

# **GROUNDHOGS STUDY & LAPBOOK**



## Research & Lessons

### Classification

Kingdom    Animalia  
Phylum    Chordata  
Sub-phylum Vertebrata  
Class        Mammalia (mammals)  
Order        Rodentia    (rodents)  
Family       Sciuridae    (ground squirrels)  
Genus        Marmota    (marmots)  
Species      M. monax    (Latin word for solitary)

### Vocabulary

predator - animal that hunts other animals for food

herbivore - plant eating

burrow - hole or tunnel dug into the ground

asocial - not social

guard hair - long, coarse hairs in a mammal's coat that form the topcoat and protect the undercoat from the elements

diurnal - active during the day

incisors - front teeth (humans have 8 - 4 in the upper jaw and 4 in the lower, rodents have 4 - 2 upper 2 lower)

mammal- any of a class of warm-blooded vertebrates that include human beings and all other animals that nourish their young with milk produced by mammary glands; mammals also have hair

### Habitat

Groundhogs are found in the woodlands and fields of the United States, Canada and as far west as parts of Alaska.

The destruction of forest has actually increased the groundhog population in recent years.

### Names

Groundhogs have several names. They are also known as woodchucks, land beavers, whistle pigs and marmots.

Whistle pig comes from the loud shrill whistle they make to warn each other of danger.

Woodchuck is derived from the Native American words "wojak" (Algonquian) and "wuchak" (Cree). Settlers pronounced these words as "woodchuck".

### Groundhog Characteristics

Groundhogs are mammals. They are diurnal.

They can grow from 17 to 25 inches long and weigh 5 to 14 pounds. When conditions are just right, that can change to 32 inches long and 30 pounds.

Their feet are black with four toes on the front and five toes on the back. Short legs cause them to waddle when they walk.

Two coats of fur help keep them warm and dry. A dense, woolly undercoat and longer guard hairs. These guard hairs are banded with alternating dark and light colors of yellowish gray to reddish brown, giving this mammal a frosted or grizzled appearance.

Dark colored tails are fanned out and fluffy like their relative, the squirrel. Although, not as large in relation to body size (1/4 of their total body length).

Ears are small, low and rounded atop a black colored head with small black eyes.

### Diet

Groundhogs are herbivores. Their diet primarily consist of wild grasses, dandelion greens, clover and agricultural crops like alfalfa. They love to feast on backyard gardens.

### Family relationship

Groundhogs are the only member of their genus that are asocial. They generally live alone, only coming together to breed and raise cubs.

Babies are called kits or cubs. In early spring, females give birth to a litter of four to nine cubs. By summer, cubs move out to start burrows of their own.

## Rodents

Groundhogs are one of the largest members of the rodent family, the largest group of mammals. There are more than 1,700 different kinds of rodents! Beavers are the largest North American rodent, weighing in at 30 to 70 pounds. Capybaras are the largest rodent in the world (found in South America), weighing up to 140 pounds. The pygmy jerboa is the smallest member of the family with a two inch body and four inch tail.

### Rodent Characteristics

- ~ all rodents have two large upper teeth (incisors) which are ever-growing (note: rodents are the only mammal with this characteristic)
- ~ rodents must wear down their incisors by rubbing them together and by chewing on tough foods; if a rodent doesn't do this, the top incisors will curve back and pierce the rodent's skull
- ~ many rodents have stretchy cheek pouches that can hold food; they gather food, put it in the pouches, and take it back to their nest for storage
- ~ use whiskers to feel their way around in the dark
- ~ have an excellent sense of smell
- ~ use front paws like hands
- ~ most have sharp claws for digging or climbing trees

Rodents are grouped into three main categories: squirrel-jawed rodents, mouse-jawed rodents, and porcupine-jawed rodents.

Squirrel-jawed include beavers, muskrats, squirrels, springhares, pocket gophers, groundhogs, scaly-tailed squirrels, pocket mice, and kangaroo rats.

Mouse-jawed rodents include rats, mice, voles, gerbils, jerboas, hamsters, lemmings, dormice, jumping mice, brich mice, and North African mole-rats.

Porcupine-jawed rodents include porcupines, caviars, capybaras, gundis, South-American mole-rats, domestic guinea pigs, chinchillas, agoutis, and nutrias.

Groundhogs, like other rodents, can climb trees and swim.

## Burrows

Groundhogs live in homes they dig in the ground, called burrows.

Groundhogs are well equipped to dig. Their front claws are curved to scrape away soil, flat heads help to push dirt aside and strong back feet are used to kick dirt behind. Those powerful incisors come in handy to gnaw through any roots that are in the way.

The tunnels they construct have several rooms and at least two entrances. Tunnels can reach lengths of 40 feet and depths of 6 feet. Rooms are used to sleep, store food, raise babies and even as a toilet.

Other mammals, including rabbits, opossums, skunks, foxes and raccoons use vacant burrows. Even snakes will move in to abandoned burrows.

### Predators

Animals that hunt groundhogs include: bears, foxes, wolves, bobcats, coyotes, and birds of prey. Humans are also groundhog hunters.

Snakes can easily access burrows and prey on young groundhogs.

To avoid predators, groundhogs stay close to one of the many entrances to their burrow; this allows them to make a quick escape down a tunnel. If necessary, they can run (gallop) up to 10 miles per hour.

### Hibernation

Starting in late summer groundhogs start bulking up for winter, getting so fat they can hardly walk.

In late September or October, groundhogs stop eating and close off the burrows with dirt. They curl into a ball and sleep, living off stored body fat.

Breathing slows from 25 breaths per minute to 1 to 4 breaths per minute.

Heartbeat rates slow from 100 beats per minute to only 4. Body temperature drops from 98 degrees Fahrenheit to around 40 degrees. That's about the temperature of your refrigerator.

Sleeping for up to six months, these mammals only awake to have a snack or use the toilet portion of the burrow.

Other animals, such as rabbits, use the tunnel exits for winter nest while the groundhogs sleep below.

### Farmers

Farmers have a reputation for disliking groundhogs.

Livestock and farmers have been injured stepping on burrow entrances that may go two feet straight down. The tunnels also collapse under the weight of machinery causing damage to farm equipment.

Burrowing under barns and buildings wreck the foundations.  
Groundhogs make a mess of the fields and eat the crops (profits).

There is one thing groundhogs do that is beneficial to farmers. All that digging exposes nutrient rich subsoil and turns it into topsoil. Approximately, 700 pounds of dirt is moved when building a single burrow.  
It is estimated that 16 million tons of soil is turned over every year in the state of New York alone.

### Tongue Twister

How much wood could a woodchuck chuck, if a woodchuck could chuck would?

Tongue twisters are phrases that are difficult to articulate, many use alliteration (repetition of a sound) and rhyme. English tongue twisters are used to help foreign students improve their accents and by speech therapist to improve various speech difficulties.

### Groundhog Day

They may not be the fastest, cutest or most loved animal, but groundhogs are the only animal with their own holiday!

Groundhog Day is February 2nd. Tradition holds that if the groundhog sees his shadow, there will be six more weeks of bad weather, and if he doesn't, that spring will be here soon. Of course, the groundhog doesn't really decide the weather! How did this holiday get started?

In the 1700s German settlers brought the tradition known as Candlemas Day with them. It was the custom on this day for clergy members to bless candles and distribute them (one for each window in every house) among the people for light in the midst of a dark winter. On this day in Germany, the people also watched a badger to check for a shadow. If the sun came out on Candlemas Day (which was also February 2), it meant six more weeks of wintry weather because the badger would have a shadow. When the Germans came to America, the badger was replaced with the groundhog.

(For more lessons on weather lore, see Homeschool Share's [The Big Snow Unit.](#))

Old English saying:

If Candlemas be fair and bright,  
Winter has another fight.  
If Candlemas brings clouds and rain,  
Winter will not come again.

The most famous groundhog is Punxsutawney Phil. The town of Punxsutawney, Pennsylvania holds a celebration in his honor each year (February 2nd). Thousands of people gather to watch Phil look for his shadow. See the emergence of Phil live on February 2nd at [www.groundhog.org](http://www.groundhog.org)

#### Book List

*Groundhog Day* by Gail Gibbons  
*The Big Snow* by Berta and Elmer Hader (HSS title)  
*A Garden for a Groundhog* by Lorna Balian  
*How Groundhog's Garden Grew* by Lynne Cherry  
*Gregory's Shadow* by Don Freeman

#### Just for fun: Jokes

What is green, with four legs and jumps out of a hole on February 2nd?  
Answer - A ground frog!

What happened when the groundhog met the dogcatcher?  
Answer - He became a pound hog

What does a groundhog call his father's father?  
Answer - Grandhog

What side of a groundhog has the most hair?  
Answer - The outside!

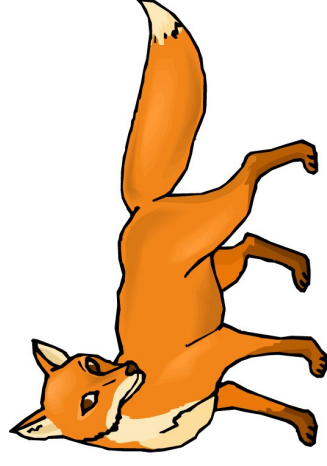
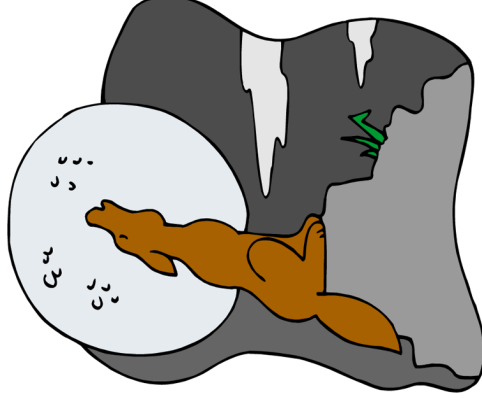
Materials and information may be used for your own personal and school use.

**Material may not be used for resale or shared electronically.**

© Homeschool Share

Bobcats	Bears	 <p>Groundhog Predators</p>	
<a href="http://www.homeschoolshare.com">www.homeschoolshare.com</a>	Foxes	Coyotes	Birds of Prey
Wolves			





Cut out pictures of animals and paste them in to the appropriate spots. [Fold hotdog style.](http://Foldhotdogstyle.com)

Cut book out as one piece.  
Fold in half. Unfold. Cut  
on flaps. Record infor-  
mation under each flap.



Pictures go with  
book on previous  
page.



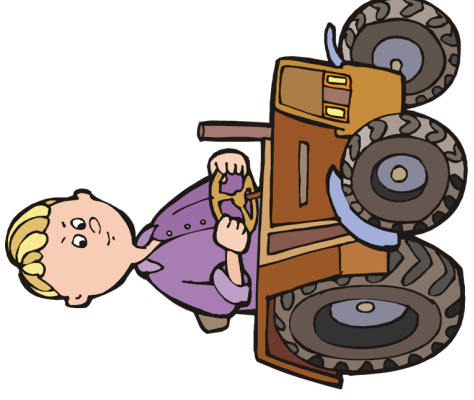
	<div data-bbox="870 655 1050 1047" data-label="Text"> <p><b>WHO IS PUNXSUTAWNEY</b></p> </div> <div data-bbox="1096 745 1409 934" data-label="Image"> </div>
	<div data-bbox="870 207 1050 590" data-label="Text"> <p><b>WHERE IS PUNXSUTAWNEY</b></p> </div> <div data-bbox="1096 308 1409 508" data-label="Image"> </div>

Assembly Directions: Cut book out as one piece. Fold left flap under. Fold right flap under. Fold book in half. Write information under each flap, as appropriate.

[www.homeschoolshare.com](http://www.homeschoolshare.com)

**Groundhogs  
HELP**

**On the  
Farm**



**Groundhogs  
HARM**

You are viewing the inside of the book. Cut out as one piece. Fold in thirds (tri-fold style). Cut out picture and paste in correct spots. Cut out cover piece and glue to the front cover.

Mouse-jawed Rodents			
Porcupine-jawed Rodents			
Squirrel-jawed Rodents			





CAPYBARA



GUINEA PIG



RAT



PORCUPINE



SQUIRREL



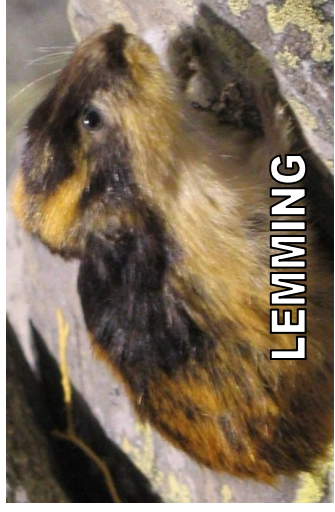
VOLE



GROUNDHOG

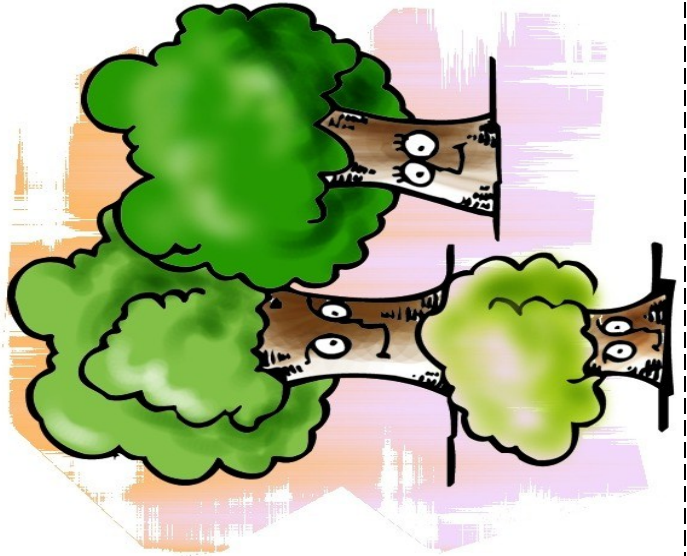


BEAVER

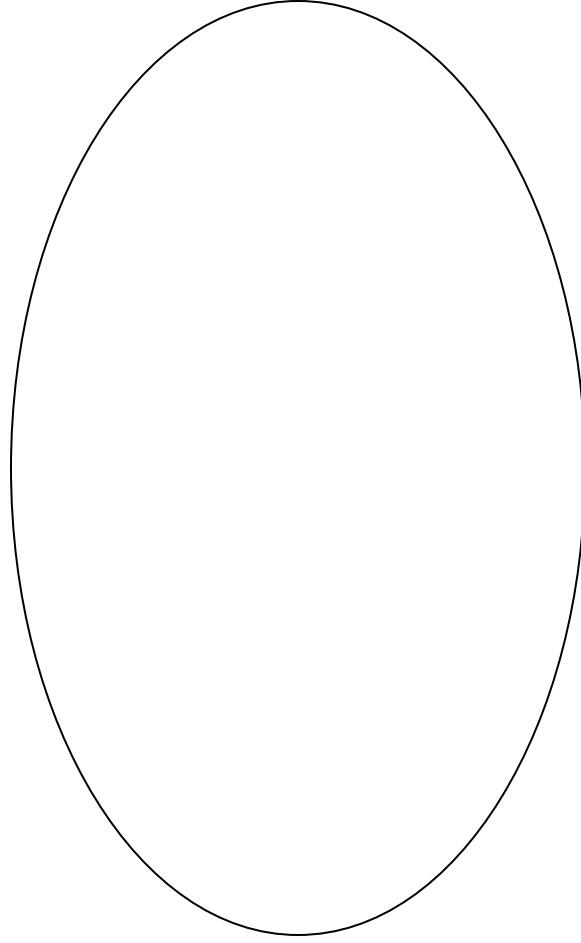
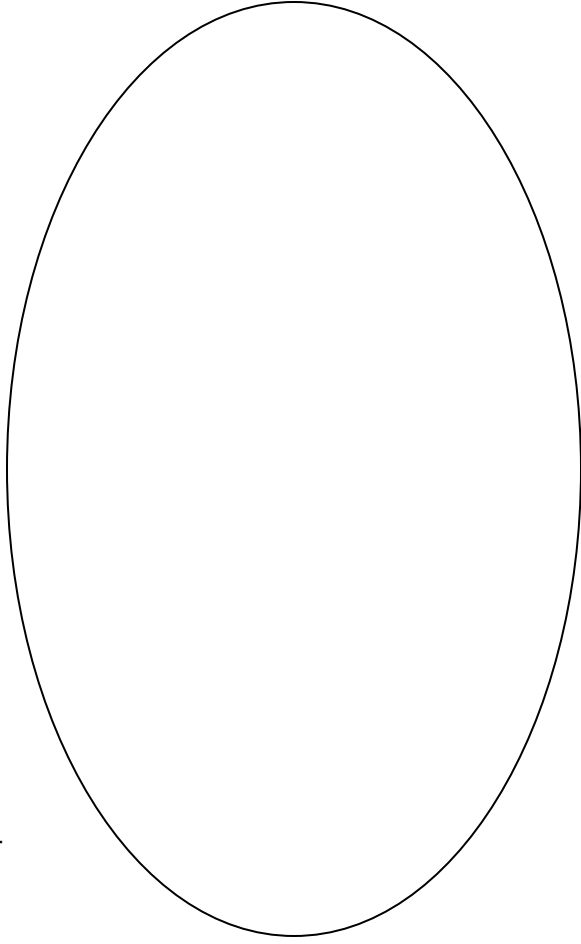
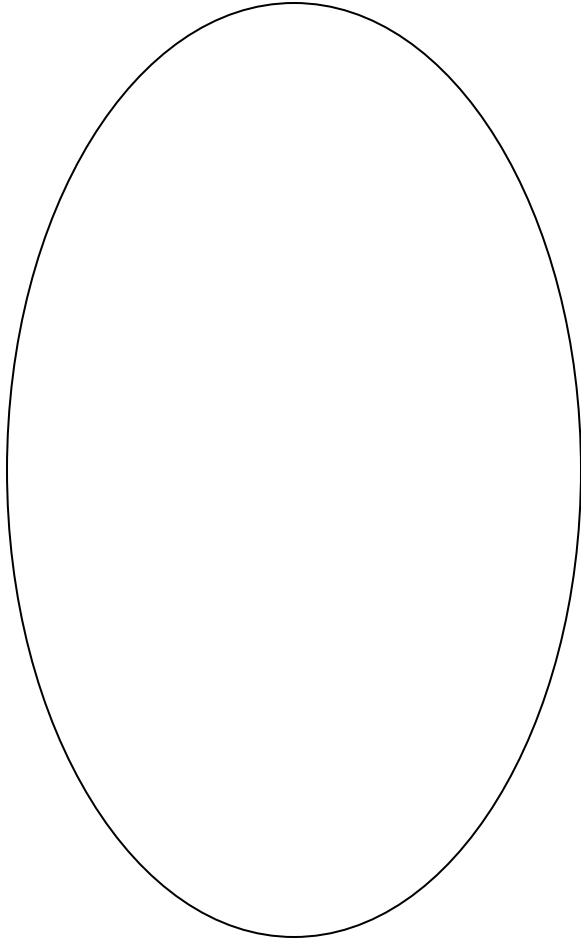


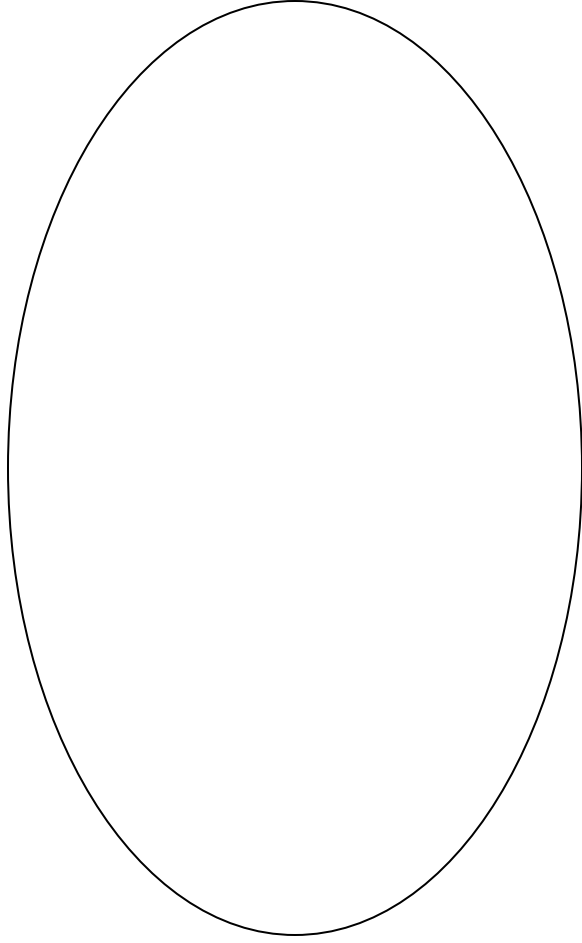
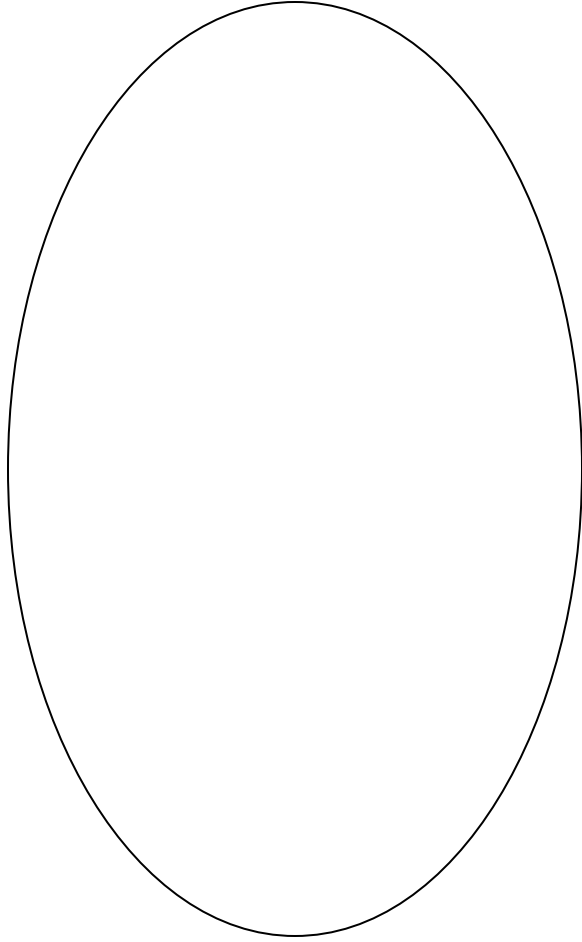
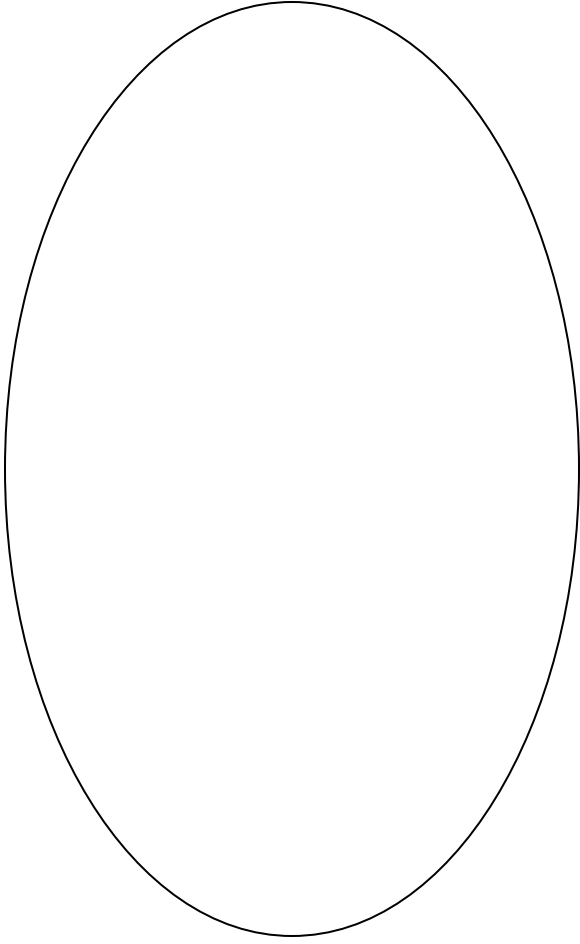
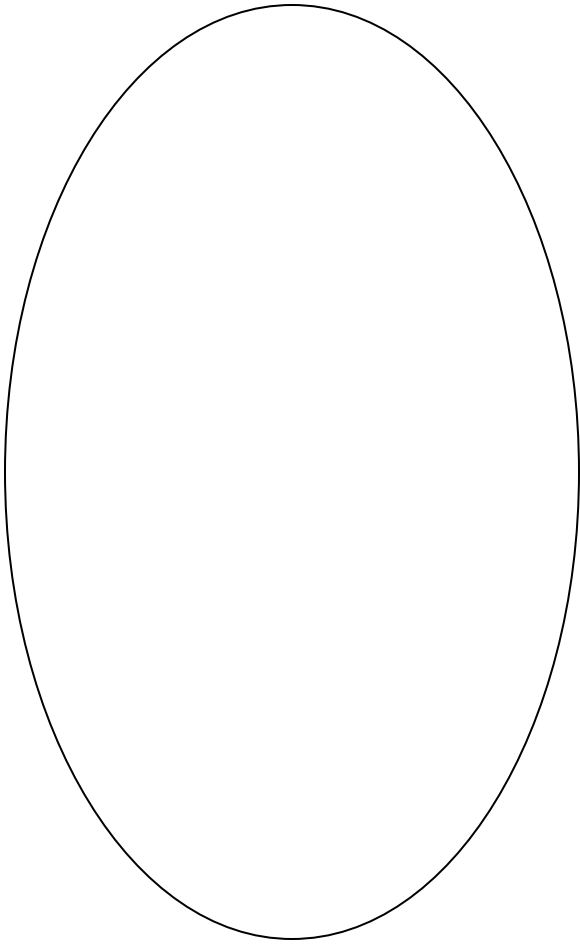
LEMMING

# THE RODENT FAMILY TREE



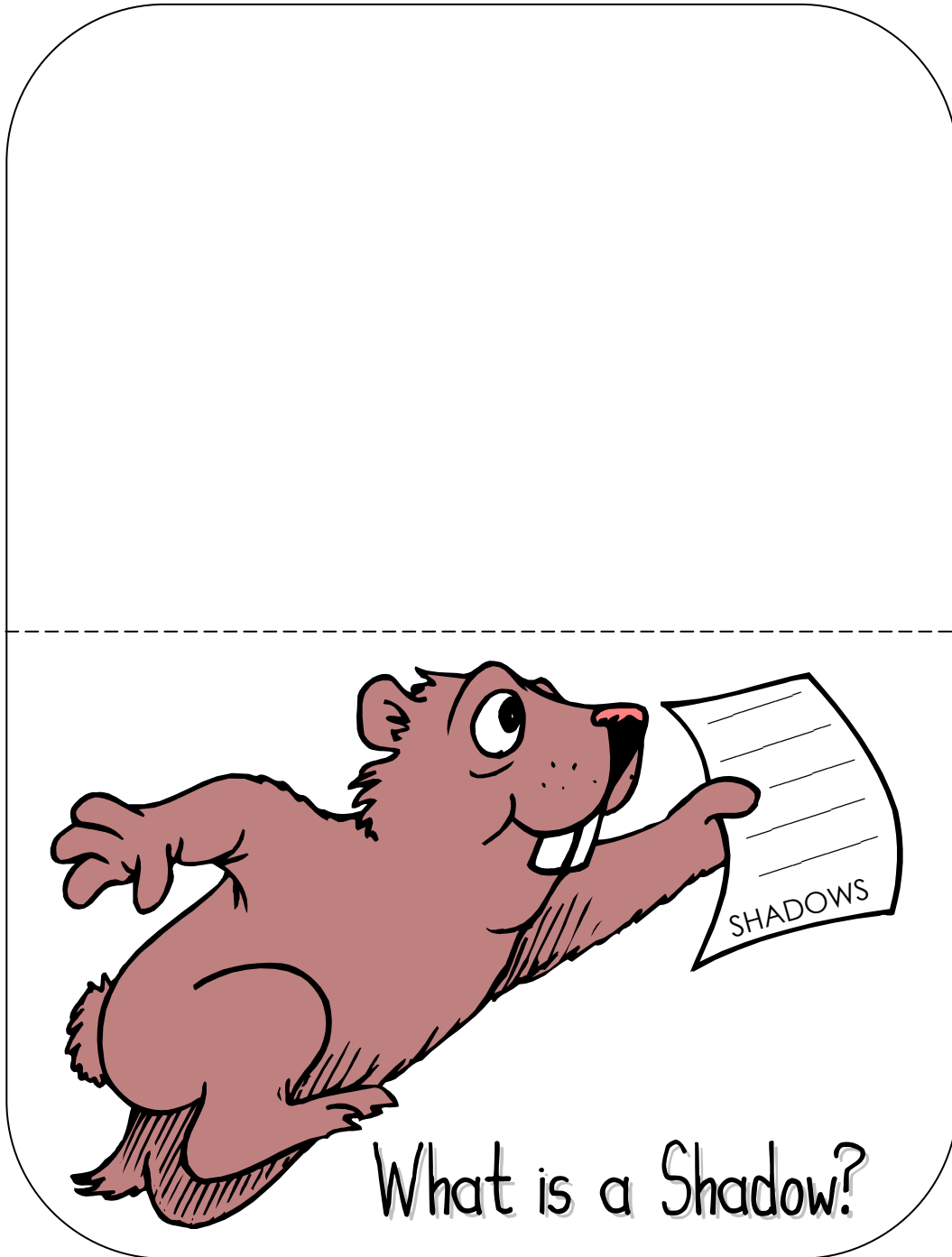
Cut out shapes. Stack together and  
staple where indicated on front cover.  
Write one rodent fact on each piece.







You will need to do your own research for this book. Cut on the solid line and fold on the dotted.



Cut out shapes on solid black lines. Fold on dotted lines like an accordion (back and forth, back and forth). If you need less areas to write, cut one/some off. If you need more, print another strip. Glue the back of the last space on the first piece to the front of the first space on the second piece.

[www.homeschoolshare.com](http://www.homeschoolshare.com)

Order

Class

Sub-phylum

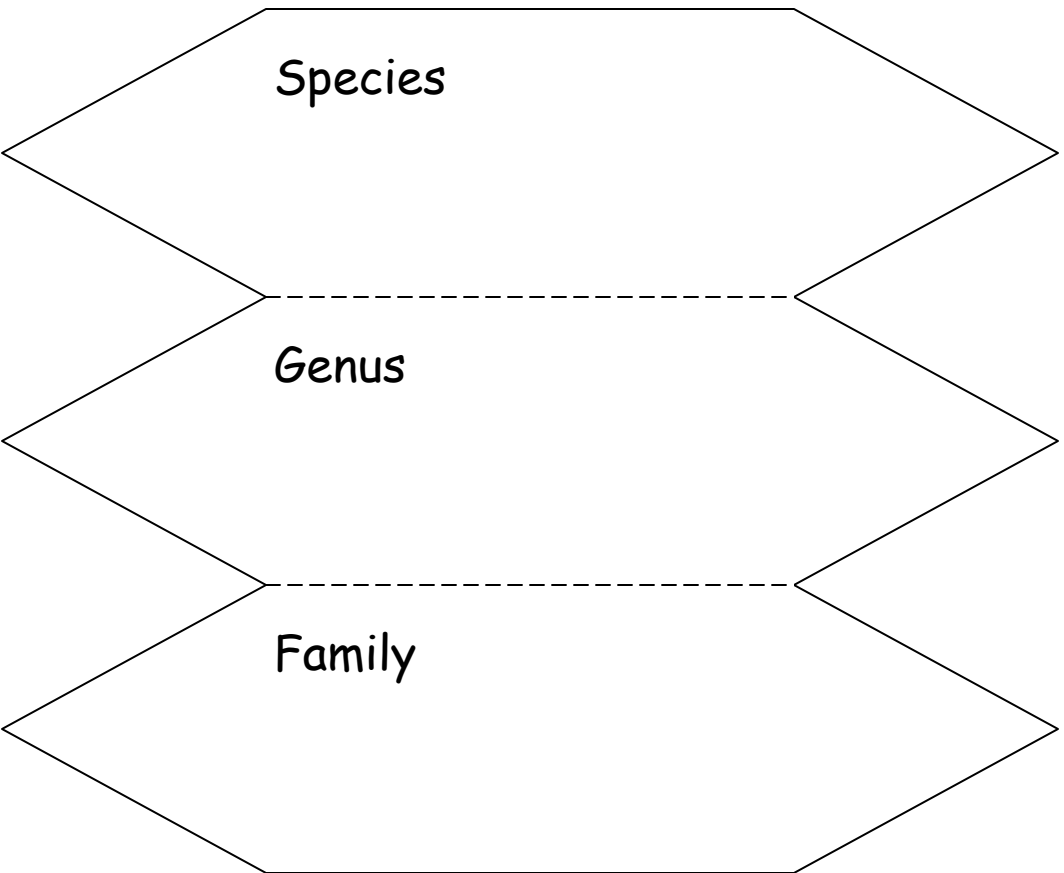
Phylum

Kingdom

**Classification**

Cut out shapes on solid black lines. Fold on dotted lines like an accordion (back and forth, back and forth). If you need less areas to write, cut one/some off. If you need more, print another strip. Glue the back of the last space on the first space on the front of the first space on the second piece.

[www.homeschoolshare.com](http://www.homeschoolshare.com)



Cut on solid lines and fold on dotted lines. Record information about a groundhog's diet in the book on the left. Use the book on the right to record whether or not the groundhog saw his shadow this year.

DIET



The Verdict

Cut out book as one piece and fold in half. Let your student record his prediction in the book. He can cut/paste the appropriate picture in as well.



**My  
Prediction**

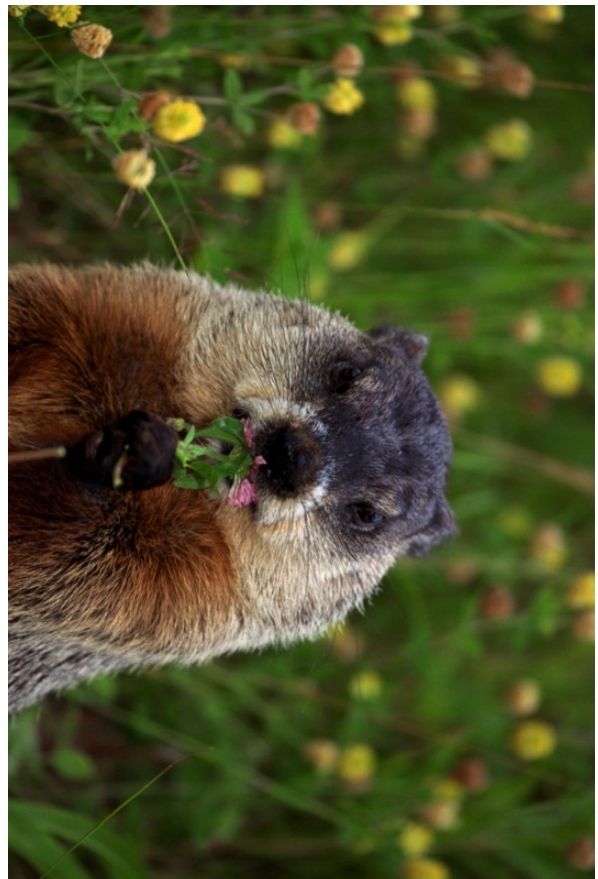
# Finding Groundhogs

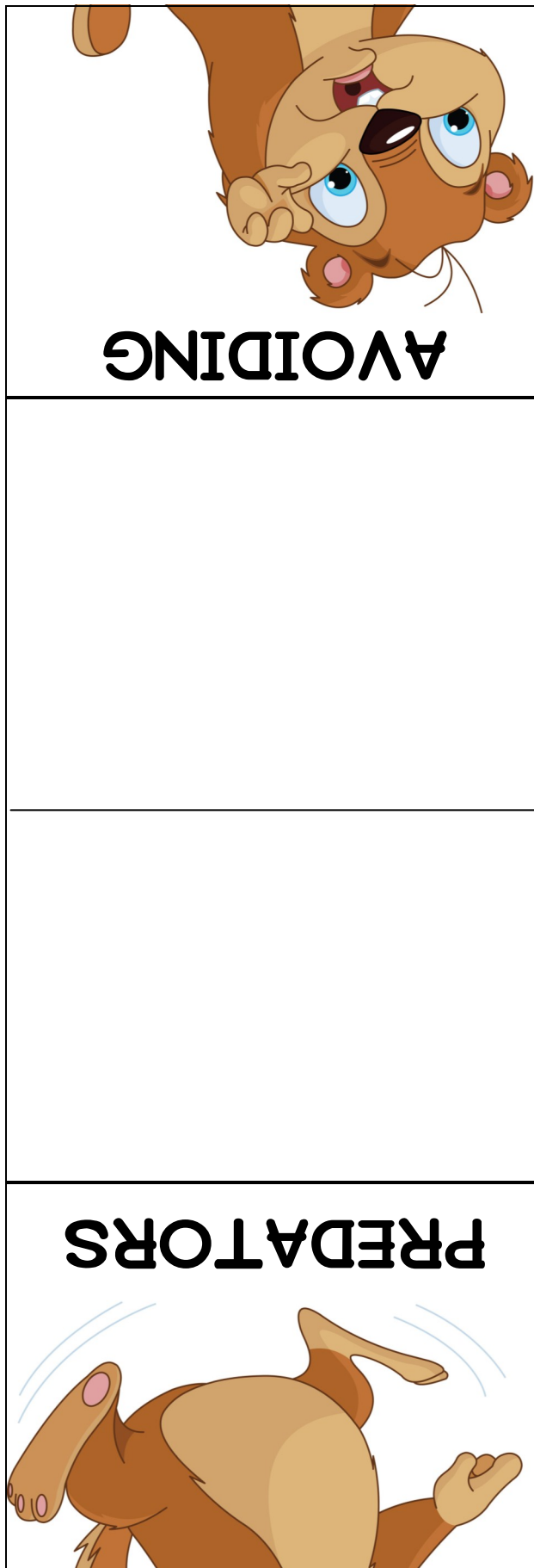


Cut book out on solid lines; fold on dotted lines. Cut out map on next page and paste into book.



Photos below have been included for your student to decorate his lapbook.





Cut book out as one piece. Fold flaps on each end under. Write one way a groundhog avoids predators under each flap.



www.homeschoolshare.com

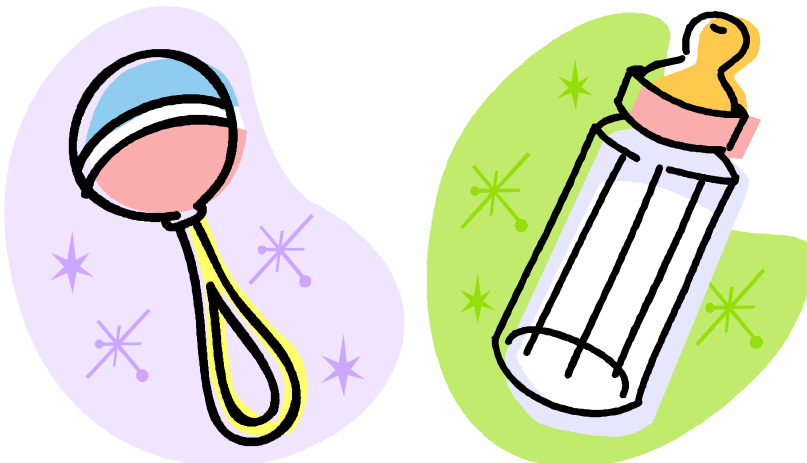
A cartoon illustration of a brown beaver standing on its hind legs. It has a large, rounded body, a small tail, and a friendly expression with blue eyes and a slight smile. It is holding a large, bright yellow flower with a green stem and leaves in its right paw. The beaver is standing on a light gray shadow.

Cut out book on this page  
as one piece. Fold in half.  
This is your cover book.

Cut books (4) out on next  
page and fold in half.  
Write answers inside and  
glue into the cover book.

[www.homeschoolshare.com](http://www.homeschoolshare.com)

# Groundhog Babies



	When do groundhogs give birth?
	How many babies are born at one time?
	What are groundhog babies called?
	When is it time for the groundhog babies to move out?

# Groundhog Anatomy



Feet & Legs

REMOVE THIS AREA (Cut away so you have just a tab left)

Tail

REMOVE THIS AREA

Cut along the solid outer lines. If there is a rectangle piece in the right corner of the strip, cut it off as indicated (remove this area). Stack your strips in order with cover on top and staple where indicated.

[www.homeschoolshare.com](http://www.homeschoolshare.com)

Ears & Eyes	REMOVE THIS AREA
Fur	

# CANDLEMAS



If Candlemas be fair and bright,  
Winter has another fight.  
If Candlemas brings clouds and rain,  
Winter will not come again.

Cut out each strip (one on this page and one the next) as one piece. Let your student complete the copywork. (For a young student, you may want to choose one line or a few key words). Attach extra pages by gluing the tab as indicated. Fold like an accordion. Tie a ribbon around the book, if desired (with the bow in the front); this will help keep it closed. Glue the back of the last page in to your lapbook.

Glue this tab to the back of the last page in your book.

# CANDLEMAS



If Candlemas be fair and bright,  
Winter has another fight.  
If Candlemas brings clouds and  
rain,  
Winter will not come again.

Cut out each strip (one on this page and one the next) as one piece. Let your student complete the copywork. (For a young student, you may want to choose one line or a few key words). Attach extra pages by gluing the tab as indicated. Fold like an accordion. Tie a ribbon around the book, if desired (with the bow in the front); this will help keep it closed. Glue the back of the last page in to your lapbook.



Glue this tab to the back of the last page in your book.

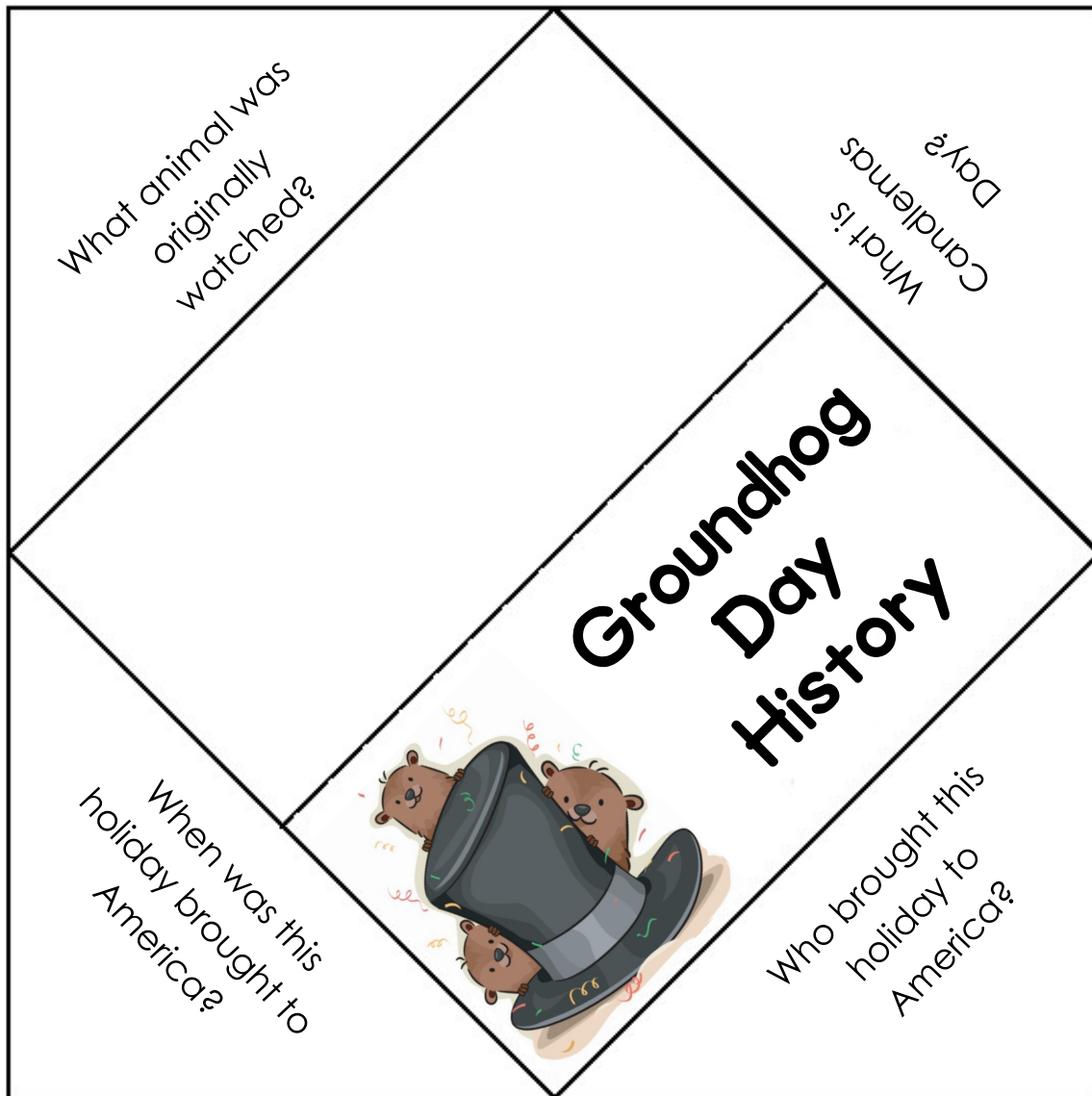
# CANDLEMAS



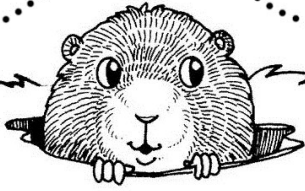
Cut out each strip (one on this page and one the next) as one piece. Let your student complete the copywork. Attach extra pages by gluing the tab as indicated. Fold like an accordion. Tie a ribbon around the book, if desired (with the bow in the front); this will help keep it closed. Glue the back of the last page in to your lapbook.

If Candlemas be fair and  
bright,  
Winter has another fight.  
If Candlemas brings clouds  
and rain,  
Winter will not come again.

Glue this tab to the back of the last page in your book.



Cut book out as one piece. Fold each triangle under. Fold book in half so that "Groundhog Day History" is on the cover.



# New Words

an animal that hunts other  
animals for food

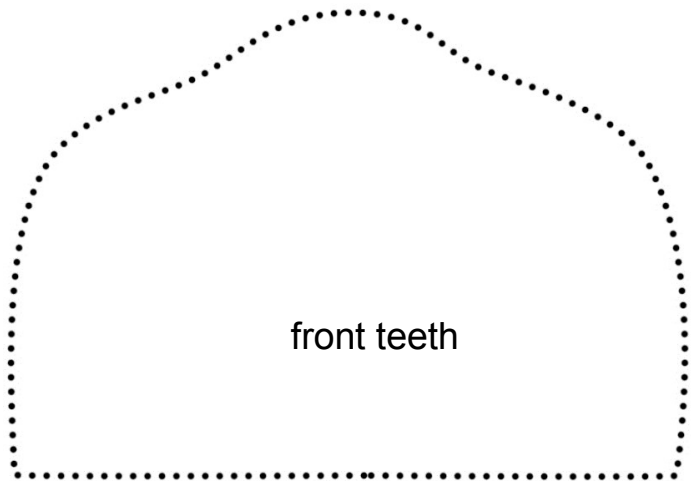
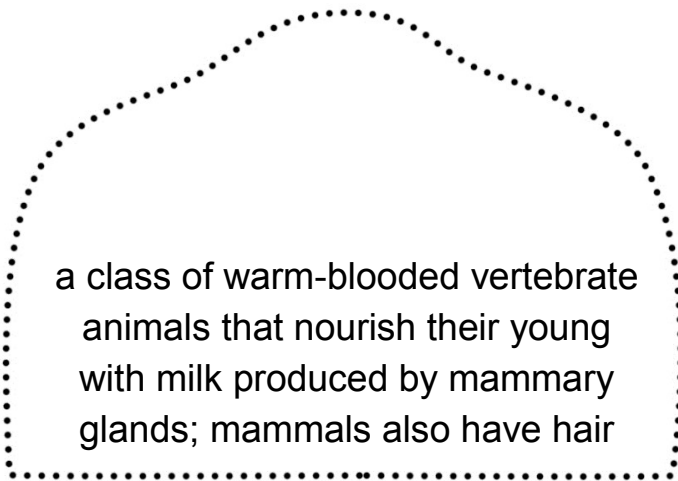
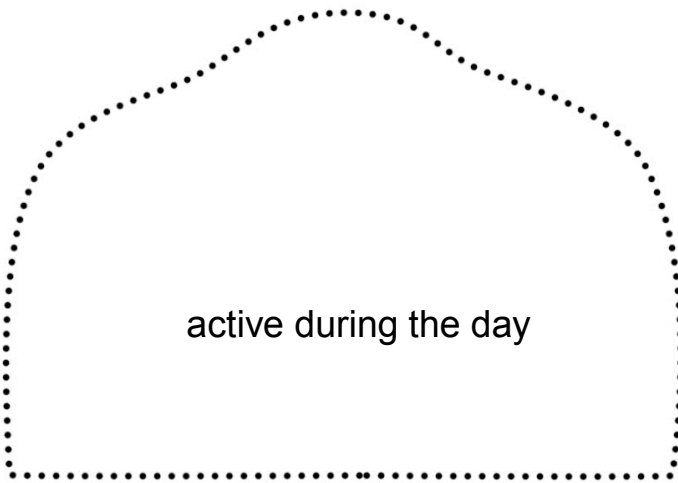
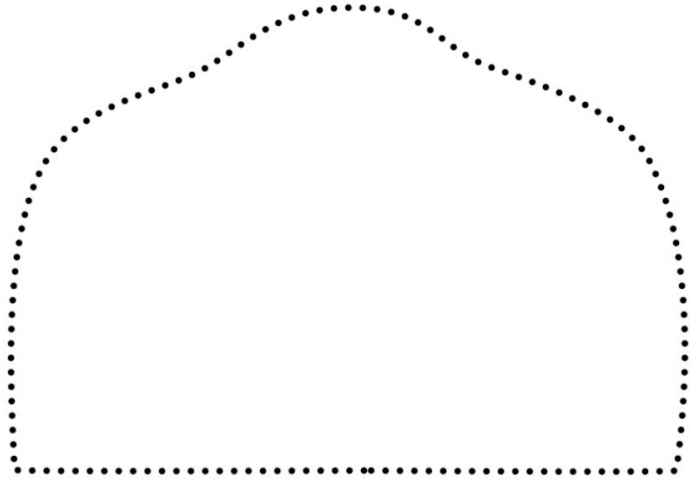
plant eating

hole or tunnel dug into the ground

not social; prefers to be alone

long, coarse hairs in a mammal's  
coat that form the topcoat and  
protect the undercoat from the  
wind, rain, and sun

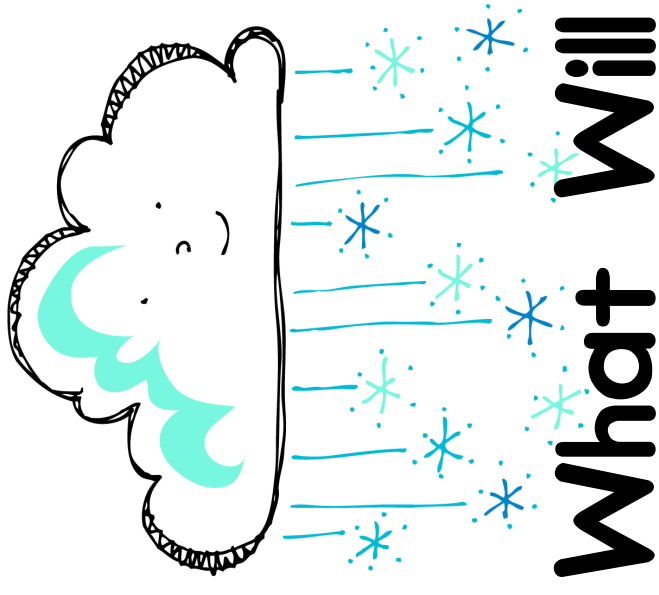
Cut out shapes. Write vocabulary word on each shape. Stack together with cover on top and staple on the left side. Blank shapes have been included in case you find more words you would like to include.



Cut on solid lines. Fold on dotted. Let your student cut/paste the pictures (on the next page) under the appropriate flaps.  
Let him write about what is suppose to happen in each case.

If the groundhog  
sees his shadow...

If the groundhog  
doesn't see his  
shadow...



the  
Weather  
Be?

What you see is the inside of the book.

I'm a Construction Worker.

Take a Tour!

Who's Moving In?



Groundhogs are well equipped to dig. Their front claws are curved to scrape away soil, flat heads help to push dirt aside and strong back feet are used to kick dirt behind. Those powerful incisors come in handy to gnaw through any roots that are in the way.

The tunnels they construct have several rooms and at least two entrances. Tunnels can reach lengths of 40 feet and depths of 6 feet. Rooms are used to sleep, store food, raise babies, and even as a toilet.

Other mammals, including rabbits, opossums, skunks, foxes and raccoons use vacant groundhog burrows. Even snakes will move in to an abandoned groundhog home.

Cut out book on previous page as one piece. Fold tri-fold style. Cut out explanations above and paste in appropriate spots (or let your student write the answers in, in her own words).

Cut out cover piece below and glue to the front of the book.

There's No Place  
Like  
Home!



What does a  
groundhog call  
his father's  
father?



What side of a  
groundhog has  
the most hair?



Cut books out on solid lines; fold on dotted lines.

[www.homeschoolshare.com](http://www.homeschoolshare.com)

What happened  
when the  
groundhog met  
the dogcatcher?



What is green,  
with four legs  
and jumps out  
of a hole on  
February 2nd?

