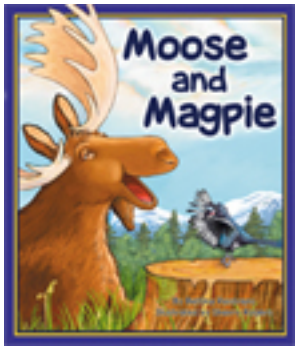
Teaching Activities

for



Teaching Activities are intended for use at home, in the classroom, and during story-times.

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Questions to ask children before reading the book

- What do you think the book is about by looking at the cover?
- What animals do you see?
- Where do you think the story takes place? (at the beach, in a desert, in the mountains, etc.)

What do children already know?

- Young children are naturally inquisitive and are sponges for information. The whole purpose of this activity is to help children verify the information they know (or think they know) and to get them thinking “beyond the box” about a particular subject.
- The children should write down their “concepts” (or adults for them if the children are not yet writing) on the provided chart found on the next page.
- Use the questions to get children thinking about what they already know. Feel free to add more questions or thoughts according to the child(ren) involved.

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What do children already know—activity chart

Ask children to write down what they think they know before reading the book. If the information is verified while reading the book, they check "yes." If the information is wrong, they mark "no" and cross it off, then write the correct information. Have the children note how the information was verified.

What do I think I know about _____?	Yes	No	Verified
moose antlers:			Text Illustration Info in FCM Other
where moose live:			Text Illustration Info in FCM Other
what moose eat:			Text Illustration Info in FCM Other
moose migration			Text Illustration Info in FCM Other
why birds follow moose			Text Illustration Info in FCM Other
Do moose swim?			Text Illustration Info in FCM Other

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Use this chart for any other thoughts the children might have.

What do I think I know?	Yes	No	Verified
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other

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After reading the book – writing prompts & thinking it through

- Did the cover "tell" you what the book was about?
- If not, how does the illustration on the front relate to the story?
- Draw your own cover.
- Write a song about moose migration.
- Can you think of another title for the book?
- Did the illustrator include anything in the pictures that were not in the story or are there things hidden in the art?
- Do you think everything in the story could be true? *Do animals really talk to each other or have human traits?*
- If the author used talking animal or gave the animals human traits, could the story have been told differently? How?
- Write a different ending to the story

Re-read the book looking for more information

Go back and re-read the book studying each page carefully.

- What facts are mentioned in the text?
- Pause during second readings and ask the child(ren) if they remember what happens next.
- What would happen if a character did something different or if something different happened to the character? Would it/could it change the story?

Comprehension Questions

- Why does Moose live by himself?
- Why did Moose have an itchy head?
- What did Moose do to try to forget about the itchiness?
- What do moose eat?
- Where did Moose go in the fall and why?
- What happens to moose antlers in the winter?

Fun things to look for

- What are some of the things that Magpie gathers?
- What are some of the other animals you see in the illustrations?

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What do children already know—activity conclusion

- Do the children have any more questions about moose? If so, write them down on the chart.

- Identify whether the information was verified and how.

- If the concept is correct, make a note of how the information was confirmed (illustration, in text, or the “For Creative Minds” section)

- If the concept was not correct, what IS the correct information – with confirmation notes as above.

- If the concept was neither confirmed nor denied, look the information up in a reliable source and note where it was confirmed.

- Wrap it all up by adding notes with new information that the children learned either through the reading or the research while looking up something else.

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Language Arts

Developing a vocabulary "word wall"

If using the book as a way to introduce a topic or subject, this is also a great way to introduce subject-related vocabulary words. If you don't have the time (or the inclination) to develop the "word wall" by playing the Vocabulary Game (below), we have provided a vocabulary list for you.

Vocabulary words for the "word wall" may be written on index cards, on a poster board, or on a chalk board. If writing on poster board or chalk board, you might want to sort into nouns, verbs, etc. right away to save a step later. Leaving the words posted (even on a refrigerator at home) allows the children to see and think about them frequently.

Vocabulary game

This activity is designed to get children thinking of vocabulary words which will then be used as the beginning vocabulary list for a science lesson.

Select an illustration and give children a specific length of time (five minutes?) to write down all the words they can think of about the particular subject. *If you do not have classroom sets of the book, it is helpful to project an illustration on a white board. Check our website (www.ArbordalePublishing.com) for book "previews" that may be used for this purpose.*

The children's word list should include anything and everything that comes to mind, including nouns, verbs, and adjectives. At the end of the time period, have each child take turns reading a word from his/her list. If anyone else has the word, the reader does nothing. If however, the reader is the only one with the word, he/she should circle it. While reading the list, one person should write the word on a flashcard or large index card and post it on a bulletin board or wall.

At the end, the child with the most words circled "wins." And you have a start to your science vocabulary list. *Note if a child uses an incorrect word, this is a good time to explain the proper word or the proper usage.*

Putting it all together

The following activities may be done all together or over a period of several days.

- Continue to add words to the vocabulary list as children think of them.
- Sort vocabulary words into nouns, verbs, adjectives, etc. and write what they are on the backs of the cards. When the cards are turned over, all you will see is "noun," etc. *(These can then be used to create silly sentences, below.)*
- Now sort the vocabulary words into more specific categories. For example, nouns can be divided into plants, animals, rocks, minerals, etc. They can be divided into living/non-living, or into habitat-related words.
- Have children create sentences using their vocabulary words. Each sentence could be written on a separate slip of paper.
- Have children (individually or in small groups) sort and put sentences into informative paragraphs or a story.
- Edit and re-write paragraphs into one informative paper or a story.

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Moose and Magpie

Suggested vocabulary list

nouns	verbs	adjectives
antlers	eat	cloven
bell	float	cold
bird	grow	dark
bone	hang	large
bug	joke	light
bull	live	new
calcium	migrate	old
calf/calves	nibble	one
cow	rub	warm
frog	sing	willow
hooves	swim	
insect	talk	
instinct	walk	
joke		
magpie		
mammal		
migration		
moose		
predators		
skin		
skunk		
tree		

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Moose and Magpie

Silly sentence structure activity

This is a fun activity that develops both an understanding of sentence structure and the science subject. Use words from the "word wall" to fill in the blanks. After completing silly sentences for fun, have children try to fill in the proper words by looking for the information in the book.

Moose are _____(adjective)._____(noun)s

Except for _____(noun)s with _____(noun), moose live alone.

The _____(noun)or dewlap is the flappy part of the _____(noun)that _____(verb)s down from the moose's throat.

Moose are _____(noun); they only eat _____(noun)s.

Some moose may _____(verb) up to five miles during _____(noun) in the fall.

Male moose _____(verb) and grow new _____(noun)s every year.

Antlers are made of _____(noun).

_____(noun), birds, mice, and other animals _____(verb) on the antlers that have fallen off.

_____(noun)s and other birds _____(verb) flies, ticks and _____(noun) drawn to moose.

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Moose and Magpie

Life-Cycle Sequence Sentence Strips

Preparation: Cut into sentence strips, laminate if desired, and place in a "center." Have children put the events in order. Children may work alone or in small groups. Cards are in order but should be mixed up when cut apart.

----------✂----------

Moose breed from early September to late October.

----------✂----------

Calves are born in May or June.

----------✂----------

Calves drink milk from their mothers.

----------✂----------

Calves start to eat food when they are a few days old.

----------✂----------

Cows chase off the calves when they are a year old.

Moose migrate to breed in the fall.

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Moose and Magpie

Word search

Find the hidden words. Even non-reading children can try to match letters to letters to find the words! Easy – words go up to down or left to right.

For older children, identify the coordinates of the first letter in each word (number, letter).

	A	B	C	D	E	F	G	H	I	J
1	F	U	N	Y	O	H	B	I	R	D
2	A	M	C	A	S	T	I	T	I	E
3	V	A	D	N	L	E	G	O	V	I
4	O	R	I	G	M	O	O	S	E	T
5	M	I	G	R	A	T	E	O	R	E
6	Y	E	P	O	G	I	F	G	U	P
7	A	C	O	W	P	L	A	N	T	S
8	H	A	I	R	I	H	L	E	A	H
9	I	L	Y	B	E	L	L	A	R	E
10	S	F	A	N	T	L	E	R	S	D

__, __ MOOSE	__, __ MAGPIE	__, __ BIRD
__, __ MIGRATE	__, __ COW	__, __ CALF
__, __ ANTLERS	__, __ FALL	__, __ RUT
__, __ SHED	__, __ GROW	__, __ PLANTS
__, __ HAIR	__, __ RIVER	__, __ BELL

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Science
Edible sorting and classifying activity

Gather together a cup of edible "sorting items." For example:

- As many different kinds of M&Ms as you can find
- Chocolate & peanut butter chips
- Hershey kisses
- Peanuts or other type of nuts

Ask the child to sort the items into groups. There is no right and wrong, only what makes sense to the child. When finished, ask the child:

What criteria or attribute (color, size, ingredient, etc.) did you use to sort the items?

- Are there some items that fit more than one group or don't fit any group?
- Is it easy to sort or were there some items that were a little confusing?

If more than one person did this, did everyone sort by the same criteria? To really extend the learning, graph the attributes used to sort the items. *(blank graph below)*

Sorting by attribute graph

Graph the attributes that children used to sort their items.
What was the most common attribute (size, shape, color, etc.) used?

10					
9					
8					
7					
6					
5					
4					
3					
2					
1					
Attribute:					

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Classifying animals

Animals can be sorted too. What are some attributes you might use to sort animals?

- By habitat
- Do they have a backbone?
- Do they have arms or legs?
- How many legs do they have?
- Do they have stripes or patterns on their bodies?
- Do they walk, swim, jump, or fly?

Some things are very easy for scientists to sort or classify, other things are not so easy. The first question they will ask is whether the item is (or was) alive or not. Both plants and animals are living things.

If the item in question is an animal, like the animals in the story, scientists will then ask other questions:

- Does it have hair or fur, feathers, or dry skin or scales?
- Does it get oxygen from air (lungs) or from water (gills)?
- Are the babies born alive or hatched from eggs?
- Does the baby eat drink from its mother?
- Is it warm or cold-blooded?
- How many body parts does the animal have?

By answering these (and other) questions, scientists can sort or classify the animals into “classes” such as mammal, bird, reptile, fish, amphibian, or insect.

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Animal classification chart at class level (vertebrates)

Information on the five classes of **vertebrates** (animals with backbones) is given in the table below. Using information found in the book or below, fill in the blanks for each of the animals mentioned in the book (text and the *For Creative Minds* section). Some of the information may be determined by looking at the illustrations. For example, if the animal gets its oxygen from the water, it will be shown living in the water. If the information is not in the book, it has already been filled in. Have the children use the chart to determine to which class of animals each animal belongs. The chart may also be used to complete a Venn diagram.

	Gets oxygen from air / water	Warm or cold-blooded*	Lays eggs or live birth	Hair, scales, or feathers
Mammals	Air	Warm	Mostly live**	Hair
Birds	Air	Warm	Eggs	Feathers
Fish	Water	Cold	Varies	Scales
Reptiles	Air	Cold	Mostly eggs***	Scales
Amphibians	Water, then air	Cold	Eggs in water to larva	Moist skin that is naked & smooth
Moose		Warm	Live	Fur
Magpie		Warm		Feathers

*Warm blooded (endothermic): animals make their own heat and have a fairly constant body temperature. Cold-blooded (ectothermic): body temperature comes from the animals' surroundings
**A few mammals are hatched from eggs.
***Some snakes give live birth

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Regeneration

By Bettina Restrepo, Author

Topic: What can fall off an animal that they can grow back?

Vocabulary

- The prefix “re” - to begin again
- Recreate
- Regenerate
- Life cycle.
- Stages
- Horns
- Tentacles

Curriculum: Science and Nature

Age: 5+

Materials: Pictures of moose, starfish, snakes, locusts growing out of skins, teeth, horns, tentacles.

Teacher to Teacher Tip:
Many of these pictures are available on Google images. Show before and after for greatest impact.

What to do:

1. Ask the children if they know any animals that have parts of themselves that fall off and grow back during their life cycle?
2. Ask if they know if any parts of themselves fall off during their life cycle? (Eyelashes, teeth, skin, hair).
3. Explain how the same happens with animals in different ways. Show pictures.
    a. Moose lose antlers each year.
    b. Starfish can lose a tentacle and grow it back.
    c. Snakes get bigger and must grow out their skin.
4. Explain life cycle as the different parts of life, like being a baby, then turning into a big kid, then an adult, and finally an older person.
5. Allow children to imagine and verbalize what other animals do during their life cycles.

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Adaptations: Physical and Behavioral

Adaptations help animals to live in their habitat: to get food and water, to protect themselves from predators, to survive weather, and even to help them make their homes. The following is not a complete list by any means, but should help.

- Physical Adaptations:
  - body parts
    - teeth – depend on type of food it eats
    - feet, flippers, fins – ability to move
    - placement of eyes
    - how does it get oxygen (gills, lungs, osmosis)
  - body covering & insulation
    - hair
    - feathers
    - fur
    - scales
    - blubber
  - Camouflage
    - color of skin or pattern to blend into background.
    - mimicry: pretending to be something else to fool predators
- Behaviors
  - instinct: behaviors or traits that the animals are born with
  - learned behavior: traits that animals learn to improve their chances of survival or to make their life easier
  - social groups versus solitary living
  - communication with other animals
  - defense/camouflage
  - reaction to cycles (day/night, seasons, tides, etc.)
  - migration: the seasonal movement of animals from one location to another
  - hibernation: a long, deep sleep in which the animal's breathing and heartbeat are slower than usual.

Try to answer the adaptation questions for each animal on the following pages.

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Moose

Have you ever seen one of these animals in real life? _____ yes _____ no

If so, where did you see it? _____

What are the babies called? _____

How are the animals born? _____hatched from eggs _____ born alive

How many brothers and sisters might be born at the same time? _____

How big is the baby (length, height, weight, etc.) when born? _____

Who raises the young: _____both parents _____mother only _____father only

_____ neither parent – the baby survives on pure instinct

What does the baby eat and for how long? _____

_____

How long will the babies stay with the parent (if parents are involved)? _____

When is the "baby" considered an adult? _____

How will it find a mate and have babies? _____

_____

Who prepares the nest/den/burrow and how (if applicable)? _____

_____

Some animals are only born at specific times of the year (to coincide with food availability). This baby is born: _____ anytime of the year or _____ usually in the month of _____ or the season of _____

To what animal class does it belong? Circle the answer:

Vertebrate:	**Invertebrate:**	
fish	arthropod (insects, crustaceans & arachnids)	
mammal	sponges	mollusk
bird	flatworms	roundworms
reptile	segmented worm	cnidarian
amphibian	echinoderms	

In what type of habitat and ecosystem does this animal live? _____

_____

How does it move and what parts of its body does it use to move? _____

_____

What are some of the behaviors that were discussed in the story? _____

_____

_____

How does it see? _____

How does it hear? _____

What does it eat? _____

How does it get its food? _____

_____

How does it protect itself from predators? _____

_____

Where does the animal live and does it make a “house?” (burrow, nest, etc.) _____

_____

Does it live alone or with a group? _____

How does it “communicate” with others of its kind? _____

How does it sleep? _____

When does it sleep? _____

Is food easily available all year? _____

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Learned or Inherited?

Learned behavior: Behavior that is taught; by observation, practicing, or experimenting.

Inherited behavior: Behavior received from parents and ancestors through genetics, instinct; they are born knowing it.

See if you can figure out if the animal behavior is learned or inherited:

animal behavior	learned	inherited
A dog barks, a cat meows, a duck quacks.		
A dog sits when told to.		
A human baby cries.		
Animals migrate (birds, butterflies, whales)		
People smile or dogs wag tails when happy.		
Animals mark their territory (scratching, urinating, etc.)		
Birds build nests.		
A human can read.		
A puffer fish puffs up to protect itself.		
A child rides a bike.		
A human speaks a language (English, Spanish, etc.).		
A beaver cuts down trees.		
Cats quietly sneak up on prey.		

Several different animal behaviors that occurred in the story are listed below. Explain whether you think the behavior is learned or inherited and why.

Moose live alone. _____learned _____inherited

_____

Moose migrate to breed _____learned _____inherited

_____

Magpies gather shiny things _____learned _____inherited

_____

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Where in the world?

Biome The broad area of the Earth's surface characterized by distinctive vegetation and associated animal life; e.g., forest biome, grassland biome, desert biome
Ecosystem A community of living organisms and their interrelated physical and chemical environment, including food webs, etc.
Environment The total of the surroundings (air, water, soil, vegetation, people, wildlife) influencing each living being's existence, including physical, biological and all other factors; the surroundings of a plant or animal, including other plants or animals, climate and location.
Habitat The immediate place where a plant or animal naturally or normally lives and grows.

See if you can identify areas where moose live. It is possible to have a habitat within an ecosystem; e.g., an animal might live in a pond in the middle of a forest. Explain why the moose could or could not live in each area.

- Aquatic
  - Marine (saltwater) Oceans
    - Open ocean
    - Deep sea
    - Tropical
    - Temperate
    - Polar (Arctic & Antarctic)
    - Estuaries, marshes, mangroves, and inter-tidal zones
    - Coral reefs
  - Freshwater
    - Lakes and ponds
    - Rivers and streams
    - Wetlands
- Desert (less than six inches of rain a year)
  - Hot
  - Cold (Antarctica)
- Forests (vary by latitude or mountain elevation)
  - Boreal or Taiga: cold winters & warm summers, evergreens
  - Temperate Deciduous: well defined growing seasons
  - Rainforest: over 85 inches of rain per year
    - Tropical: found in tropics 0 to 22.5 degrees latitude
    - Temperate: between 22.5 and 50 degrees latitude
- Grasslands (also called prairies, savannas, or steppes)
  - Temperate: defined growing seasons
  - Tropical: hot all year
- Tundra (cold and no trees)
  - Arctic
  - Alpine (mountain) tundra (high elevation)
- Polar
  - Arctic (North Pole) (see also Tundra)
  - Antarctic (South Pole)
- Caves
  - entrance
  - twilight
  - dark (no light)
  -

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Science journal

Have children draw a picture to define the vocabulary word or concept.

herbivore
antlers
solitary

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rut
magpie
moose

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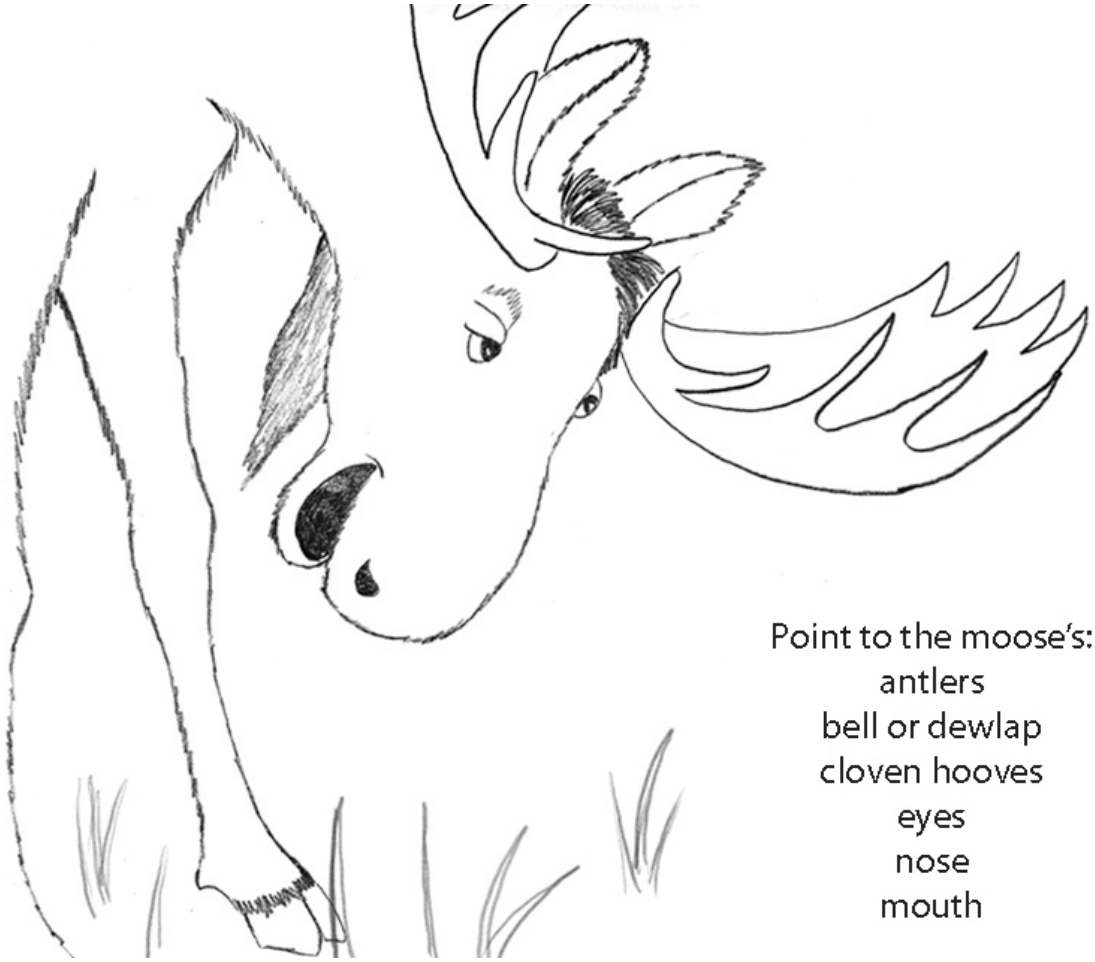
Label the animal



Point to the moose's:
antlers
bell or dewlap
cloven hooves
eyes
nose
mouth

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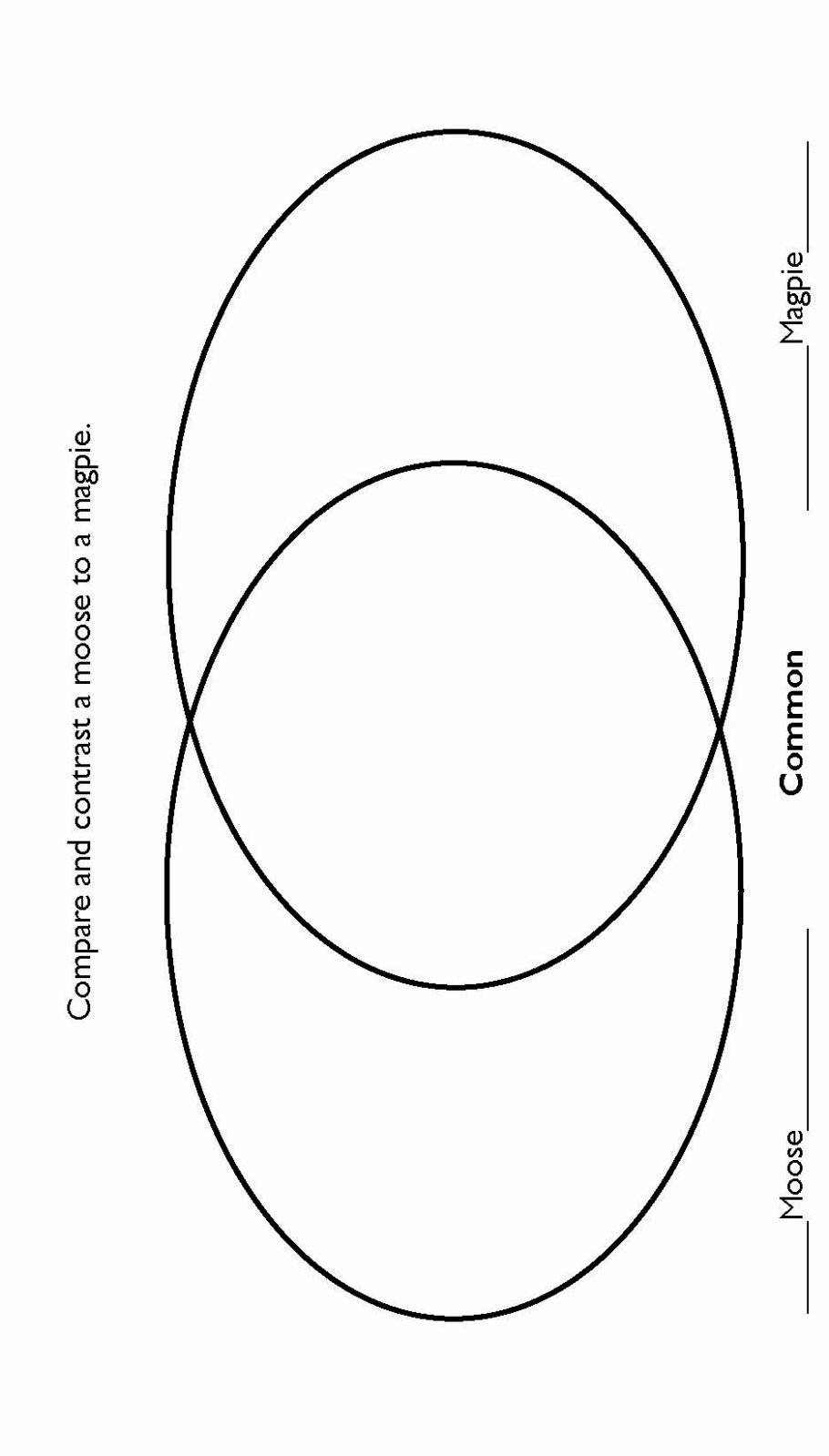
Math
Venn diagram



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Measuring (comparing and contrasting)

Animals come in all shapes and sizes. Some animals are so small, they can only be seen with a microscope. Other animals (blue whales) are so big that they are the size of a school bus when they are born!

Comparing and contrasting by size and weight

It is easy to say that a moose's antlers may grow to 4 or 5 feet, but what does that really mean? What standard measuring tool would you use to measure something in:

- Inches or centimeters
- Feet or meters
- Pounds or kilograms

Try to imagine how big or small the animal is compared to something you know:

It if is small, what are some other things about the same size? *How many pennies, paperclips, quarters, hands, shoes, etc.)*
If it is very big, how many "things" would equal it?

How big is five feet?

- Using the right measuring tool (yard stick or measuring tape) and chalk, mark off five feet is on the playground, sidewalk, or driveway. *How many inches are in five feet?*
- If you were to lie down on or next to the line, how many times would you have to lie down in order to equal the size of the antlers?
- If someone shorter or taller than you did it, how many times do they have to lie down?
- How many times would an adult have to lie down?

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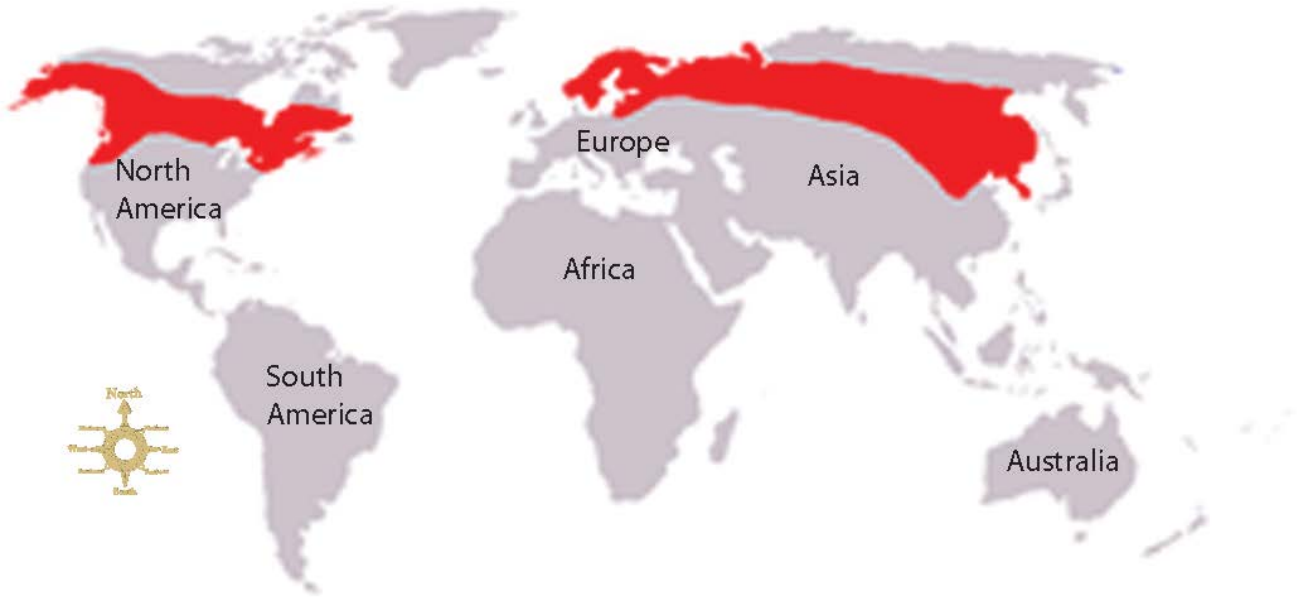
Geography



World-wide moose range & distribution
adapted from
http://en.wikipedia.org/wiki/Moose

Are moose found in the north or the south?
From the location of where they are found, do you think they like hot or cold weather?
On which continents do moose live?

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North American moose range & distribution
http://en.wikipedia.org/wiki/Moose

Find the state or province in which you live.
Do moose live in your state?

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Answers

Page 5 Comprehension Questions

- Why does Moose live by himself? Moose are solitary animals
- Why did Moose have an itchy head? His antlers were growing in.
- What did Moose do to try to forget about the itchiness? He rubbed his head against the tree.
- What do moose eat? leaves and tree bark
- Where did Moose go in the fall and why? Moose gather to "rut" in the fall. They migrate to certain areas where the males compete for the female's attention.
- What happens to moose antlers in the winter? The antlers fall off and start growing again.

Page 9 Silly Sentences

- Moose are large mammals.
- Except for cows with calves, moose live alone.
- The bell or dewlap is the flappy part of the skin that hangs down from the moose's throat.
- Moose are herbivores; they only eat plants.
- Some moose may swim up to five miles during migration in the fall.
- Male moose shed and grow new antlers every year.
- Antlers are made of bone.
- Bugs, birds, mice, and other animals nibble on the antlers that have fallen off.
- Magpies and other birds eat flies, ticks and insects drawn to moose.

Page 12 Word Search

	A	B	C	D	E	F	G	H	I	J
1							B	I	R	D
2									I	
3									V	
4				G	M	O	O	S	E	
5	M	I	G	R	A	T	E		R	
6				O	G		F		U	
7		C	O	W	P	L	A	N	T	S
8	H	A	I	R	I		L			H
9		L		B	E	L	L			E
10		F	A	N	T	L	E	R	S	D

4,E MOOSE
1,A MIGRATE
10,C ANTLERS
7,J SHED
8,A HAIR
4,E MAGPIE
7,B COW
6,G FALL
4,D GROW
1,I RIVER
1,G BIRD
7,B CALF
5,I RUT
7,E PLANTS
9,D BELL

Page 15: Moose are mammals and magpies are birds.

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Other

The Moose Song
by Bettina Restrepo

The moose went over the mountain,
The moose went over the mountain,
The moose went over the mountain,
Because it was time to go.

The antlers wave in the wind,
The antlers wave in the wind,
The antlers wave in the wind,
Because they stick up in the air.

The nose flaps in the forest,
The nose flaps in the forest,
The nose flaps in the forest,
Because it's big and long.

The moose went over the mountain
The moose went over the mountain
The moose went over the mountain
Because it migration time!

Motions to the song:
Stanza one – children march in place
Stanza two – children place their finger on their temples like horns and waggle them
Stanza three – children place their fist in front of their nose and wave back and forth
Repeat stanza one

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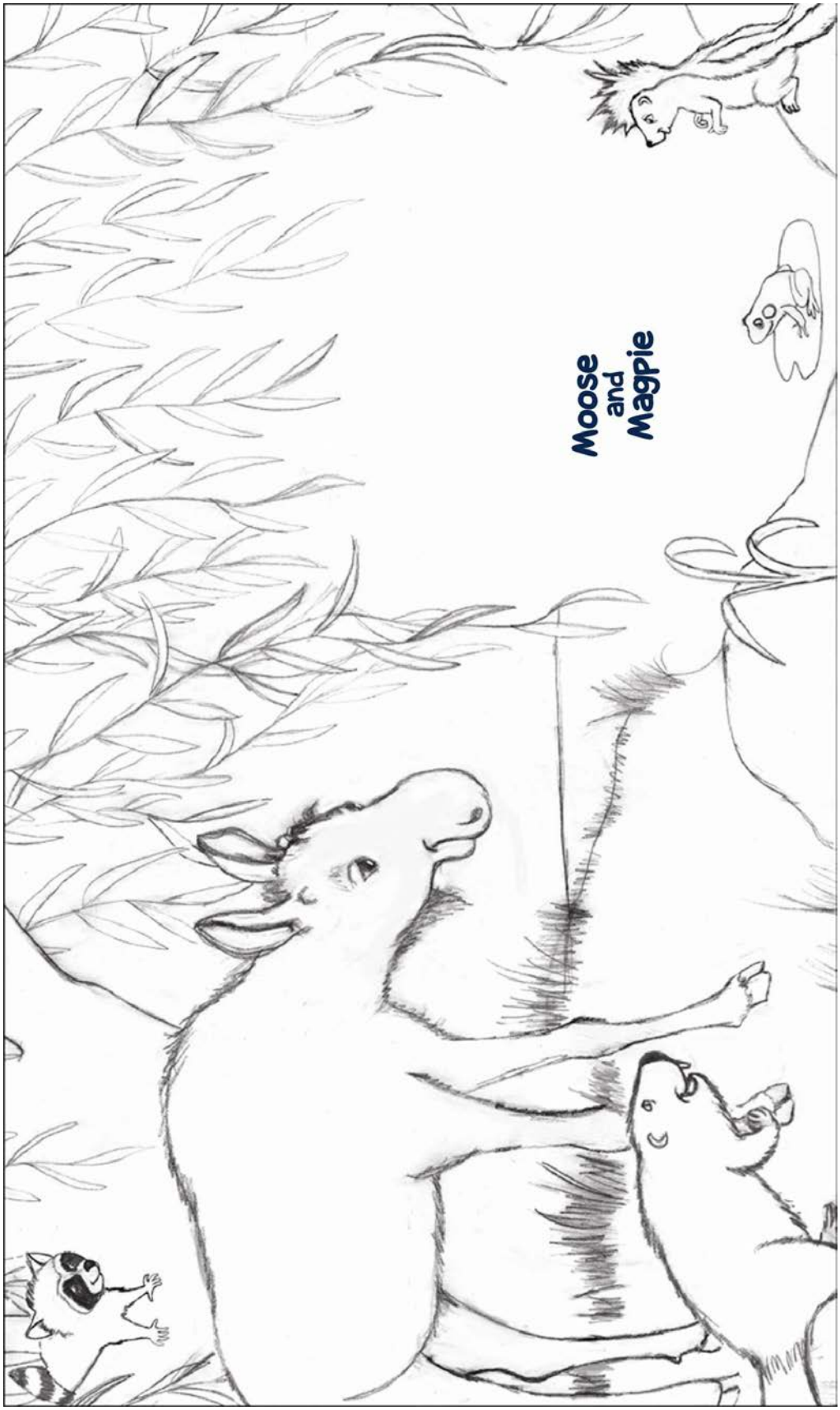

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