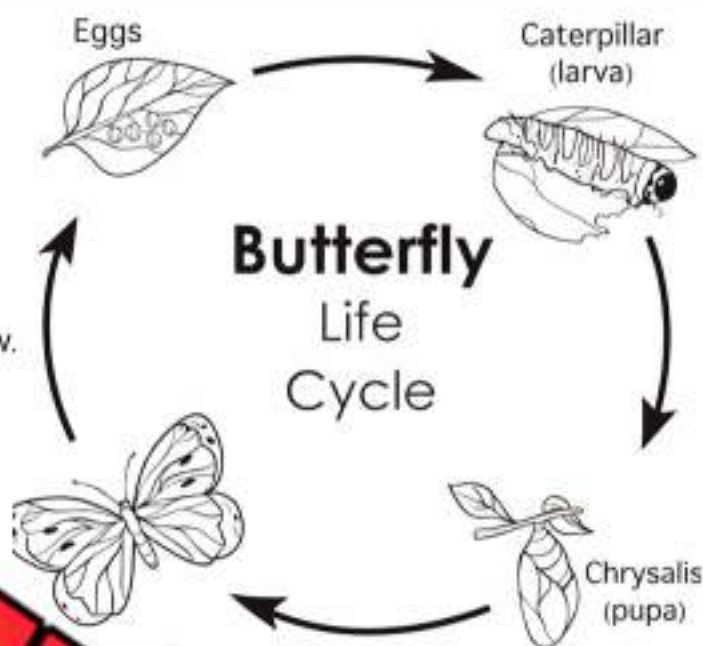
Stage 3: Pupa (Chrysalis)

One day, the caterpillar will stop eating because they have grown enough. They will hang themselves upside down from a twig or leaf and they spin themselves into a chrysalis. The chrysalis is almost like a blanket they wrap around themselves.

While the caterpillar is inside the chrysalis, they are turning themselves into a butterfly. They are growing organs, wings, legs, and antennae. The chrysalis protects the caterpillar while they change into a butterfly.

Stage 4: Butterfly (Adult)

When the butterfly has fully grown inside the chrysalis, they are ready to come out. The chrysalis will split open and the butterfly will hang upside down for a while. They can't fly yet, as their wings are too wet, soft, and wrinkled. After their wings dry, the butterfly will fly around looking for food and other butterflies to mate with. This completes the cycle!



PREVIEW

True or False

Circle whether the statement is true or false

1. Butterfly eggs have little caterpillars inside	True	False
2. During the chrysalis stage, the caterpillar eats lots of plants	True	False
3. A caterpillar eats a lot of plants and grows a lot too	True	False
4. A butterfly can fly as soon as it comes out of the chrysalis	True	False
5. A chrysalis protects the caterpillar as it grows into a butterfly	True	False

Diagram

Draw each stage of a butterfly's life cycle

Eggs	Caterpillar (Larva)	Chrysalis	Butterfly

Questions

Use information from the text to answer the questions

1) What are the different stages of a butterfly's life?

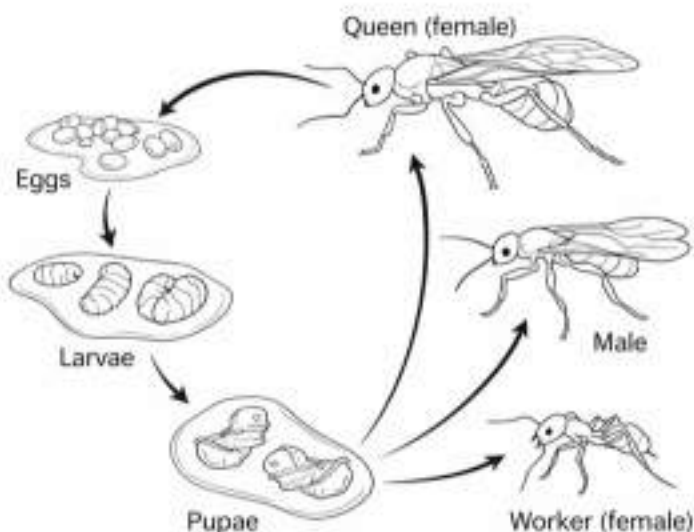
2) How does the butterfly grow so much? In what stage does it eat?

Ant Life Cycle

Ant Life Cycle

Stage 1: Egg

An ant's life begins as an egg. An ant egg is soft, oval and very tiny. It is about the size of a period at the end of a sentence! Not all ant eggs become adults. Some of the eggs are eaten by other ants for food.



Stage 2: Larva

After a couple weeks, the egg becomes a worm-shaped larva with no eyes or legs. The larva eat, eat, and then the matured adult ants to regurgitate food for them to eat. Regurgitate means the adult ant eats the food and then bring it back up again (vomit) for the larva to eat.

Stage 3: Pupa

When the larva grows large enough, it turns into a pupa. It looks like an adult ant, but their legs and antennae are folded against their bodies. The pupa is wrapped in a silk-like cocoon around itself. The cocoon protects the pupa inside which changes into an adult ant. The cocoon is usually built against a solid object, like a wall.

Stage 4: Adult

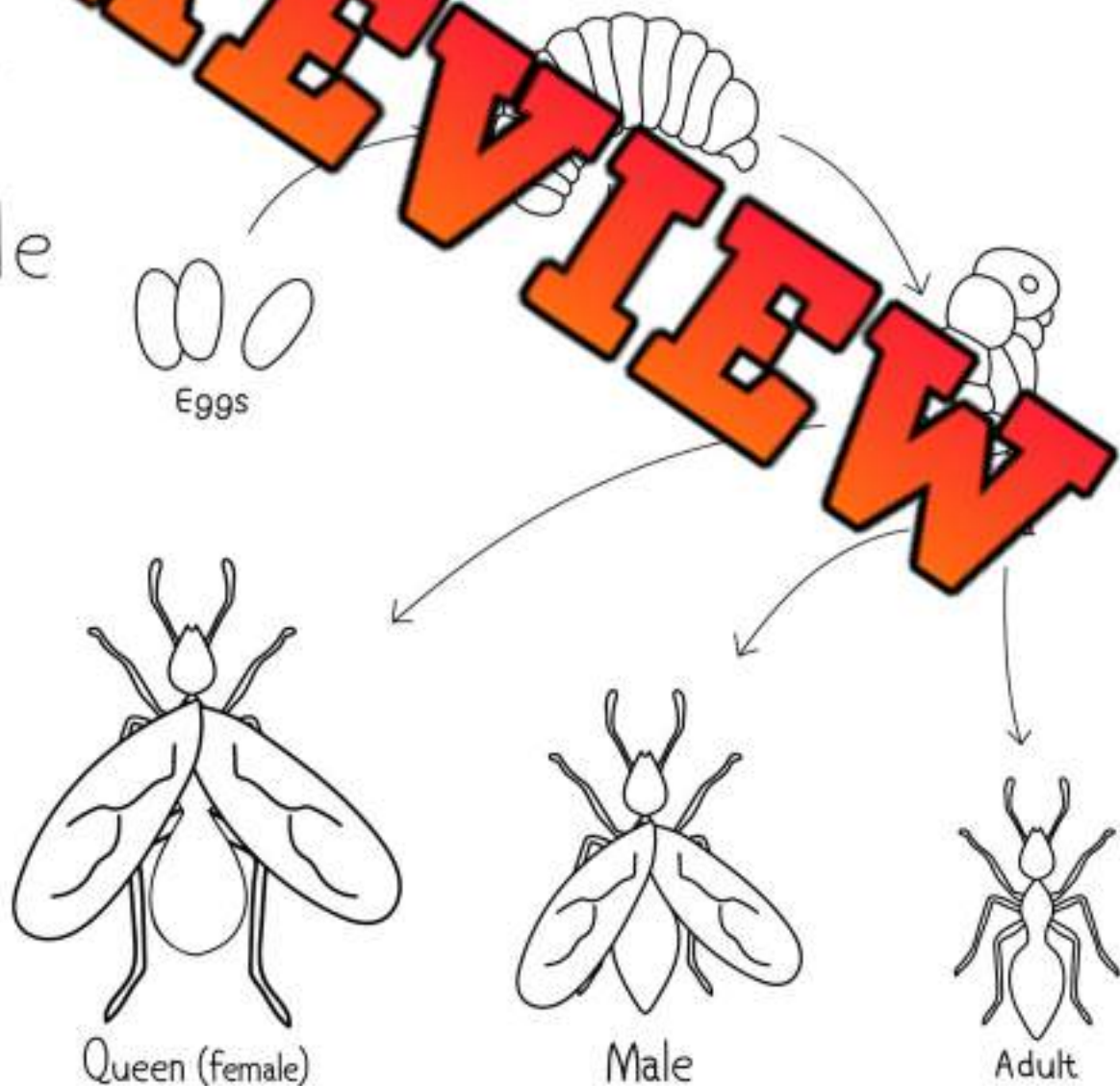
When the pupa has finally formed into an ant, it will come out of the cocoon. This can take anywhere from a few weeks to a few months. When they emerge from the cocoon, they are fully grown adults. Their exoskeletons stop them from growing larger. There are three types of adult ants: queen, worker, or male. Worker and male ants can live up to 7 years, while some queens live over 15 years.

True or False

Circle whether the statement is true or false

1. Ant eggs will all become adult ants	True	False
2. A larva is shaped like a worm	True	False
3. A larva eats regurgitated food from adult ants	True	False
4. All adult ants are the same	True	False
5. Larva use _____ to protect themselves while they change into an ant	True	False

Colour _____ the stages in an ant's life cycle

Ant
Life
Cycle

Types of Animals - Spiders

What are Spiders?

Spiders are small animals that are like insects because they both have exoskeletons. Spiders move differently than insects and have a different body. Read this list of things all spiders have in common:

8 Legs	Cold-blooded	Lay eggs	Invertebrates – no backbone, just an exoskeleton
--------	--------------	----------	--

Spider Webs and Spiders Hunt

A spider web is a structure that spiders make to trap their prey. Spiders mainly eat insects. When insects fly or crawl on the silk web, they get stuck and the spider eats them. Spiders spin silk to make webs. The strength of spider silk is stronger than steel when comparing the same amount of material.



Examples of Spiders

There are over 40,000 types of spiders, such as tarantulas, brown recluse spiders, and black widow spiders.

True or False

Is the statement true or false?

1. Spiders have no backbone, just an exoskeleton	True	False
2. All spiders have 6 legs	True	False
3. Spiders are warm-blooded	True	False
4. A spider's silk is stronger than steel	True	False
5. Spiders have the same bodies as insects	True	False

Questioning

Write two questions you have after reading the text

1)	
2)	

Spider Life Cycle

A spider goes through 4 stages in its life cycle. Use the word bank to fill in the blanks below. Then, draw pictures of each stage

Egg Sac

Adult

Eggs

Spiderlings



Draw _____ draw a spider's life cycle below

PREVIEW

Life Cycle Activity – Making a Book

Choose an animal that you want to write a book about. You will write how the animal grows from its first stage to its last. You can choose an animal that undergoes a metamorphic or non-metamorphic change.

Plan Fill in the plan below to make it easier to write your book

1) What animal do you choose?

2) Write the stages of the animal's life. Write what happens to the animal in each stage.

1

2

3

PREVIEW

Plan

Fill in the plan below to make it easier to write your book

4

5

PREVIEW

3) Draw pictures of each stage.

1)

2)

4)

5)

6)

Name: _____

51

My Animal Life Cycle Book

PREVIEW

By: _____

Stage 1: _____

PREVIEW

Stage 2: _____

PREVIEW

Stage 6: _____

PREVIEW

Physical Characteristics of Animals

Word Search

Find the words from the word bank

<input type="checkbox"/> Animals	<input type="checkbox"/> Invertebrate	<input type="checkbox"/> Vertebrate	<input type="checkbox"/> Backbone	<input type="checkbox"/> Insects
<input type="checkbox"/> Mammals	<input type="checkbox"/> Reptiles	<input type="checkbox"/> Birds	<input type="checkbox"/> Worms	<input type="checkbox"/> Spiders

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

Word Scramble

Unscramble the words from the word bank

MMAAMLS		VBRETREATE	
AMINLAS		IECTNSS	
WROSM		BRDIS	
RLPTEIES		ITREAENRTBVE	
BBOACKNE		SDIRPES	

Story: Benny and the Farm of Changes

Benny and the Farm of Changes



Once upon a time, there was a little boy named Benny who lived on a big, bustling farm. Benny loved the farm with all his heart, especially the animals who lived there.

One morning, Benny woke up to a delightful surprise. His cow had given birth to a little calf. Benny named the calf Daisy. Daisy was covered in soft fur and big, curious eyes. She was unsteady on her feet, but she always followed her mother, Bessie, around.

Benny loved to watch Daisy frolic around the farm. He also loved feeding Daisy from the trough when Bessie was resting. As weeks turned into months, Benny started noticing that Daisy was growing! She was no longer the small, wobbly calf that she used to be. Her legs were becoming strong, and she was getting bigger each day. By the end of the year, Daisy had become as big as Bessie. She had turned into a beautiful young cow.

On another part of the farm, Benny had a little chick named Goldie. Goldie was a fluffy, yellow chick who loved to peep and follow Benny wherever he went. Benny loved Goldie and enjoyed watching her chase after him.

As the months passed, Benny noticed that Goldie was changing. Her fluffy yellow feathers started to turn white, and she grew bigger and bigger. She no longer peeped but clucked instead. And one day, Goldie laid an egg! Benny had turned into a chicken.

Benny was amazed to see his animals grow and change. He understood that just like him, animals also grow up. This realization made Benny love his farm and his animals even more. Every day became a new adventure, watching and learning about the amazing changes in his farm animals.



And so, life on Benny's farm was always full of wonder and discovery, reminding us all that change is a part of life, and it's a beautiful thing to witness.

True or False

Circle whether the statement is true or false

1) Animals don't change much	True	False
2) A calf will grow into a cow	True	False
3) A chick will grow into a horse	True	False
4) A calf has strong legs	True	False
5) A chick has yellow feathers, and they turn white	True	False

Diagram

Draw each animal below

Chick	Chicken	Calf	Cow

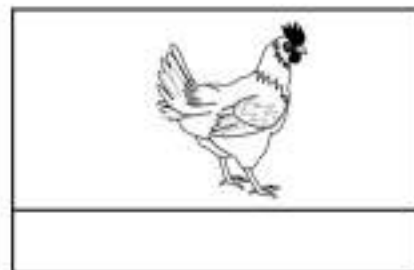
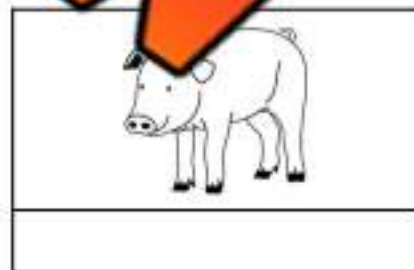
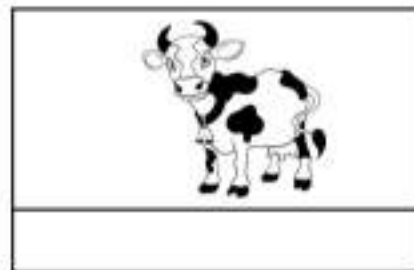
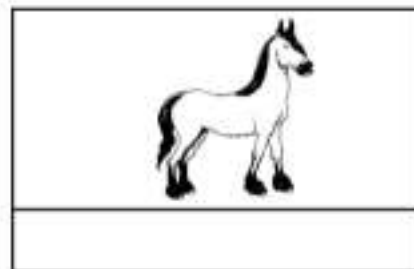
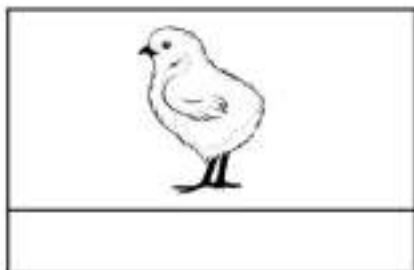
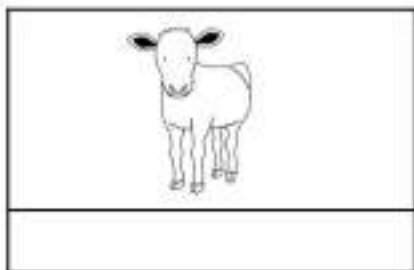
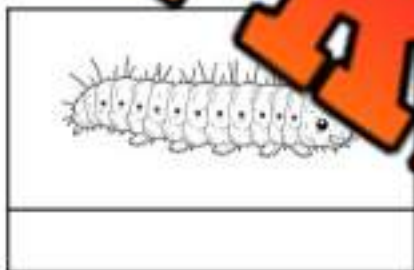
Question

How did Benny's animals change?

Changing Animals

Matching Label the names of the animals and draw a line matching the baby to the adult

Pig	Larva	Cow	Chick	Piglet	Chicken	Horse	Calf	Butterfly	Foal
-----	-------	-----	-------	--------	---------	-------	------	-----------	------



PREVIEW

Name: _____

62

Matching Label the names of the animals and draw a line matching the baby to the adult

Duck

Puppy

Sheep

Frog

Duckling

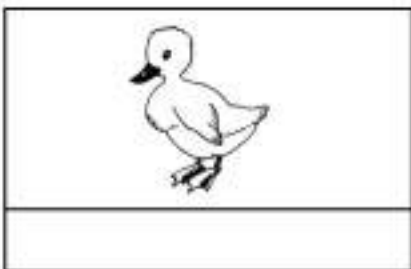
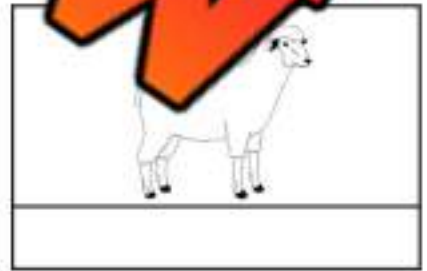
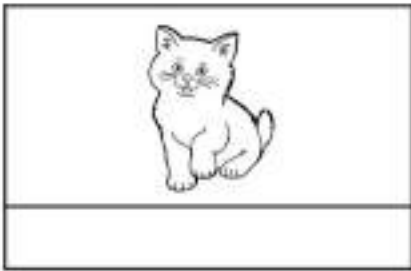
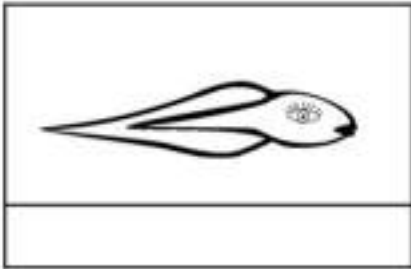
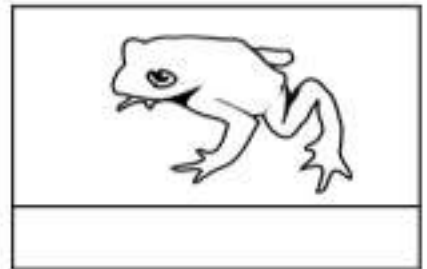
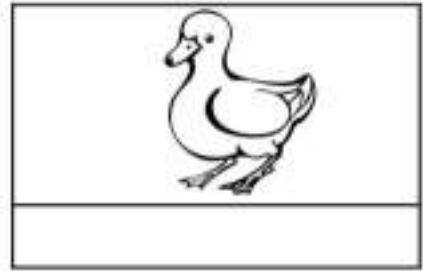
Dog

Tadpole

Kitten

Lamb

Cat

**PREVIEW**

Exit Cards

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

Name: _____

Mark

Sort the names into "Babies"
or "Adults."

Items	
Tadpole	Chick
Sheep	Calf
Frog	Horse
Babies	Adults

Name: _____

Mark

Sort the names into "Babies"
or "Adults."

Items	
Tadpole	Chick
Sheep	Calf
Frog	Horse
Babies	Adults

Name: _____

Mark

Sort the names into "Babies"
or "Adults."

Items	
Tadpole	Chick
Sheep	Calf
Frog	Horse
Babies	Adults

Name: _____

Mark

Sort the names into "Babies"
or "Adults."

Items	
Tadpole	Chick
Sheep	Calf
Frog	Horse
Babies	Adults

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

Life Cycle of a Seed Plant

1. **Seed** - The seed will grow as a seed. The seed has a hard shell that protects the embryo.



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 sprout. The seed will 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!



Questions

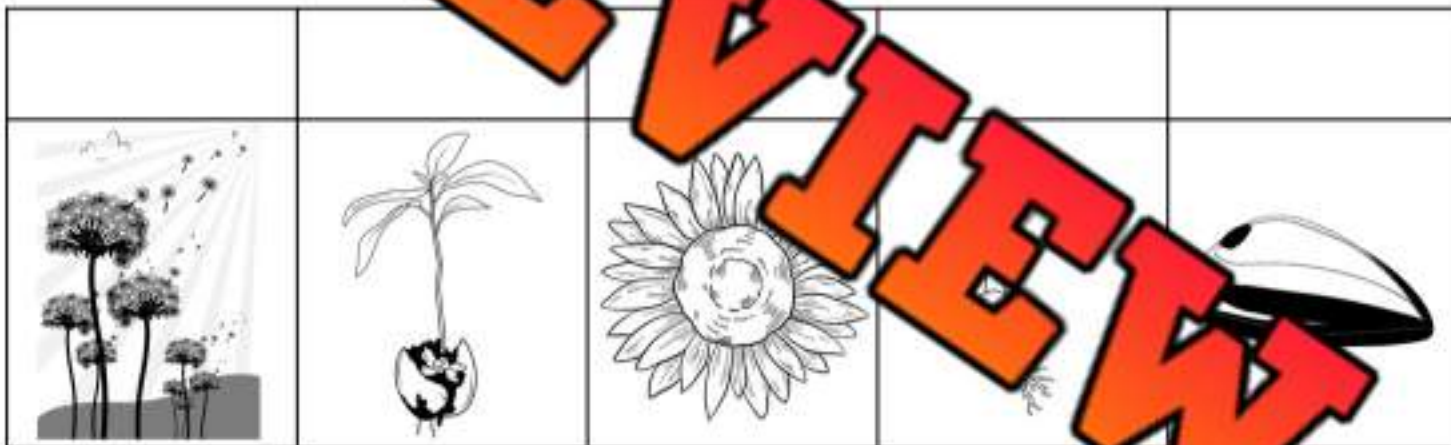
Use information from the text to support your answer

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

2) What does germination of a seed mean?

Ordering

Put the stages 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

Seed Plant – Describe and Draw

Explain

Describe each stage of a seed-plant's life cycle

Seed	
Germination	
Growth	
Reproduction	
Spreading Seeds	

Draw

Draw each stage of a seed-plant's life cycle

Seed	Germination	Growth	Reproduction	Spreading Seeds

Lab – Germinate Seeds on a Window

Research Question

What are we trying to learn more about?

Will a seed germinate (sprout) without soil if it is given sunlight and water?

Hypothesis

What do you think will happen?

Materials

What do we need for this experiment?

- Small plastic zipper storage bag
- Dried, uncooked beans or seeds
- Paper towels
- Water



Procedure

What do you need to do?

1. Cut the paper towel in half and fold it a few times so that it can fit into the zipper storage bag
2. Soak the paper towel in water and slide it into the bag. Smooth it out so that it is flat
3. Put two beans or seeds about three centimeters from the bottom of the bag, on one side of the paper towel. Make sure they don't fall to the bottom of the bag or else they will sit in the water. You can roll up a piece of paper towel and put it on the bottom of the bag if the beans/seeds keep falling to the bottom.
4. Seal the bag part way, leaving an opening near the top so the growing plants can get some air
5. Tape the bag to the window so that the beans are facing indoors, so you can watch them grow.
6. Optional – do the same experiment but put the plastic bag in a dark closet. See if this grows better or worse.

Observations

Write how many days it has been and draw what the seed looks like

Day	What is happening to the seed?

Day	What is happening to the seed?

PREVIEW





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

<p>1) Dormant</p> 	<p>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 half-asleep as they don't grow in size or above ground. But, they do quietly work away at growing roots.</p>
<p>2) Waking Up</p> 	<p>As the temperature warms in the spring, the bulb begins to grow. You will see the shoot growing through the soil.</p>
<p>3) Bloom</p> 	<p>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.</p>
<p>4) Falling Asleep</p> 	<p>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.</p>

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

Answer the following questions

1) Where does a bulb plant grow during its life cycle?

Underground Above ground

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

Visualizing

What were you picturing in your head while you were reading?

Describe your picture

Where Animals Live

Where Animals Live

Every animal has a special home that is just right for them. These homes provide the food, water, and shelter that they need. Different environments are perfect for different animals.

Forest: In a forest, there are lots of trees and bushes. Animals like bears and squirrels love the forest. The trees give them a lot of food and places to hide.



Ocean: The ocean is a big body of water. Whales, and dolphins live here. They are great swimmers and can live for a long time.

Desert: Deserts are very hot and dry. Camels, snakes, and scorpions live here. They can handle the heat and don't need much water.

Polar Regions: Polar regions are very cold places. Polar bears, penguins, and seals live here. They have thick fur or blubber to stay warm.

Grassland: Grasslands are full of tall grasses. Lions, elephants, and zebras live here. They can find plenty of food and space to roam.

Rainforest: Rainforests are wet and warm. Monkeys, toucans, and frogs live here. They love the tall trees and plentiful rain.



Mountain: Mountains are tall and rocky. Goats, eagles, and bears live here. They are good climbers and can handle the thin air.

Choose

Circle the environment the animal lives in

#	Animal	Environment 1	Environment 2
1	Bear	Forest	Ocean
2	Whale	Desert	Ocean
3	Camel	Desert	Grassland
4	Penguin	Rainforest	Polar Region
5	Lion	Grassland	Ocean
6	Elephant	Grassland	Forest
7	Whale	Forest	Ocean
8	Monkey	Forest	Rainforest
9	Mountain	Mountain	Rainforest
10	Zebra	Grassland	Mountain
11	Squirrel	Forest	Desert
12	Scorpion	Desert	Desert
13	Toucan	Rainforest	Polar Region
14	Seal	Polar Region	Rainforest
15	Deer	Forest	Grassland

Draw

Draw one animal that you would find in each of the environments

Forest	Ocean	Polar Region	Grassland	Desert	Mountain

Reducing, Reusing, Recycling, and Repurposing

Animals Love a Clean Home

Animals live in forests, oceans, and all around us. When we reduce, reuse, recycle, and repurpose, we keep their homes clean. This helps animals stay healthy and happy.

Reducing Waste

When we use less, we make less waste. This means fewer plastic bags, which can harm bird nests or water where fish live. Fewer soda cans won't end up in places where small animals could get stuck.

Reusing Items

When we reuse items, like water bottles and shopping bags, we make less trash. This helps keep animals' homes clean. Animals don't mix up trash for food.

Recycling Things

When we recycle, we give trash a new life. It can turn into new bottles, cans, or even playgrounds! This way, less trash goes into landfills or oceans where animals might eat it or get caught in it.

Repurposing Stuff

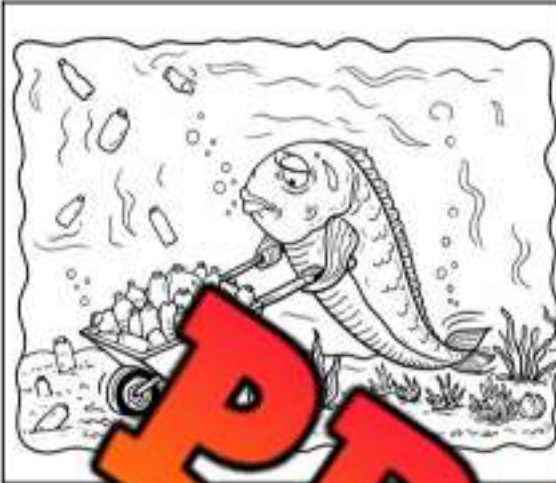
Repurposing is like recycling. It means using something old to do a new job. An old boot can become a plant pot. This way, less trash can hurt animals.



PREVIEW

Write

Write about what is happening to this fish



Draw

Draw your own picture of an animal living in a polluted home

Think

What do each of the terms below mean?

Recycle	
Reduce	
Reuse	
Repurpose	

How Long Does Garbage Take To Decompose?



Questions

Answer the questions below

1) What surprised you about how long garbage takes to decompose?

2) How does this graphic show the importance of recycling? What happens when we don't?

Uninvited Guests: New Plants and Animals

Uninvited Guests: New Plants and Animals

Just like we have our home, animals and plants have their own homes too. They are in special areas where they grow the best. But what happens when they move to a new place where they don't belong? Let's find out.

Plants That Move In

Some plants can move to a place where they didn't live before. They can come from people who bring them from other countries. These plants can grow very fast and take up a lot of space, leaving room for the plants that were there before.

In Alberta, a plant called kudzu from Europe and Asia has done this. It grows quickly and takes up space, making it hard for local plants to grow.

Animals Moving In

New animals can also be a problem. They might eat a lot of the same food, leaving none for the animals that lived there before.

In Alberta, the American bullfrog from the eastern part of North America is a problem. It eats so much that other animals, like local frogs and small mammals, don't have enough to eat.

Too Many Changes

When new plants or animals come to an area, they can change it a lot. This can make it hard for the original plants and animals to live.

In Alberta, the wild boar, a kind of pig from Europe, is causing trouble. It eats a lot of different foods and can damage the places where it lives.



True or False

Circle whether the statement is true or false

1) When plants and animals move, it is good for everyone	True	False
2) When animals move, they affect other animals and plants	True	False
3) The wild boar is from Alberta	True	False
4) The American bullfrog eats a lot of food	True	False
5) Animals move to new areas	True	False

Questions

Write 2 questions you have about the reading?

1)	
2)	

Questions

Use information from the text to answer the questions

1) How do you think animals move to new places?

2) What can happen when an animal moves to a new area?

Helping Animals

Fixing Up Natural Areas

Natural areas are places like forests, beaches, or deserts where plants and animals live.

Sometimes these places get hurt or sick, like when trees get cut down or trash is left behind. We can help them get better. This is called fixing up natural areas.

We can plant new trees, clean up trash, and make sure these places have clean water.



Protecting Natural Spaces

Protecting natural spaces is very important. It means keeping them safe from harm. These places will not be sold to anyone else. They are the same for plants and animals to enjoy. Humans on this planet should not

- Cut down trees or plants
- Build factories that pollute the water
- Make air pollution from cars

Making Parks

One great way to protect natural spaces is by making parks. Parks are places where we can go to enjoy nature. We can see trees, flowers, animals, and more in parks. Parks help keep nature safe, because people take care of them. People can't cut down trees or leave trash in parks.

Yes or No

Is the answer yes or no?

1) Can humans buy protected land?	Yes	No
2) Can humans cut down trees on protected land?	Yes	No
3) Is protected land left alone?	Yes	No
4) Do a lot of animals live on protected land?	Yes	No
5) Are there plants on protected land?	Yes	No

Draw

_____ near a park? Draw it and explain it.

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Question

What would happen if we didn't protect land and if we let humans buy all the land in the world?

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Humans Fighting For Animal Rights

Animal Rights

Humans have rights that need to be followed. For example, you have the right to use the bathroom, eat lunch, go to school, and feel safe. If someone took those rights away from you, you could call the police.

Other animals do not have the same rights. Animals are the property of humans. Animals are not free to live like humans. Many organizations, including PETA, are fighting for more rights for animals. Here are some of the rights they want for animals.

- No experiments on animals
- No breeding and killing animals for clothes or medicine
- No use of animals for work (example: oxen to pull carts)
- No hunting
- No zoos or use of animals in entertainment



What You Can Do

If you want to help animals get the rights above, try some of the ideas below.

- Only visit zoos that have proper enclosures for the animals
- If you have a pet, treat them right! Feed them regularly and take care of them
- Consider eating more plants and less meat
- Do not feed wild animals human food
- Adopt pets from animal shelters to save them
- Do not use pesticides on your lawn that kill animals
- Don't wear or buy things made out of animals
- Spread the word about animal rights!



Questions

Use information from the text to support your answer

1) Do animals have the same rights as humans? Explain.

2) Do you think animals should have the same rights as humans?

True or False

Is the statement true or false?

1) Animals have the same rights as humans

True

False

2) If someone takes your rights away, you can call the police

True

False

3) Animals are property of humans

True

False

4) Humans will go to jail if they hunt and eat wild animals

True

False

5) Some zoos have small cages for animals

True

False

Making Connections

What does the reading remind you of in your life?

Coding – Deer Crossing



PREVIEW

Direction Code the deer across the highways to the bush using arrows

-
-
-
-

1 st Move	2 nd Move	3 rd Move	4 th Move	5 th Move	6 th Move

7 th Move	8 th Move	9 th Move	10 th Move	11 th Move

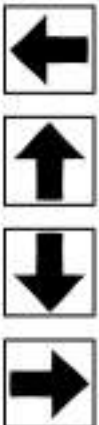
Coding – Self Driving Car

Self-driving cars use codes to drive around obstacles. Many self-driving cars are on the road now. By 2040, it is possible that we will all enjoy safe, self-driving cars.

PREVIEW

Direction

Code the car around the deer.
The car can only be in the passing lane for 3 spaces in a row

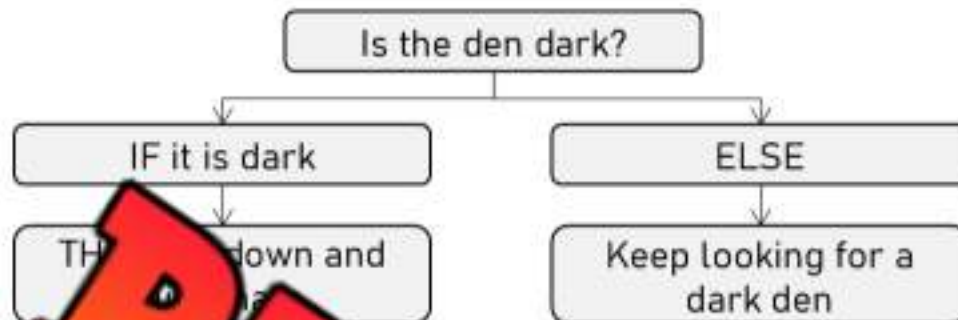


1	2	3	4	5	6	7	8	9	10

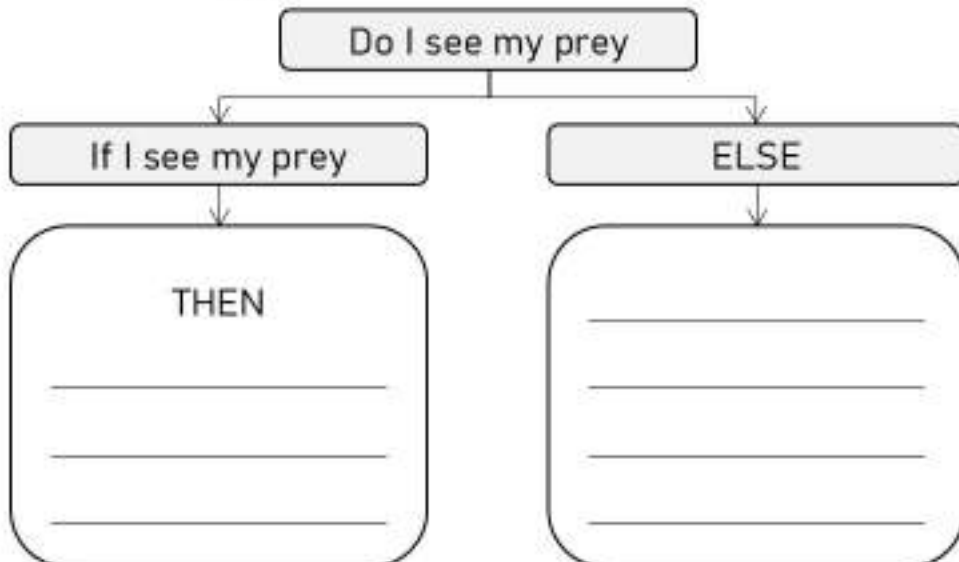
11	12	13	14	15	16	17	18	19

Coding – Else Statements

An **else** statement works like an if statement. When an if statement is false, we can have another command, instead of nothing happening.



Directions: Use the IF/ELSE commands below with your own ideas



Directions

Fill in the ELSE commands below with your own ideas

Is a predator coming?

IF a predator is coming

ELSE

THEN



If I see a car coming

THEN



Is it getting cold?

IF it is getting cold

ELSE

THEN



Indigenous Groups – Sacred Animals

Why Animals are Sacred

First Nations, Métis, and Inuit are groups of people in Canada. They think animals are very important. Here's why:

- Animals are like presents from nature.
- Animals are like teachers, showing us how to live.
- Animals are in their stories.
- Animals are symbols. They represent ideas, like a turtle means patience.
- Animals live in a special place we can't see, called the spirit world.



Indigenous Groups - Sacred Animals

Each group has some animals they consider special:

- **First Nations:** There are over 600 First Nations in Canada. They do not all find the same animals sacred. Some First Nations consider the eagle and the bear are sacred. The eagle flies high and sees everything. The bear is strong and teaches us about power. Others believe the rabbit is the first created life.
- **Métis:** The Métis believe the bison as sacred. The bison gives many gifts like food and clothing. The Métis followed and hunted the bison for many years.
- **Inuit:** The Inuit believe the polar bear and the seal are sacred. The Inuit hunted these animals for food, clothing, and tools. They used polar bear fur for clothing, seals for meat and oil, and seal skin for kayak coverings.



True or False

Circle whether the statement is true or false

1) There is only one First Nation community	True	False
2) All First Nation communities find the same animals sacred	True	False
3) The bear shows patience	True	False
4) The Inuit find the polar bear to be sacred	True	False
5) The Métis find the bison as sacred	True	False

Draw and label an animal that each group finds sacred

	
Inuit	Métis and First Nations

Questions

Use information from the text to answer the questions

1) Name three indigenous groups in Canada.

2) Why are animals sacred to some groups of people?

Indigenous Methods for Classifying Living Things

Another Indigenous system for classifying plants and animals is to sort them as being totemic or non-totemic.

Totemic – A plant or animal that is sacred to an Indigenous group

Non-Totemic – A plant or animal that is not sacred to an Indigenous group

Directions Determine whether the living thing below is totemic or non-totemic to you



Totemic	Non-Totemic
---------	-------------

Evergreen Tree (Christmas)



Totemic	Non-Totemic
---------	-------------

Tree



Totemic	Non-Totemic
---------	-------------

Cat



Totemic	Non-Totemic
---------	-------------

Bunny



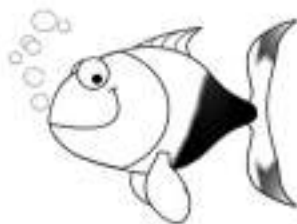
Totemic	Non-Totemic
---------	-------------

Sunflower



Totemic	Non-Totemic
---------	-------------

Bird



Totemic	Non-Totemic
---------	-------------

Fish



Totemic	Non-Totemic
---------	-------------

Roses



Totemic	Non-Totemic
---------	-------------

Dog

Totemic – Indigenous Classification

Directions

Draw 3 totemic plants and 3 totemic animals that are important to you

Totemic Animals

Totemic Plants

PREVIEW

Indigenous Groups Respect the Earth

Taking Only What is Needed

Indigenous groups show care for the land, plants, and animals by only taking what they need.

For example, the Nisga'a people of British Columbia have a rule about fishing. They only catch enough salmon for their community and let the rest go.



Using the Whole Animal

Another way to respect the Earth is using the whole plant or animal. Some people use every part of an animal for clothing, tools, or tools.

For example, the Inuit people use every part of a seal – its meat for food, its skin for clothes, and its bones for tools.

Protecting Water and Soil

Water and soil are very important because they help things grow. We should keep them clean and safe.

For example, the Cree people in Alberta plant trees and bushes to prevent soil erosion and to protect the waterways. They also never use harmful chemicals that damage the water and soil.

Treating Land, Plants, and Animals as Relatives

Just like we care for our family, we can care for the land, plants, and animals. We can think of them as our big Earth family. This means being kind to them, taking care of them, and learning from them.

For example, the Haudenosaunee people think of the Earth as their mother and take care of it as they would take care of their own mother.

True or False

Circle whether the statement is true or false

1) The Inuit only eat seals and do not use their bones	True	False
2) The Inuit use seal bones for tools	True	False
3) The Nisga'a take more salmon than they need	True	False
4) The Cree use chemicals to keep their soil clean	True	False
5) The Haida believe the Earth is their mother	True	False

Visualization Draw _____ were picturing while you were reading. Explain the picture

	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
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Question

Do the Indigenous take care of the Earth? Explain

<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

Name: _____

Date: _____

Unit Test – Growth and Changes in Animals

Multiple Choice

/10

<p>1. What is the first stage of an ant's life cycle?</p> <p>a) Larva b) Egg c) Pupa d) Adult</p>	<p>2. What is it called when you use something from the recycling bin?</p> <p>a) Recycling b) Repurposing c) Reusing d) Reducing</p>
<p>3. Which of the following is a non-metamorphic life cycle?</p> <p>a) Lion b) Butterfly c) Frog d) Crab</p>	<p>4. Which animal does not care very much for their offspring?</p> <p>a) Cats b) Dogs c) Snakes d) Humans</p>
<p>5. An animal with no backbone is part of which group?</p> <p>a) Vertebrate animal b) Invertebrate animal c) Amphibian d) Mammal</p>	<p>6. Which of the following are part of which group?</p> <p>a) Vertebrate animal b) Invertebrate animal</p>
<p>7. What animal is the baby of a horse?</p> <p>a) Lamb b) Foal c) Chick d) Calf</p>	<p>8. What animal is the baby of a sheep?</p> <p>a) Lamb b) Foal c) Chick d) Calf</p>
<p>9. What is the second stage in the life of a butterfly?</p> <p>a) Adult b) Larva (caterpillar) c) Eggs d) Chrysalis (pupa)</p>	<p>10. What is the name of a baby bird?</p> <p>a) Adult bird b) Chick c) Juvenile bird d) Senior bird</p>

Diagram

Draw the 4 stages of a butterfly's life cycle

Diagram

Draw the 4 stages of a frog's life cycle

Choose

Does the animal have a metamorphic or non-metamorphic life cycle?



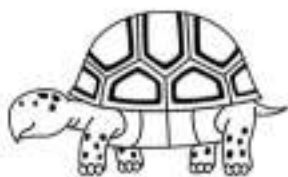
Metamorphic

Non-Metamorphic



Metamorphic

Non-Metamorphic



Metamorphic

Non-Metamorphic



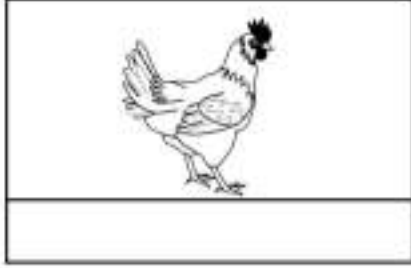
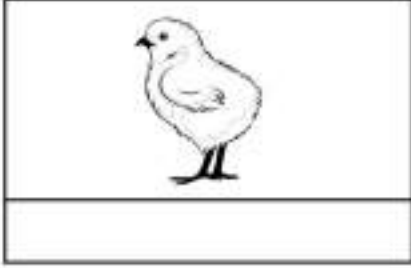
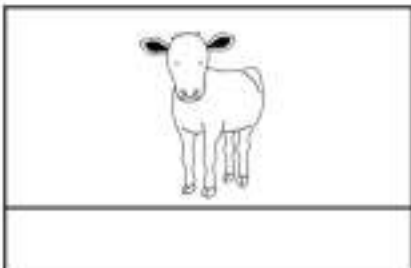
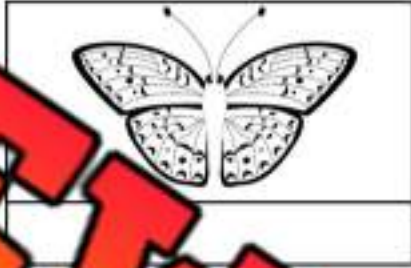
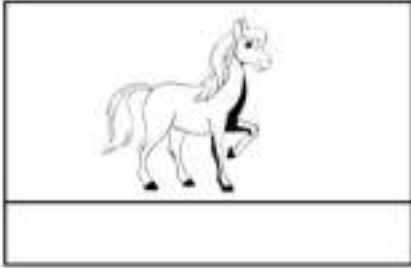
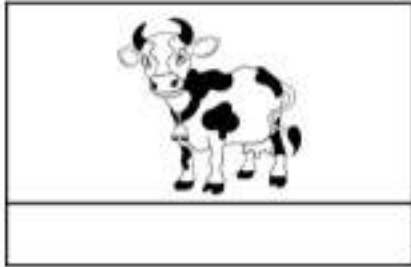
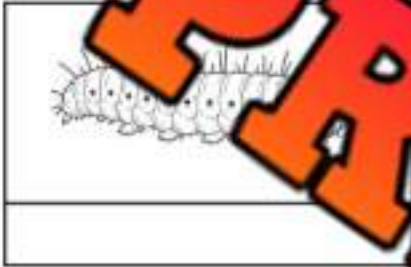
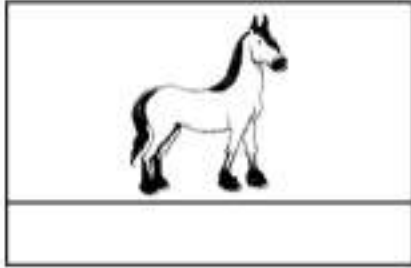
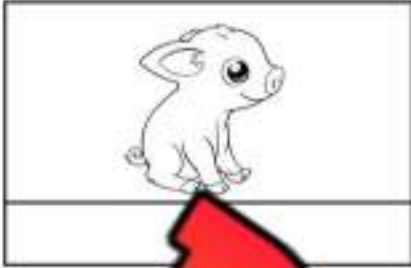
Metamorphic

Non-Metamorphic

Matching

Label the names of the animals and draw a line matching the baby to the adult

Pig	Larva	Cow	Chick	Piglet	Chicken	Horse	Calf	Butterfly	Foal
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PREVIEW