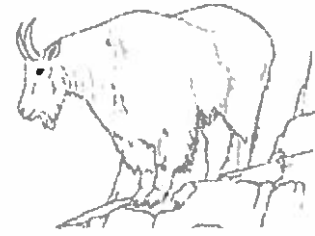


Kids on the Edge



Subject: Science and Physical Science

Objective: Students will understand the hazards and perils of life of a mountain goat.

Materials:

- Mountain Goat Course: The course may be made up of flat boards, balance beams, boxes, paper plates, craft foam, floor tape, or lines in the gym.
- Flagging tape, bandanas or other materials to differentiate nannies, billies, kids and mountain lions.
- Food tokens (poker chips or construction paper)

Procedure:

1. Lay out a mountain goat course prior to the lesson using the above items. Create an obstacle course zigzagging your items to make the course difficult for the “goats” to follow. Place food tokens along the course and make a grazing area at one end of the course.
2. Discuss with the students all the difficulties mountain goats face in their lives.
3. Tell the students they will be doing a simulation of a mountain goat’s life. Explain the course you have set up and tell them they will be walking the “trails” and finding food. Goats, with nannies leading, proceed from one side of the course to the grazing area and back, collecting food tokens along the way and in the grazing area. Each adult goat will need to collect at least seven food tokens, each kid five tokens. As they are moving along, goats need to avoid falling and being eaten by predators. Predators need to not be attacked by goats (losing their flag) and to eat goats (take the goat’s flag).
4. Assign students to be kids, nannies and billies. Have about half as many kids as nannies and about a quarter as many billies as nannies. Assign two mountain lions.
5. Go over the follow rules:
 - Only nannies and billies can defend themselves and snatch flags from predators. Kids are not allowed to take flags from predators.
 - Kids are not allowed to put their hands out for balance. If they put their arms out while walking the trail, they have fallen and are out. (This signifies the high mortality rate of kids in the first two years of life.)
 - Goats are out if they fall off the course, get eaten by a predator or don’t collect enough food.
 - Goats cannot be preyed upon while on the trail. Kids may be taken by an occasional eagle (you).
 - Once the goats reach the grazing area, they are to collect the rest of the food tokens and return to the start of the course.
 - Predators are located in the mountain goat grazing area. A goat is captured when a predator takes the goat’s flag. Predators must walk the goat to the out of bounds area.
 - Predators have two flags. Goats can take their flags indicating a successful attack by the goat. If a predator loses both flags, he/she has had an unsuccessful hunt and must leave the hunting grounds.
6. Evaluation: Have the students explain or write a story explaining the role they played from the point of the animal. What were the difficulties? Were they a survivor?

It's Your Niche

Subject: Science

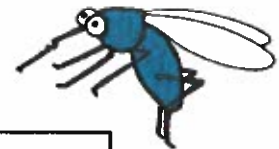
Objective: Students will be able to define habitat and niche and create business cards for particular animals.

Materials:

- 3" X 5" blank index cards or pieces of construction paper cut business card size
- writing and coloring materials
- animal books for researching

Procedure:

1. Review habitat with students. (food, water, shelter, and space in a suitable arrangement.) Tell students that habitat can be considered an animal's address. Explain to students that in this activity they will be not only be looking at animals' addresses, but animals' jobs, as well.
2. Talk about the student's neighborhood. Everyone has an address and most people have jobs. The job might be a role that person plays in the community. Animals have roles in the ecosystem, or community, that they live in. This role is called the animal's ecological niche. It includes such things as where and how the animal gathers its food; the animal's role in the food chain; what the animal gives and does for the community; the animal's habits, periods of activity, etc. It can also be described as what an animal does for a living.
3. Allow students time to choose and research a certain Idaho animal to find out its niche and choose one thing this animal does well.
4. Their assignment will be to create a business card for that animal advertising its job in the community. To help them, you may want to bring in a few "real" business cards to look at.
5. Here are a few samples of animal business cards:



Rick Raven
Environmental Cleanup
Unlicensed, Unbonded, Uninsured
Your trash is our treasure
Call 1-800-Wise-guy

Buzz Mosquito
Plasma Collector/blood sucker
123 Stick-It-To-You Lane
Everywhere, Idaho
We'll suck you drier than a vampire
Call 1-800-drink-blud

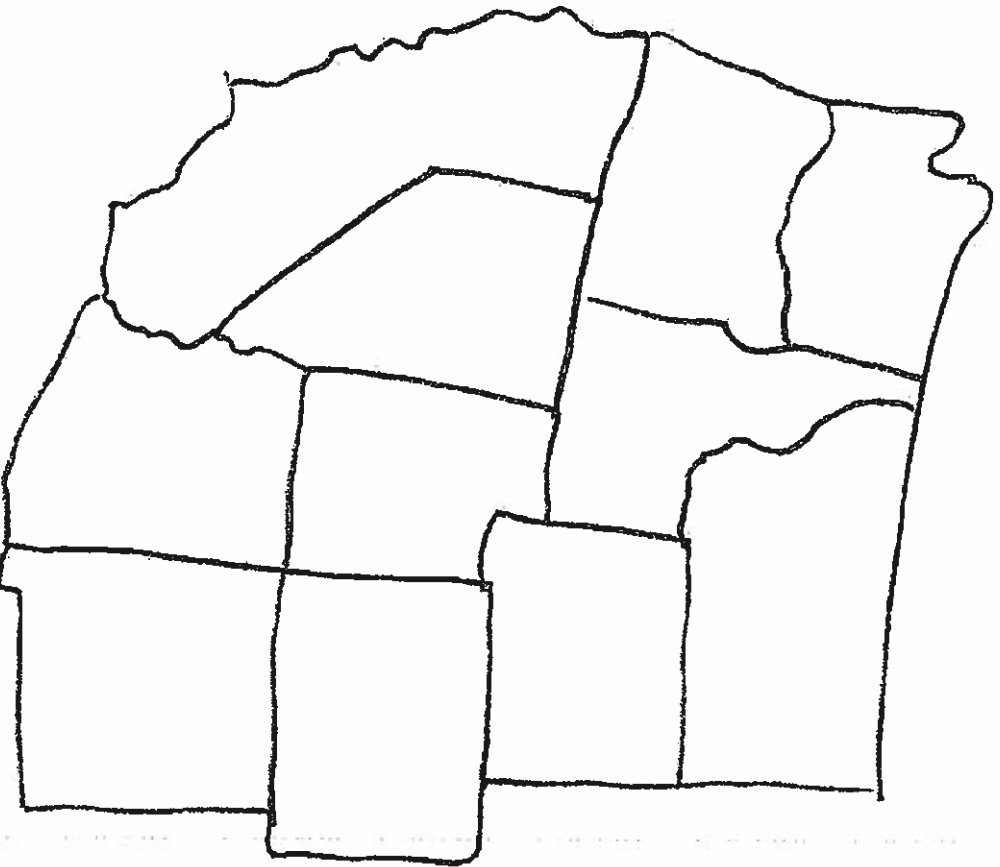
6. Business cards should include the following: name of animal, job title, company name, address, phone number, slogan and illustration or symbol for business (optional).
7. Hang business cards on your bulletin board and call it "Whose Niche?"

Where in the Western U.S. are American pikas?

Animals have a geographical range or distribution where members of that species might be found.

Research the American pika's range. Label the states in the box, color and key accordingly on the map.

On the lines, explain how climate change is affecting the pika population.



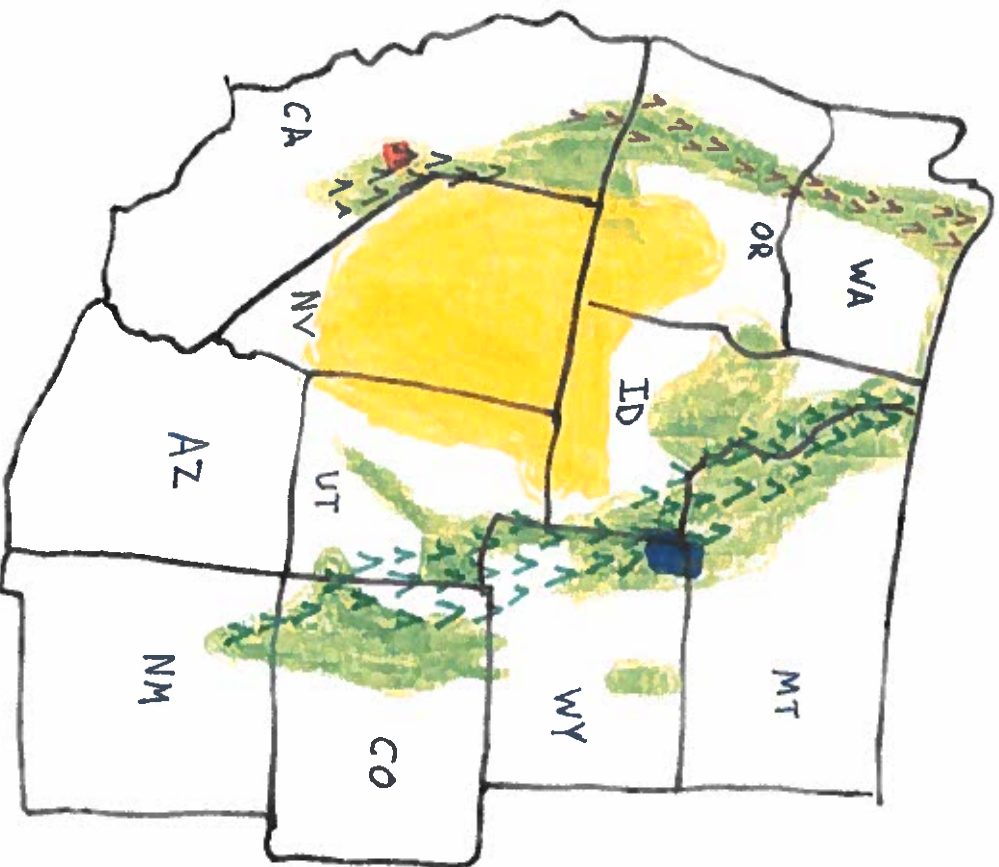
<input type="checkbox"/> Sierra Nevada Mountain Range
<input type="checkbox"/> Cascade Mountain Range
<input type="checkbox"/> Rocky Mountain Range
<input type="checkbox"/> Yosemite National Park
<input type="checkbox"/> Yellowstone National Park
<input type="checkbox"/> Great Basin Desert
<input type="checkbox"/> Range of Pika

Where in the Western U.S. are American Pikas?

Animals have a geographical range or distribution where members of that species might be found.

Research the American pika's range. Label the states. Locate the items in the box, color and key accordingly on the map.

On the lines, explain how climate change is affecting the pika population.



- Sierra Nevada Mountain Range
- Cascade Mountain Range
- Rocky Mountain Range
- Yosemite National Park
- Yellowstone National Park
- Great Basin Desert
- Range of Pika

Pikas have a hard time with hot temperatures. They need snow and ice. Less snow in the winter means less insulation to keep them warm and less water for plants to grow that pikas eat.

My Oh, My, Mustelid

Subject: Science

Objective: Students will be able to use a variety of sources to research a mustelid and create a mustelid wheel demonstrating knowledge.

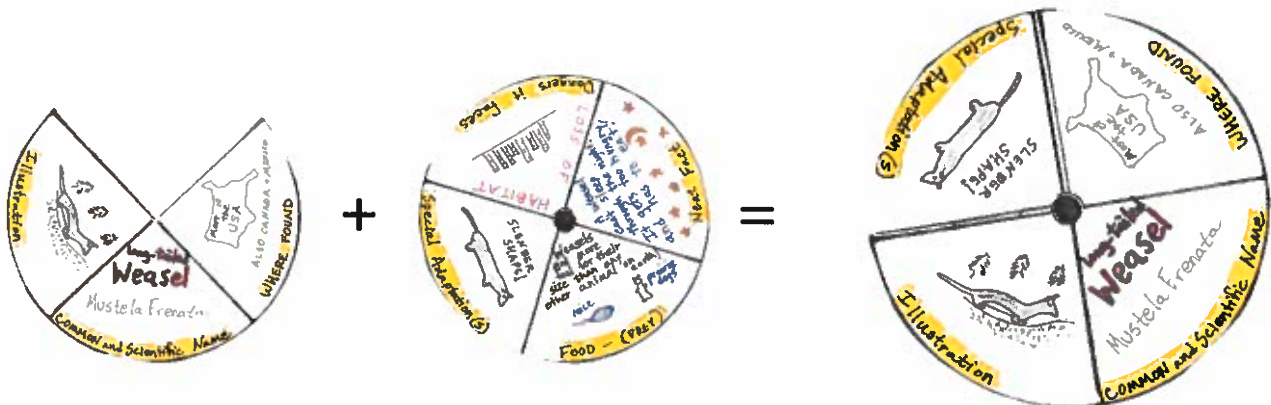
Materials:

- construction paper (2 pieces/student)
- scissors
- research materials
- coloring tools
- brad for each student



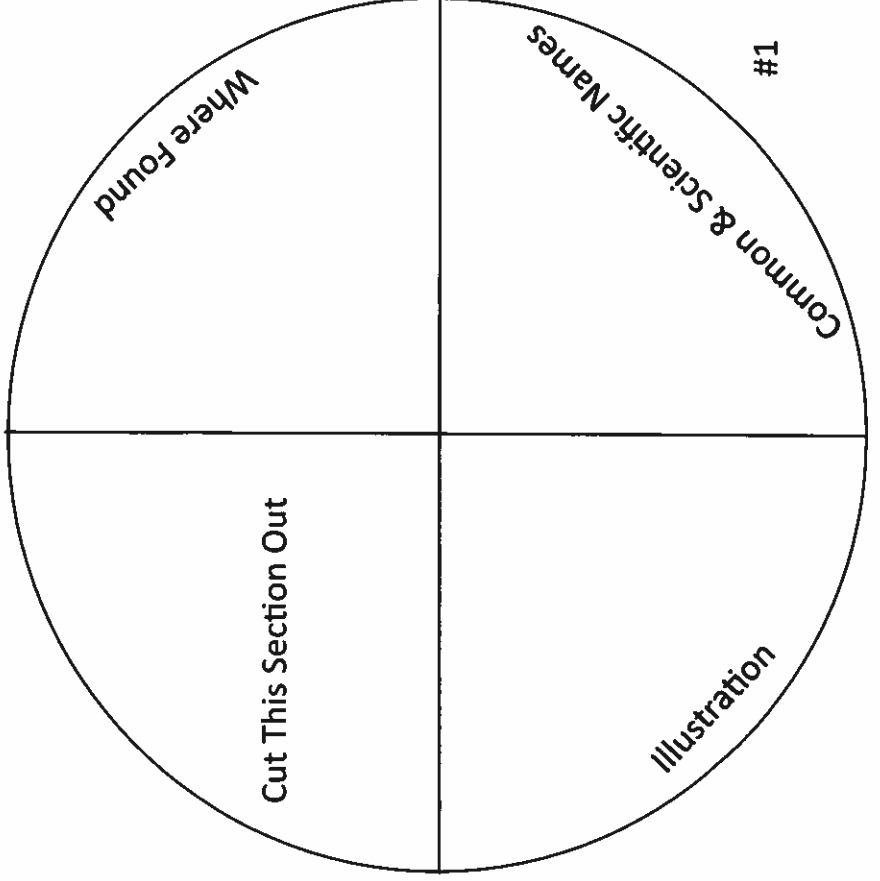
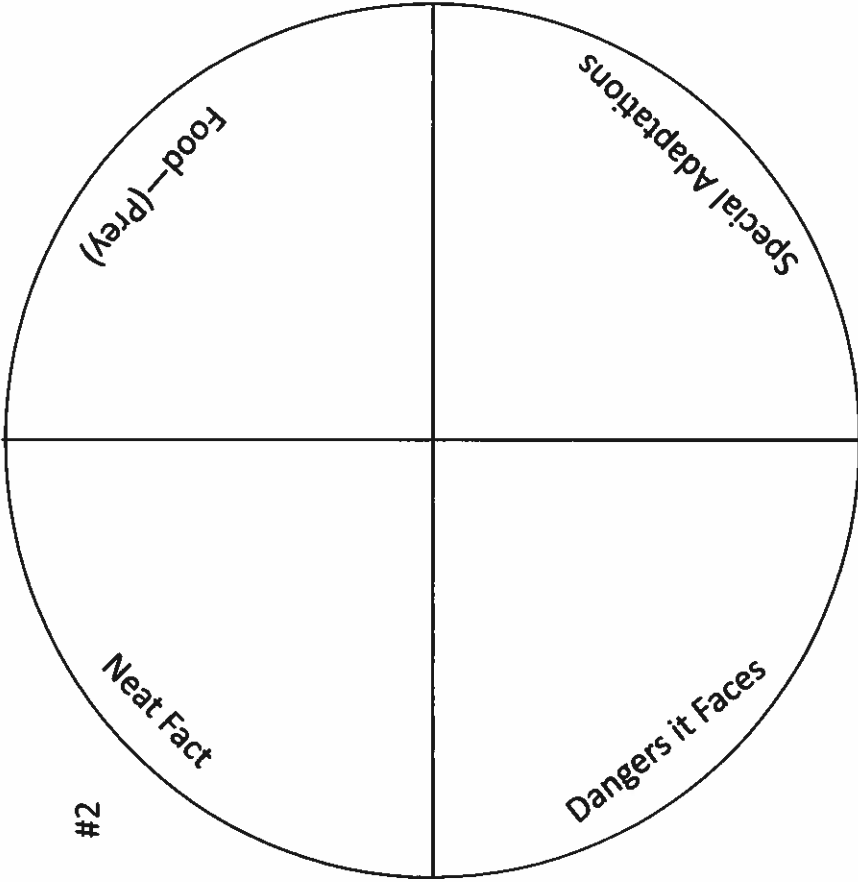
Procedure:

1. Review with students the animal kingdom. Mustelids come in many sizes, but most have short legs and short round ears and thick fur. Mustelids also all have scent glands that are used for different purposes. Remind students that scientists are continually monitoring animal classification. The skunk, for instance, used to be classified as a mustelid, but it no longer is. Scientists have found that it actually belongs to a subfamily called mephitidae.
2. Discuss other mustelids found in the United States (weasels, badgers, sea otters, river otters, ferrets, minks, wolverines, and martens). More thorough lists can be found online.
Talk about how mustelids are different from each other. Review animal adaptations. Remind students that all of the varied sizes, shapes, diets and hunting methods are ways that help the animals to survive in the environment in which they live.
3. Assign each student (or pair of students) a mustelid to research. Students should gather information and with it create a mustelid wheel. Hand out the following *Wildlife Worksheet* for a pattern. Tracing the circles on construction paper would work best.
4. After students share their wheels with one another, display wheels for others to learn about mustelids!



My Oh, My, Mustelid

Directions: Complete circles with words and illustrations.
Color. Cut out and glue circles to construction paper. Cut out circles again and place circle # 1 on top of circle #2. Insert a brad into the middle to hold wheel together.



High Mountain Exploring

Name: _____

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

ADAPTATIONS
ARCTICGRAYLING
BLUFFCHARGE
CACHE
ELEVATION
EXPLORE

HIBERNATE
HOARYMARMOT
LYNX
OTOLITHS
PIKA
PLANNER

PREDATOR
SNOWSHOE
SONGBIRD
STOCK
TALUS
WOLVERINE