

HIBERNATION



Created by
The Curriculum Corner

WHAT IS HIBERNATION?

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WHAT IS HIBERNATION?

- When an animal sleeps all winter
- Some animals who hibernate will need to wake up to eat
- It's a deep, deep sleep - animals will not be easily woken up
- Their body temperature will drop
 - Their heart will slow
 - Their breathing will slow
- Animals will enter hibernation in fall or early winter
- Animals hibernate because their food source is scarce
 - Animals will wake up in spring
- Animals hibernate in different places
 - burrows, caves, trees, underground

Hibernation

As humans, we are able to prepare for winter by buying warm clothes, building a fire or turning the heat up higher in our homes. Animals aren't able to do these things so they find other ways to survive the cold weather.

One way that animals have found to survive the cold weather is hibernation. Hibernation is a long period of deep sleep that occurs during cold weather. Their bodies will slow down in order to save energy. Their heartbeats drop very low and their body adjusts to burn fewer calories by conserving energy.

Hibernation is necessary for animals who are unable to find their main food source during colder weather. Animals will stock up on food and store fat during the fall. Their bodies are then able to use the stored fat to help them live through hibernation without eating (although a few animals do wake up to eat if necessary.)

Once their bodies are prepared, they will enter their hibernation location. This might be a cave, a hole in a tree, a den or maybe a hole. They are looking for a place where they will be safe from predators.

You might not know that animals who live in hot and dry climates experience something similar to hibernation. It is called estivation. These animals will bury themselves in the ground during times of high heat or drought. They will wait until the wet season or cooler temperatures to emerge.

A variety of animals hibernate - can you make a list of some that do?

Hibernation

Happens because...	Looks like...
Animals who...	More to know..

WHO HIBERNATES?

groundhog

bat

chipmunk

skunk

raccoon

hedgehog

mouse

rabbit

goose

frog

snake

toad

kangaroo

deer

turtle

bear

lion

squirrel

WHO HIBERNATES?

groundhog

bat

chipmunk

skunk

raccoon

hedgehog

mouse

rabbit

goose

frog

snake

toad

kangaroo

deer

turtle

bear

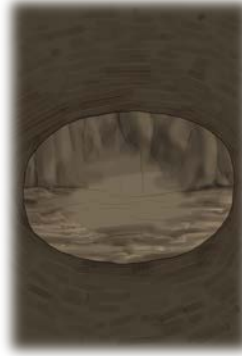
lion

squirrel





nest



burrow



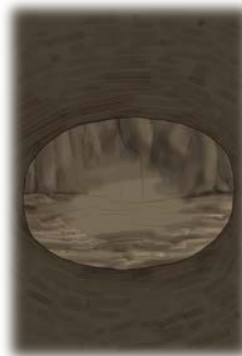
burrow



tree
hole



den



burrow



cave

hedgehog

groundhog

frog

turtle

bear

lemur

bat

hibernation

estivation

terrestrial

aquatic

emerge

burrow

predator

ectothermic

when an animal goes
into a dormant (or
inactive) state during a
cold period

an inactive state
similar to hibernation
that animals go into
due to high
temperatures or dry
conditions

living on land

living in water

to come out

a hole in the
ground dug by an
animal

an animal that
preys on others

animals that get their
warmth through the
ground, air and water,
a cold-blooded animal

primate

bromate

migrate

scarce

surroundings

a mammal with hands,
feet and forward
facing eyes along with
a large brain
(examples are humans,
lemurs, monkeys_

different from
hibernation, when an
animals goes to sleep
when temperatures
drop then wake up when
temperatures rise

to move from one
region to another
according to the
seasons

not enough to
meet needs

environment

What is hibernation?

Why do animals hibernate?

Why are beavers not considered animals who hibernate?

How is estivation different from hibernation?

Chipmunks do not hibernate.
What do they do instead?

How is the hibernation of black bears different from the hibernation of other animals?

How does a bat's food impact its need to hibernate or migrate?

What are some ways animals prepare to hibernate?

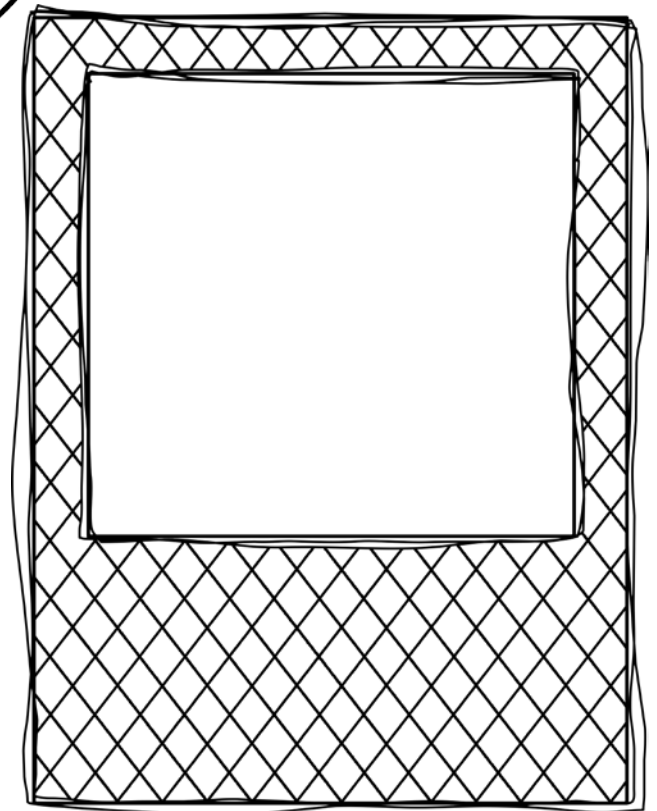
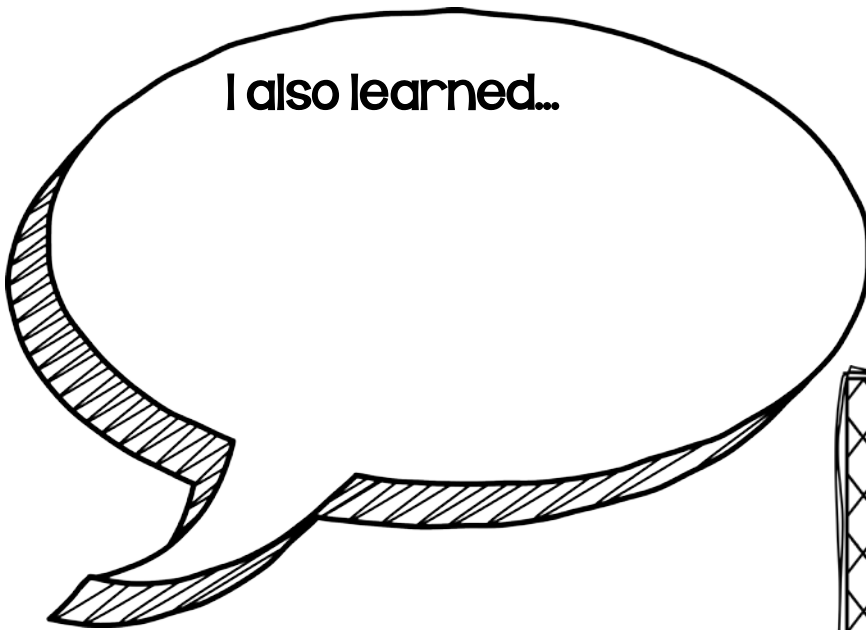
HIBERNATION

Hibernation is...

I wonder...

An animal who
hibernates is...

Name: _____



Name: _____

Name: _____

Thinking Sketch

1.

2.

3.

4.

animal

Name: _____

CHOICES

Animals who live in cold environments have three choices during the winter.
They will hibernate, migrate or adapt to their surroundings.
Research and share what you find.

What is hibernation?	
List animals who hibernate.	

What is migration?	
List animals who migrate.	

What is an adaptation?	
Name adaptations that might help an animal who lives in a cold area.	

THINK ABOUT IT!

Why do you think not all animals have the same reaction to cooler or wintery weather? Explain why one animal might migrate but another adapts to the environment or hibernates.

HIBERNATION

Name: _____

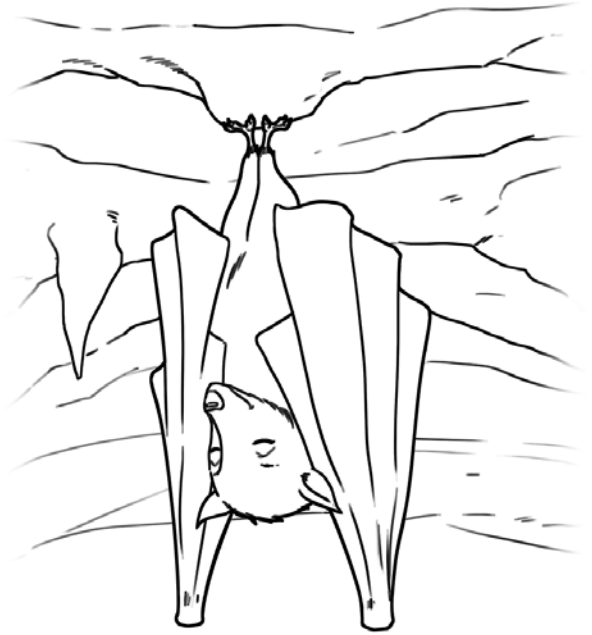
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What is hibernation?

Why do animals hibernate?

BATS

Some bats hibernate and others don't. Bats who live in cold weather need to migrate to a warmer area in the winter or hibernate. Those bats that do hibernate will do so in empty houses, caves or abandoned mines. They are most often found clustered together on cave walls or ceilings.



Interesting Fact: During hibernation a bat's heart rate can be as low as 10 beats per minute. Normally they have a heart rate close to 600 beats per minute when awake and 1,300 beats per minute when flying.

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BLACK BEARS

The American black bear is the most common bear species in the world. They will hibernate for three to eight depending on the weather where they live. Black bears most often can be found hibernating in hollowed-out dens, caves or tree cavities.



Interesting Fact: At one time black bears were not considered true hibernators. Because of research, scientists now understand that they do go into a deep hibernation.

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HEDGEHOGS

Most hedgehogs will begin hibernating in October or November or a little later if they are still able to find insects to eat. Even though they do hibernate, you might see one outside their nest in the cold if they need to find more food to help them make it through the winter. Also, hedgehogs might wake up if the weather gets warmer for a small period of time.

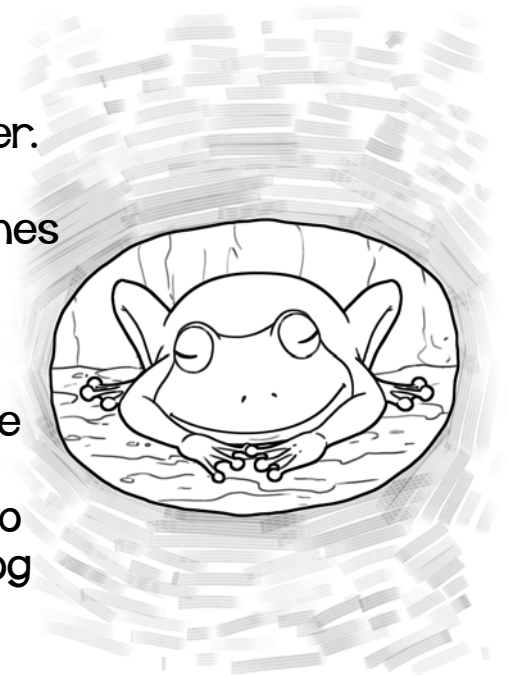


Interesting Fact: During hibernation a hedgehog's heartbeat can drop to 20 beats per minute - their normal heartbeats per minute are 190. They might only breath in and out once or twice every few minutes.

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FROGS

Many types of frogs hibernate during the winter. Aquatic frogs can be found hibernating underwater. They must be in a pond over 16 inches deep to avoid being frozen all the way through. Some people used to think that aquatic frogs would burrow into the mud at the bottom of a pond - this is not true. They get oxygen from the water so must remain in the water. Terrestrial frogs (or frogs who live on land) will burrow into the soil. Some might find a crevice in a rock or log instead. During this hibernation, they might stop breathing and their heart might stop beating. When it warms up, they will thaw.



Interesting Fact: Some frogs estivate in the summer to avoid hot weather. The frog will burrow into the soil, shed skin and form a cocoon around itself. Only its nostrils will be exposed so that it can breath.

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GROUNDHOGS

Groundhogs are also known as woodchucks. They will hibernate beginning in October (or when the first frost occurs) and emerge in the spring. Groundhogs will dig a burrow underground to hibernate in. Their body temperature will drop and their heartbeat will slow from 80 beats per minute to 5 beats per minute when they are hibernating.



Interesting Fact: Their burrows can be huge! They might have 50 feet of tunnels that have more than one exit. These exits can be used if they need to escape their predators.

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TURTLES

Most turtles hibernate in the winter - there are some in warmer areas of the world who do not. Turtles hibernate because they need a cooling period that will help their immune systems work better. Also, they are sensitive to cold and often their diet is impacted by the cold weather.



Interesting Fact: Turtles that live in the water will swim to the bottom of a pond and burrow into the earth. Their breathing will slow and they will stop breathing through their lungs. They will then get oxygen through special skin cells found in their tail.

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LEMURS

Lemurs are the first mammal living in a tropical environment that scientists have found to hibernate. They will hibernate for up to seven months. It is believed they hibernate because this is a dry time in Madagascar, where they live.



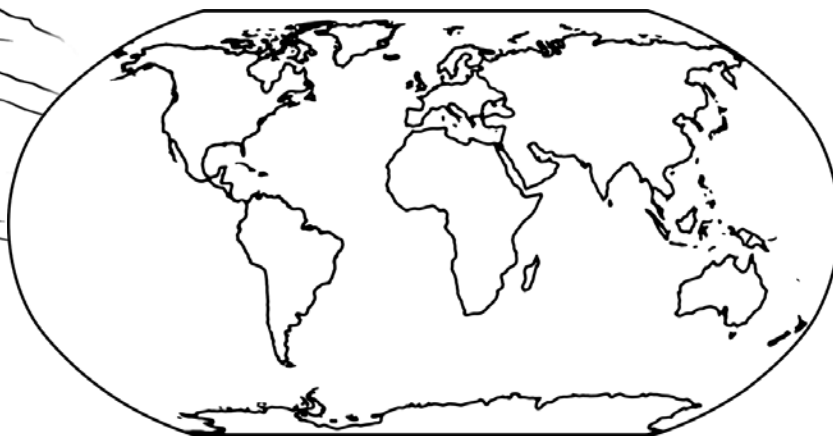

Interesting Fact: Lemurs are the only primate known to hibernate! This is surprising because lemurs are closely related to humans!

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I wonder...



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Three words to describe this animal

2.

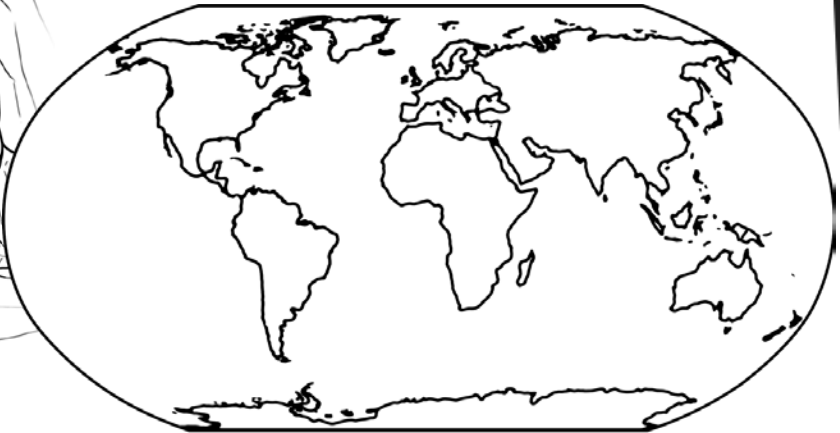
3.

This image shows a single sheet of white paper with horizontal blue lines, resembling notebook paper. The paper has a decorative, slightly irregular black border around its edges. On the left side, there are three rectangular tabs or cutouts protruding from the edge. The paper is otherwise blank, with no writing or markings.

FOCUS ON:



This animal lives...



Important Facts

**Three words to
describe this
animal**

1.

2.

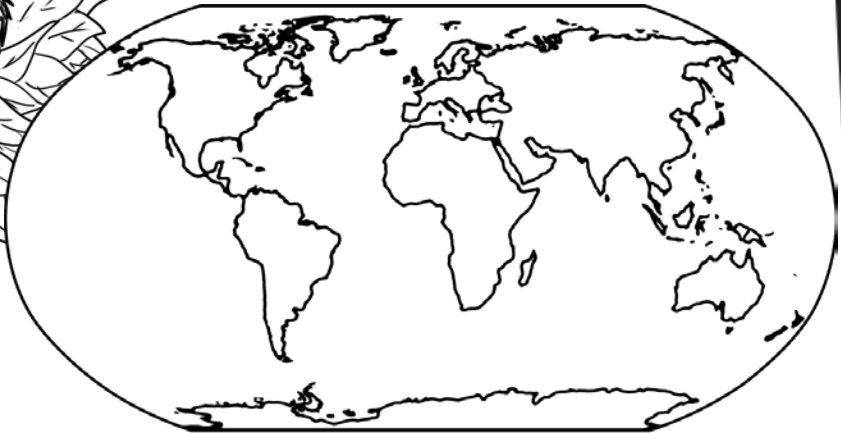
3.

A large rectangular area with a decorative border, containing ten horizontal dashed lines for writing facts.

FOCUS ON:



This animal lives...




Important Facts

**Three words to
describe this
animal**

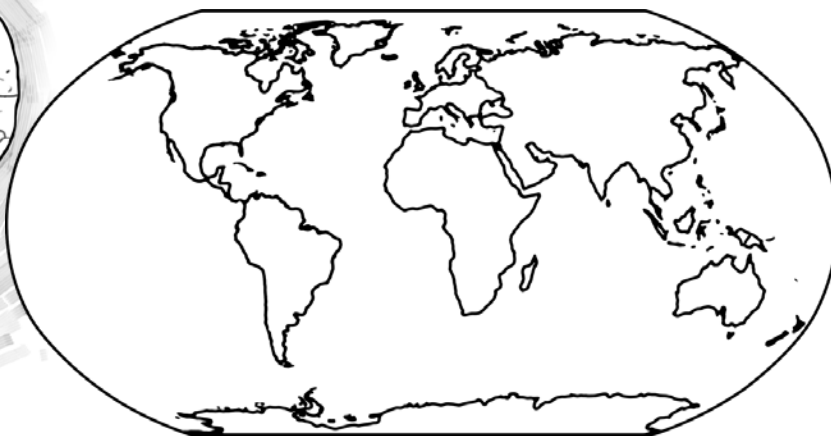
1.

2.

3.



This animal lives...

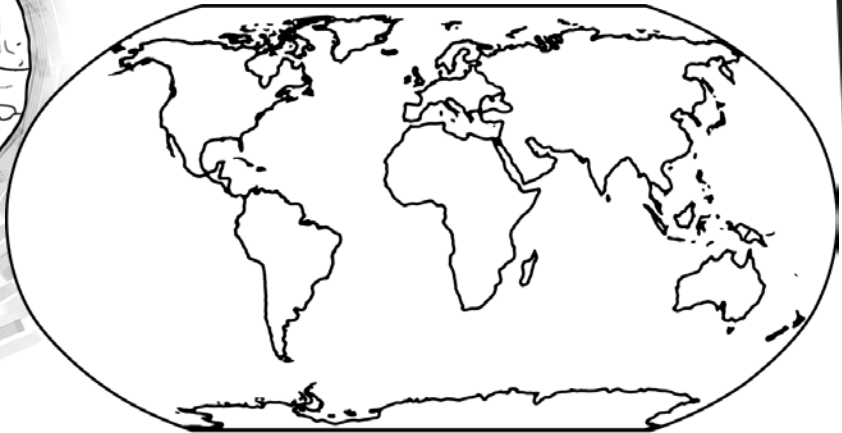


Important Facts

Three words to describe this animal

2.

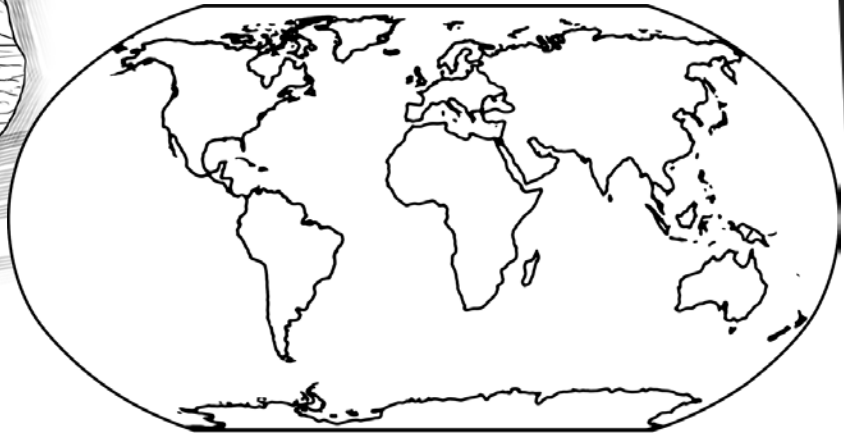

3.



Three words to describe this animal

3.

This is a blank sheet of white paper with horizontal ruling lines. The paper has a decorative, hand-drawn black border around its edges. On the left side, there are several rectangular tabs or cutouts, suggesting it might be part of a binder or a folder. The lines are evenly spaced and extend across most of the width of the page.



Three words to describe this animal

2.

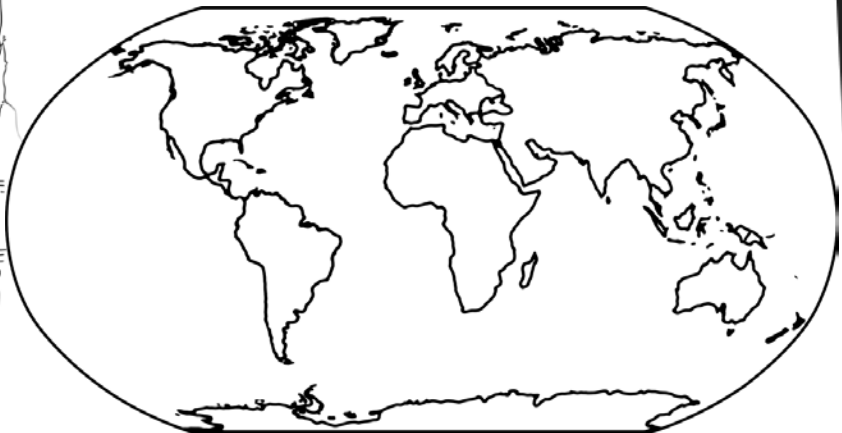
3.

[illegible]

FOCUS ON:



This animal lives...




Important Facts

**Three words to
describe this
animal**

1.

2.

3.



A black and white outline map of the world, showing the continents of North America, South America, Europe, Africa, Asia, and Australia. The map is enclosed in an oval border.

Three words to describe this animal

animal

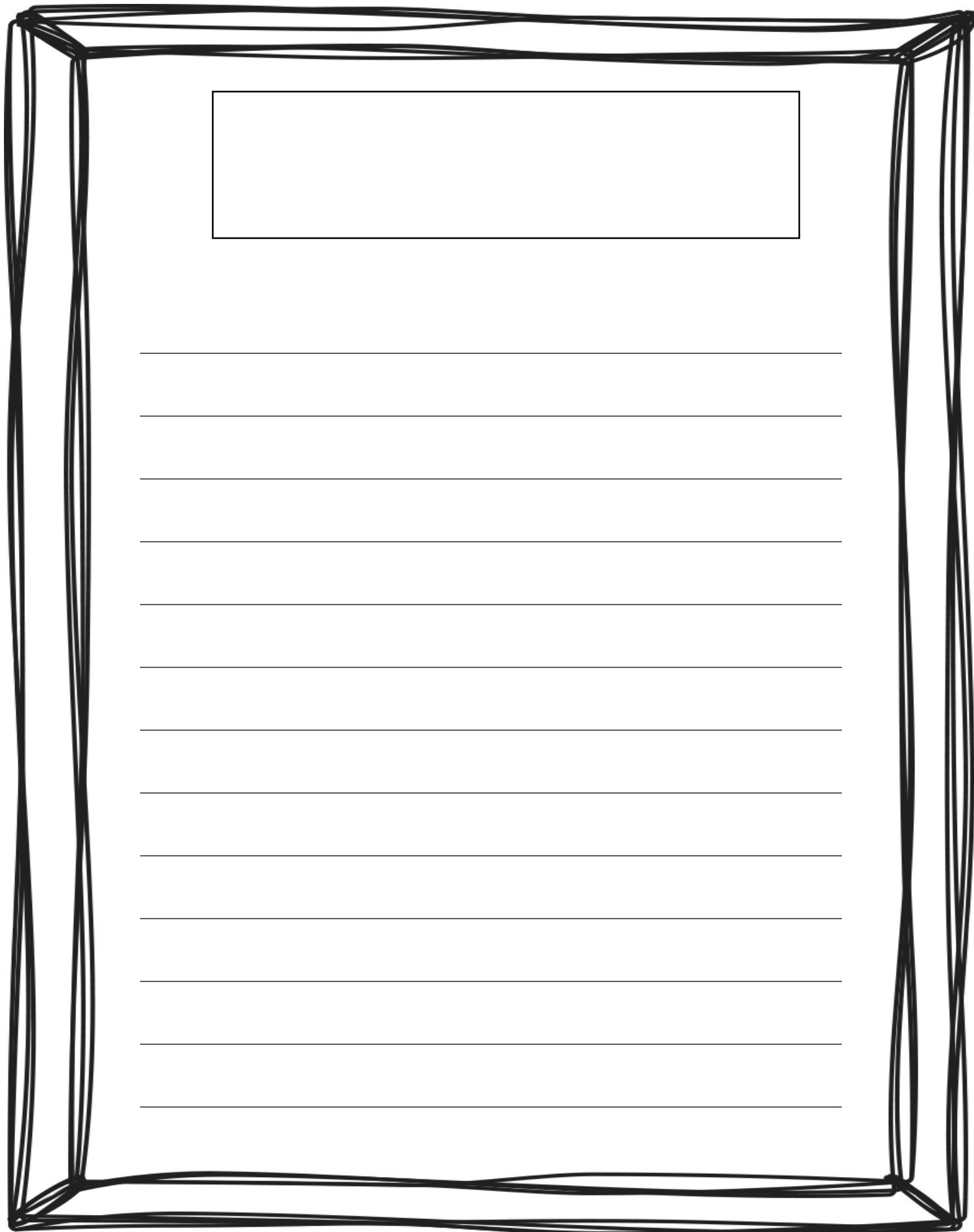
1. lion

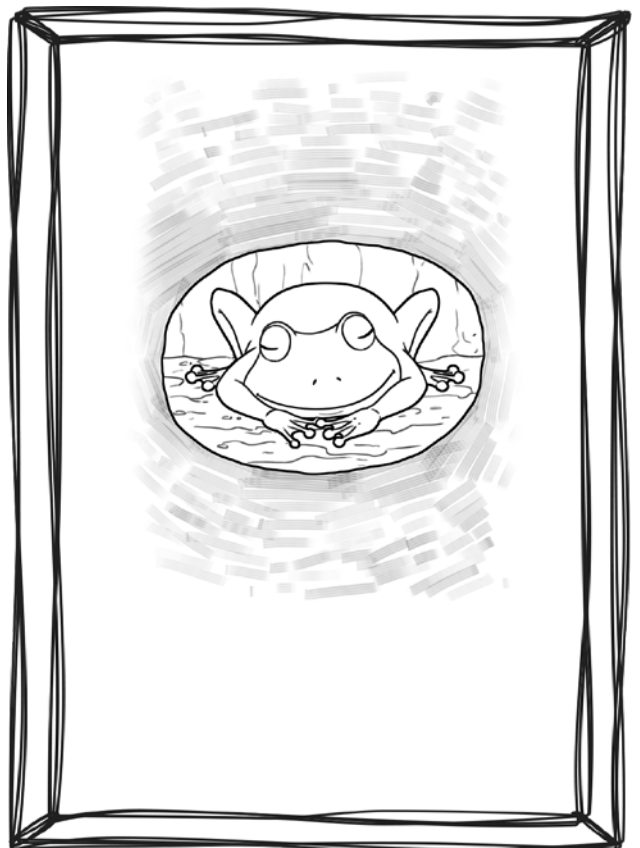
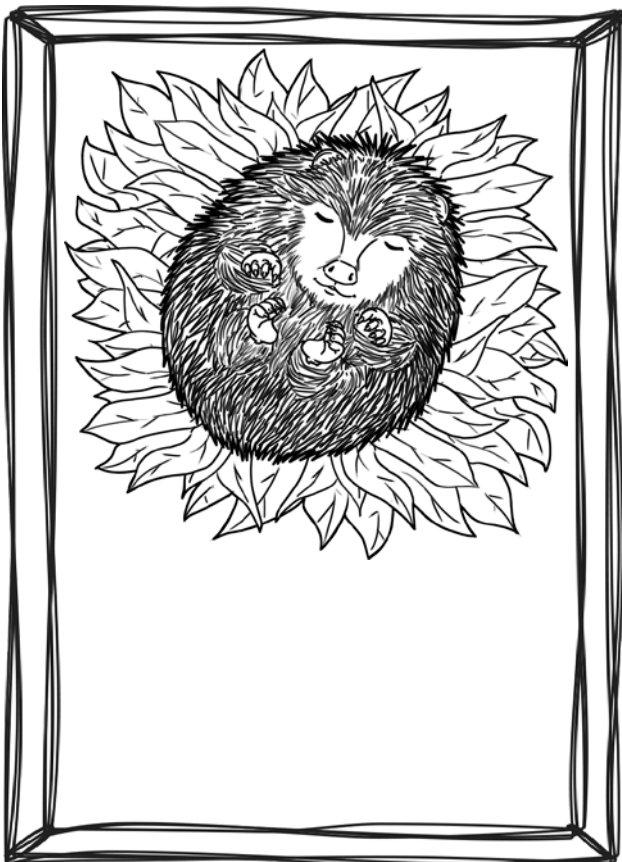
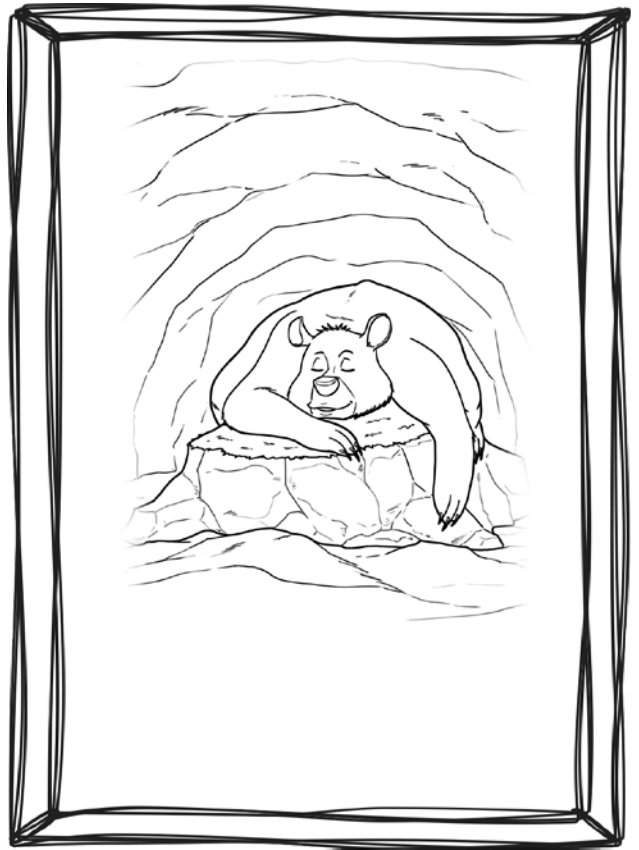
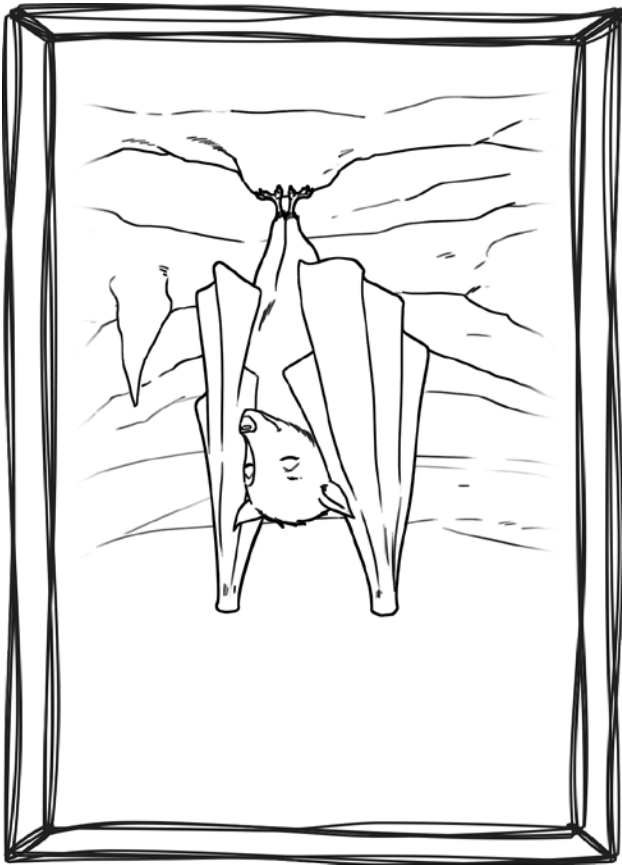
2. tiger

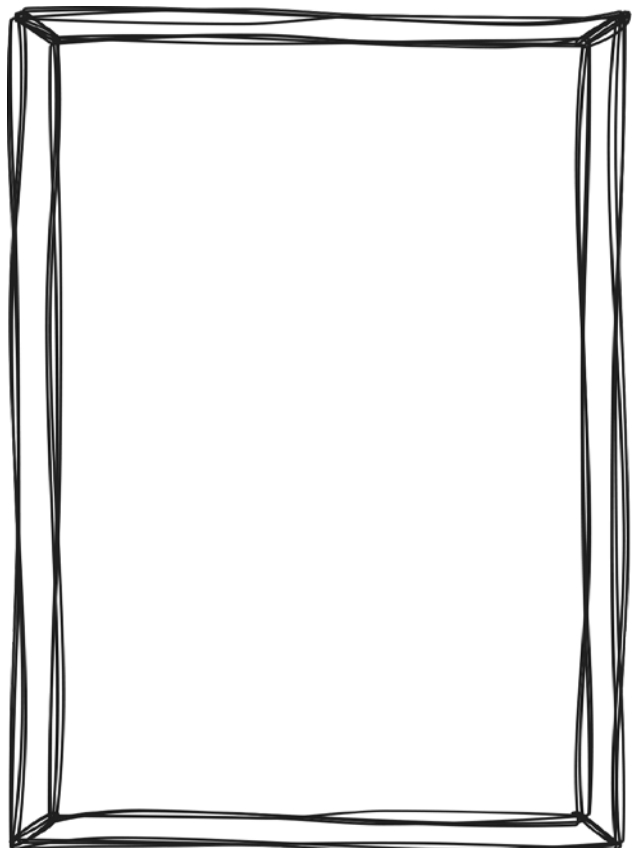
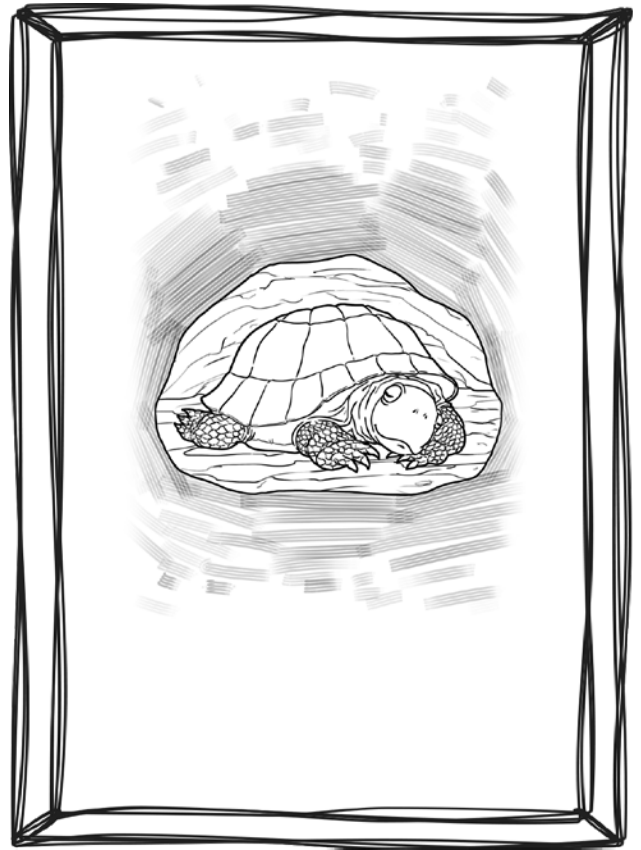
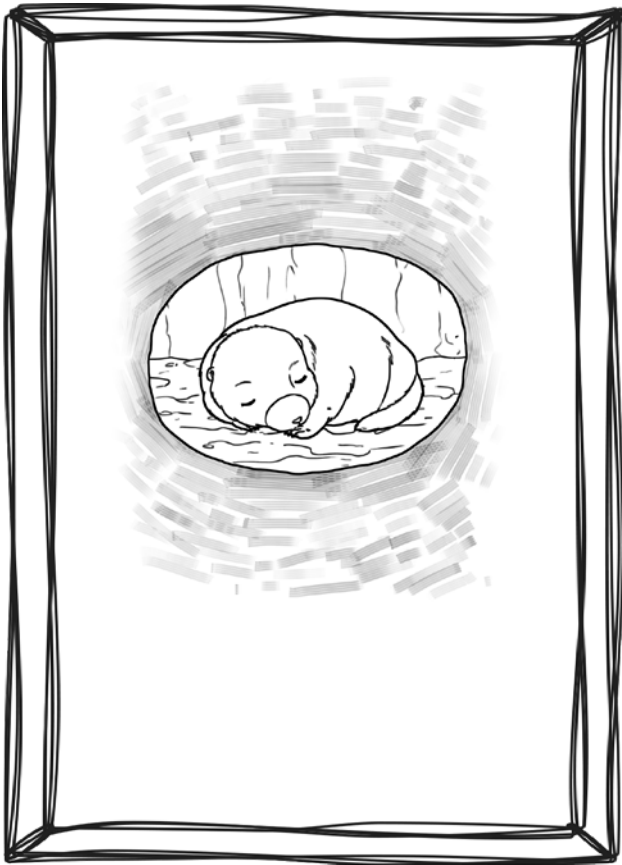
3. elephant

3.

[illegible]







Name: _____

Date Due: _____

Let's Get Social



Animal: _____

What Instagram posts would your animal share before and after hibernation?

Post #1:

A large, rounded rectangular box with a dashed border, intended for drawing or writing the content of the first Instagram post.

Post #2:

A large, rounded rectangular box with a dashed border, intended for drawing or writing the content of the second Instagram post.