

Outline of this month's Wildlife Express Activities:

Activity #1: **Majestic Moose** – Students use a grid to create a life-sized moose.

Activity #2: **Moose Masterpiece** – Students create a shape poem sharing information they learned about moose.

Activity #3: **Moose Zoo** – Students discuss zoos and design an enclosure appropriate for a moose.

Activity #4: **Moose Math** – Students create a cross number puzzle using addition, multiplication, subtraction and division.

Activity #5: **Moosely about Money** – Students develop an understanding of antler collecting.



Activity #1 - Majestic Moose

Objective: Students will be able to compare a life-size moose to their own body size.

Methods: Students use graphing, measuring and drawing techniques to draw a life-sized moose.

Background: A moose weighs between 800 - 1100 pounds and measures six feet at the shoulder.

Materials:

- Moose picture with grid overlay
- 64 sheets of 12"x12" construction paper
- Pencils
- Black marker
- Tape

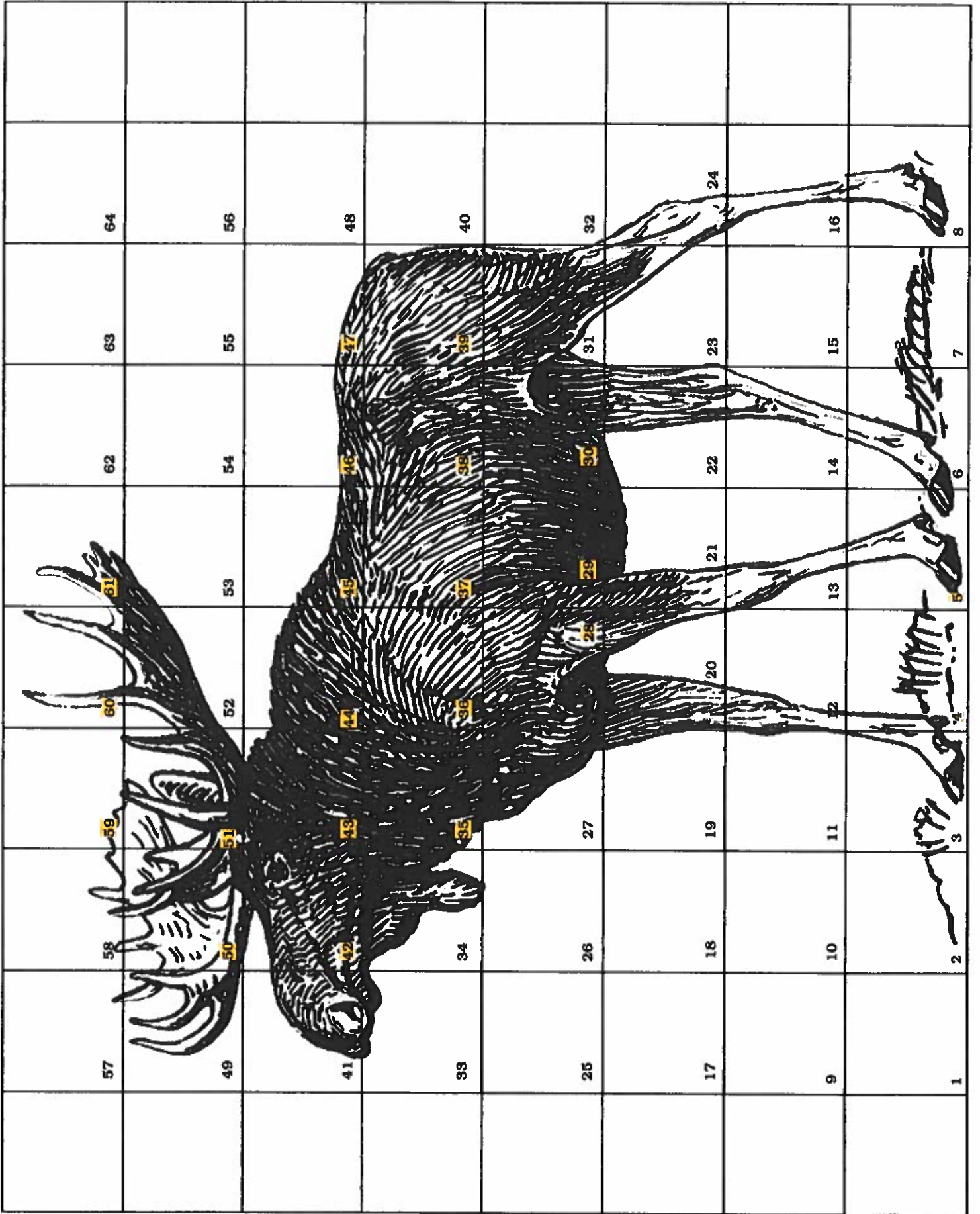
Procedure:

1. Use white 12" X 18" construction paper to make your 12 X 12" paper. (Cut off 6 inches of each piece) You will need 64 pieces of 12" X 12" paper.
Print off the moose grid. Cut out the squares.
2. Give each student a blank 12" X 12" piece of construction paper and a grid square. After completing one sheet, you can give them another set if needed.
3. Ask students to lightly number the construction paper in the lower right hand corner (or on back if it's really thick with lines) with the same grid number. Instruct students to transfer the drawing from the small square onto the large square.
4. Better results will be achieved if students lightly quarter their 12" X 12" paper with a pencil and fold the small grid from the copied grid. It makes the comparison easier.
5. When all squares are completed, tape the Magnificent Moose together in order, based on the master grid drawing that you copied.
6. If necessary, draw over the sketches with a dark colored marker to visually tie them together.
7. Hang the assembled sheets on the wall for a magnificent life-sized moose! Compare the moose's size to the students' sizes. Were they surprised by the size of it?

Extensions:

1. Measure the assembled moose from head to tail and from foot to antler.
2. Write a story about a moose's life (in a zoo or out)!

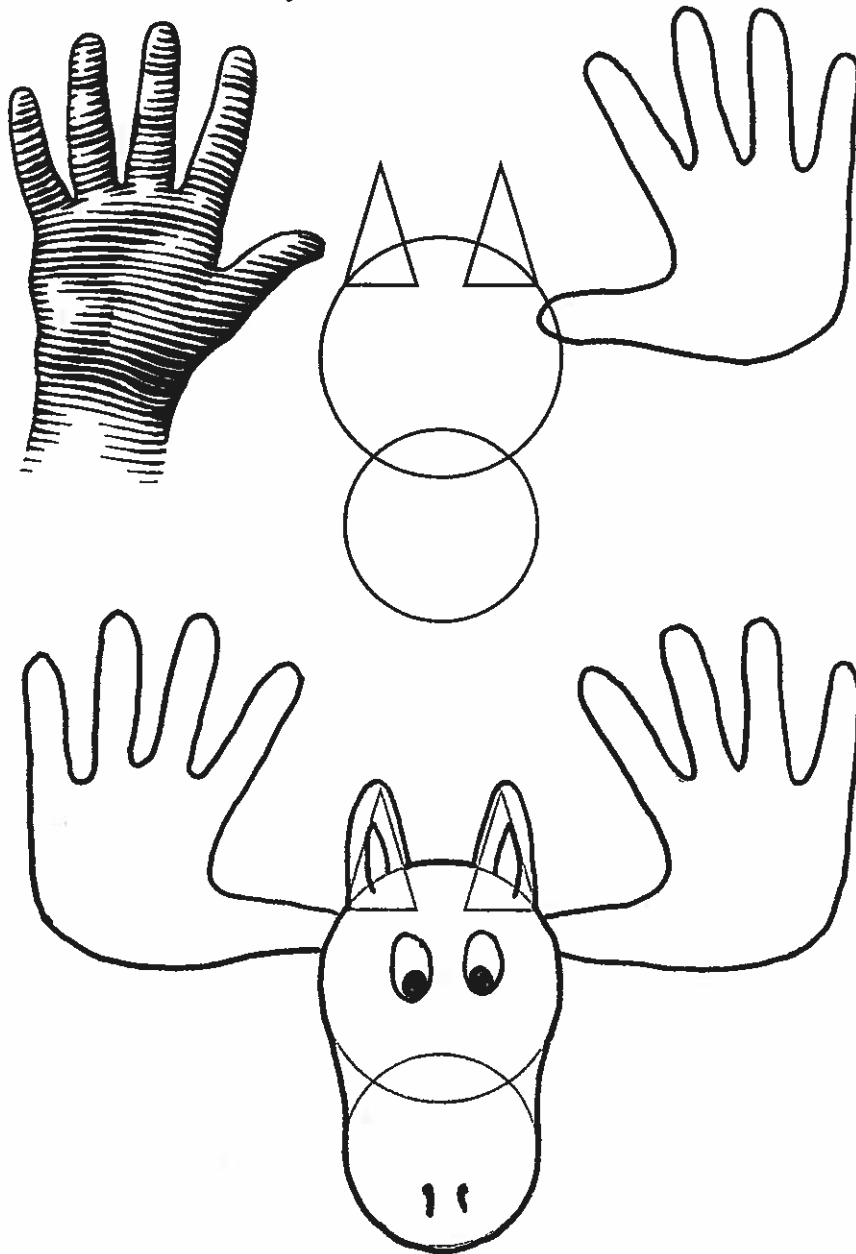
Check out other life-sized animals on this link. <https://sites.google.com/view/lifesizedanimalgrids/home>



Moose Masterpiece

How to Draw a Moose Head

You can draw a moose head using circles, triangles, and your hands. Lightly sketch your forms and then make an outline of the critter. Be creative and modify your moose's features. Fill in the details of eyes, nostrils, and ears after the outline is formed.



Once you're happy with the moose head you've drawn, set it aside. With a partner, edit your 8 sentences. Listen carefully to your teacher for directions on how to write a shape poem from the moose that you have drawn.

Activity #3 - Moose Zoo

Objectives: Students learn about animal habitat components and consider zoo designs.

Method: Students read and discuss zoos and work to plan and complete an enclosure that fits the needs of a moose, zoo staff and visitors.

Materials:

- butcher paper (if drawing enclosure) OR
- materials to make a diorama (shoe box, cardboard, paper, scissors and markers or other coloring supplies.)

Procedure:

1. Share the background information below and have students share some of the zoo enclosures they've seen.

Zoos display living things. Zoos that existed over 100 years ago were very different to the modern zoos of today. Early zoos tried to display as many animals as possible in order to attract the greatest number of visitors. In those days, people had little or no understanding of the behavior, habitat or needs of animals. This led to displaying of animals in small, dirty, heavily barred cages that resulted in abnormal behavior by many animals. Little education was provided for visitors.

Today, zoos limit the size of their collections and enclosures have an overall themes. (South East Asian Rainforest, African Plains, etc.) Exhibits with more than one species are also becoming more common. A great deal of planning and discussion goes into developing an enclosure or group of enclosures. It takes many people to offer input. Architects, designers, educators, zoo staff, maintenance staff and even horticulturalists are involved.

Naturalistic enclosures encourage animals to behave and reproduce as they would in the wild. However, it is almost impossible to completely recreate a natural habitat and compromises need to be made. Factors related to public viewing, safety, information, easy, safe access for keepers and maintenance staff also need to be considered. Funding (sponsorship, donations) is also a major consideration. The final presentation of the enclosure should provide people with a better understanding of the relationship between animals and their environment.

Signage is now a critical part of the enclosure. It should provide the public with information related to the species. Problems affecting the species and conservation efforts, both on the zoo's part and ways visitors can help should be included.

2. Next, review a moose's habitat needs and life history in Wildlife Express. Also as a group, review the factors to consider for designing a moose zoo. For best results, initiate the discussion and ask for input. Be sure to cover all of the factors listed below.

FACTORS TO CONSIDER WHEN DESIGNING AN ENCLOSURE

Needs of the Animal

- Size of animal
- Level of activity – how to provide behavioral enrichment
- Social groupings (size/structure – family, solitary, sex ratio)
- Natural habitat; Shelter from the elements
- Food and water
- Sleeping facilities
- Retreats from Public
- No dangerous areas/substances to animals

Needs of the Zoo Staff

- Safe and desirable contact (Is it possible to complete all work tasks without any direct contact with animals?)
- Security of enclosure.
- Can animals be captured safely and easily if they need to be?
- Ease of access for maintenance, cleaning, feeding, etc
- Ease of viewing for health checks
- Suitable off limits areas with appropriate holding facilities
- Breeding programs provided for (if breeding is to occur)

Needs of the Public

- Clear view of animal
- Does the enclosure cater for all?(young, wheelchair bound, etc)
- Aesthetically appealing
- Reflect the habitat of the animal
- Educational value – appropriate graphics

3. Working in groups is best for this activity. Instruct students to draw/design their enclosure.
4. When students are finished have them share with classmates. Have a discussion about desirable and undesirable enclosures.
5. Visit a zoo if possible. Students will have a better appreciation of how zoos have evolved over time and how most zoos now are concerned with conservation of animals.

Activity #4

Moose Math

Use a calculator, if needed, to solve the following problems. Write the answers in the cross number puzzle.

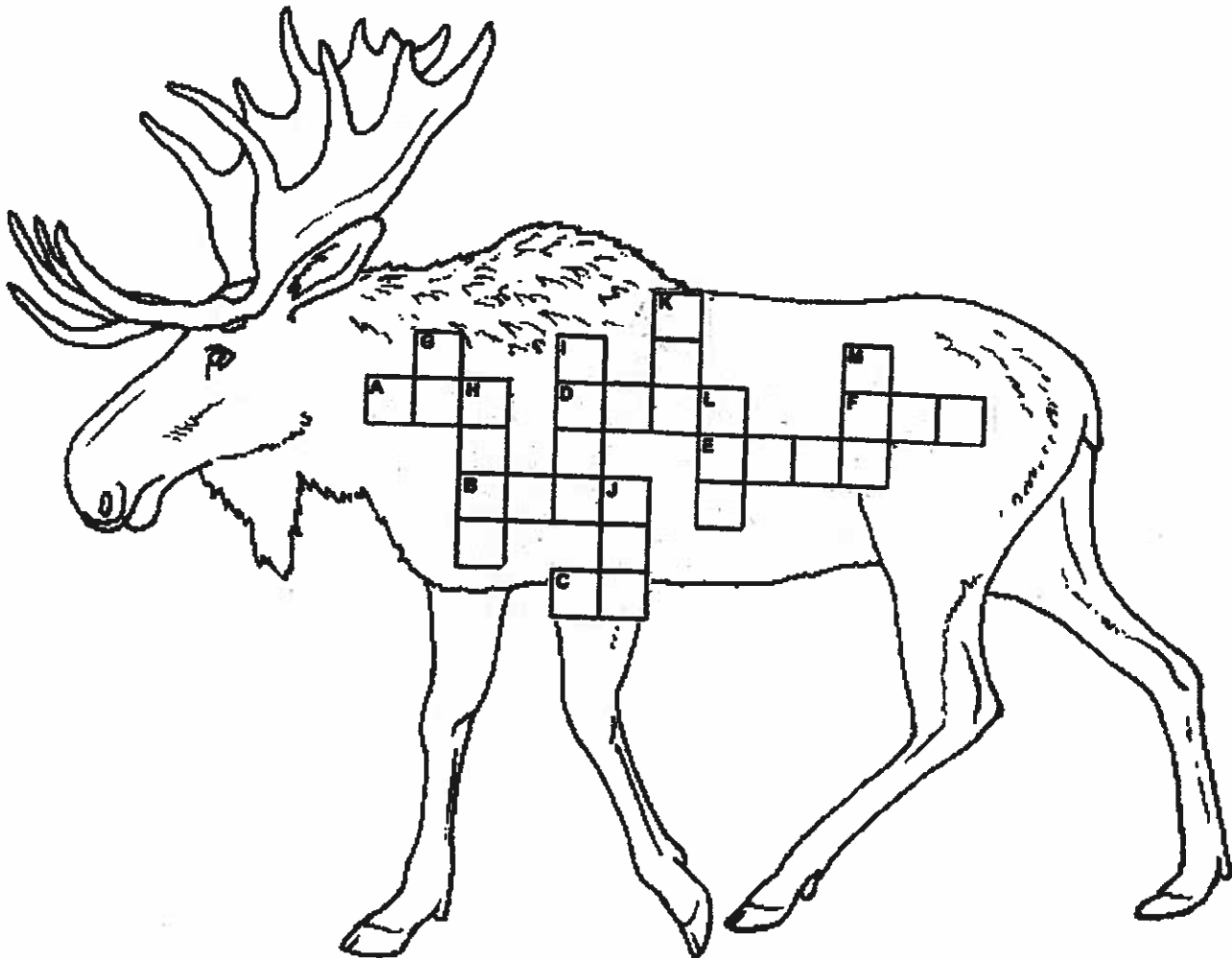
Cross Number

Across

- A) $55,476 \div 69 =$
- B) $341 \times 15 =$
- C) $9,777 - 9,763 =$
- D) $49 \times 107 =$
- E) $(72 \times 106) + 1,770 =$
- F) $3 \times a = 486$

Down

- G) $(10 \times 10) - 10 =$
- H) $507 \times 8 =$
- I) $(76 \times 112) + 49 =$
- J) $(15,000 \div 30) + 34 =$
- K) $(213 \times 3) + (5 \times 27) =$
- L) $(12 \times 26) + 85 =$
- M) $32 \times 16 =$



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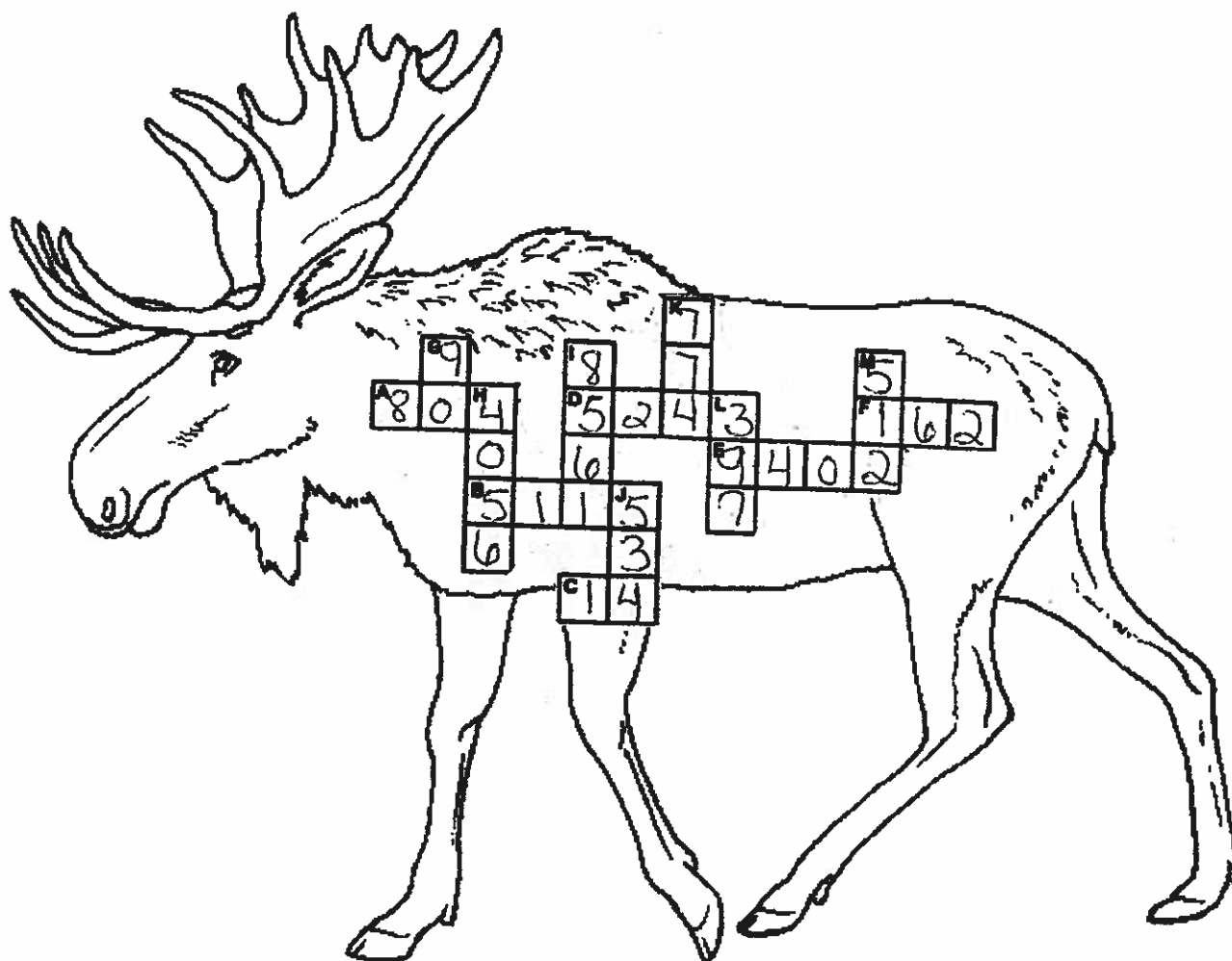
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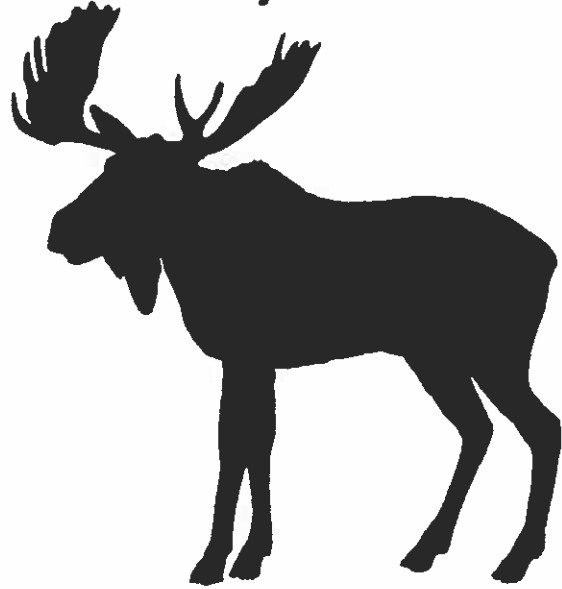
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Activity #5

Moosely about Money



OBJECTIVES

Students will: 1) Develop an understanding of the economic significance of the ungulate antler trade.
2) Develop an understanding of the importance of wildlife management and the manner in which human activities can affect wintering wildlife.

METHODS

Students will simulate taking part in the antler harvesting trade. They will evaluate their economic success based on societal-influenced indices and explore the impact that their activities could have on wintering wildlife.

MATERIALS

Tokens to represent antlers of various members of the deer family. String to denote activity area. Paper and pencils to tabulate data.

BACKGROUND

In North America, all male members of the deer family have antlers that function as secondary sex characteristics. Antlers are made from the same material as bones. When growing, antlers are covered with capillaries, commonly called "velvet." The antlers of moose have been measured to grow an inch per day in some animals, making moose antlers the fastest growing bones in the animal kingdom.

Antlers drop off each year in a process called shedding. The spent antlers are commonly called "sheds." Despite the fact that antlers are shed and regrow annually, many people mistakenly refer to them as horns. Horns are actually different in that they remain on an animal for the animal's entire lifetime. Horns also differ in that while they have a bony core, the outer sheath is made up of the same substance as hair and fingernails.

In addition to their aesthetic appeal for craft and decorative purposes, antlers are used by certain Asian cultures as a folk medicine ingredient. For both reasons, antlers that are freshly shed and of larger size and higher quality command a higher price. Domestic ungulate ranching operations also contribute to a limited demand for antlers that are in velvet. Captive-raised animals can be handled rather easily, and velvet antler harvesting - aside from creating a short-term bloody mess - has no long-term negative impact on the animal.

When dealing with animals in the wild, many people go out each spring specifically to gather antlers. This activity is sometimes called "Horn Hunting." Once antlers are collected, they are either used by the finder for personal purposes or sold to an antler buyer for resale locally and abroad. Antlers shed a number of years ago that have been weathered by the elements are often referred to as "chalk." These antlers may also have been gnawed upon by rodents seeking a source of calcium.

Grade Level: 3 - 12

Subject Areas: Science, Social Studies, Math, Wildlife Management

Duration: Short five-minute introductory session, followed by a brief period of physical activity, concluding with a twenty minute discussion of results noted by participants.

Group Size: Any

Setting: Indoors or outdoors

Conceptual Framework Topic Reference:

Key Terms: Antlers, harvest, aphrodisiac

Appendices: Local resources, Internet, List of agencies and organizations

In and of itself, the practice of collecting shed antlers can be a pleasurable and profitable pastime. Depending on the going rate, collectors can make hundreds or thousands of dollars each year. If protected from the elements, antlers can be stored indefinitely for resale when market rates are more favorable.

Problems arise for big game animals when humans harass them in hopes of helping along the shedding process. Not only do the animals suffer from the stress, but they can be injured during the process. All animals in a herd, not just those with antlers, must expend valuable energy reserves responding to human pressure. This waste of stored energy reserves can be critical for females ready to birth; for animals already weakened by a long winter, it can mean the difference between life and death when a late-season spring snowstorm hits.

To protect wintering wildlife from such harassment, wildlife management agencies have utilized a variety of approaches. In many places, animals are intentionally drawn to winter feeding sites, but this practice comes replete with an entirely different set of problems including disease transmittal, overcrowding, and habitat loss. In some locations, agencies may pass regulations limiting or restricting access for the purpose of collecting shed antlers.

One such closure was arranged by local county commissioners, the Bureau of Land Management and the Idaho Department of Fish and Game near St. Anthony, Idaho. This important wintering area will support, on average, around 500 moose, 3,000 elk and 3,500 deer.

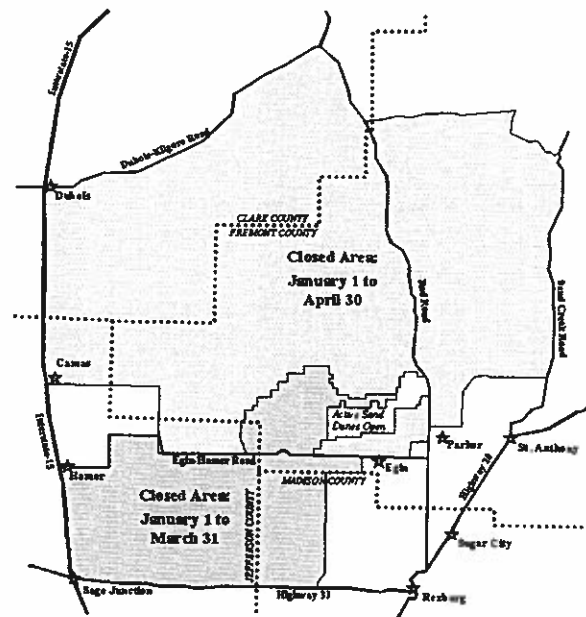
PROCEDURE

1. Select an area to serve as your closure area. This area can be of any shape, but it should not be overly large. It is important that boundaries be clearly identifiable.
2. Prepare tokens to be used. Specific amounts or totals are not important. Actual slices of antler help to connect the students with the actual activity of gathering antlers. A liberal amount of play money and a few old batteries need to be scattered along with the tokens. Tokens should be color coded as follows:

Black - Moose Blue - Elk Green - Deer

Written numbers will reflect the weight of antlers in pounds. A red underline means that the antlers are of such exceptional quality that their weight is to be tripled to reflect the higher value they would have on the decorative market. The letter C next to the number indicates that the antlers are older and worth only the lower chalk market rate.

Egin-Hamer Project Closure Area



A small number of tokens should be marked with the letters EHC to denote antlers taken from the closed area before the legal opening day.

Exact numbering is not critical: values should somewhat reflect actual weight in relation to value. Deer antlers would generally have lower single digit values, while elk would be valued with teens and twenties. Some of the elk antlers should be rated at five to reflect the number and value of younger spike antlers harvested.

3. Scatter tokens, money and batteries randomly throughout the closure area. Care should be taken to place all the EHC marked tokens just outside of the activity boundary, along with half of the total number of batteries.
4. Students should be given the pre-activity talk at a location out of view of the actual activity area. Discuss information listed in the background section, plus whatever information is available about antler collection. Pictures of antler crafts and furniture can be shown to help explain how antlers are used by some people. Pictures of oriental medicines can also be shown to educate students regarding alternate uses of antlers.
5. Students should be given a small envelope or sack for token collection. Inform them that today is May 1st, the opening day for antler gathering in the Egin-Hamer Project Closure Area.

6. Students should be led to the activity site and told to start collecting all items on the ground at a given signal. They should be instructed to collect only items within the closure area until none remain on the ground. Instructors should keep a watchful eye during the activity to see if any restricted tokens are collected and by whom.

7. Student should then tabulate token values and receive instruction about the final phase of activity.

8. Instruct students to sort their tokens by ink color used for numbers. Students should be informed which species each color represents and the current value per pound of antler for each species. Have them calculate the total value for all antlers harvested.

Deer - \$12/lb.

Elk - \$6/lb.

Moose - \$8/lb

Chalk - \$1.50/lb


Underlined - 3x's total value

9. Ask students to check their tokens for ones bearing the letters EHC. These tokens represent antlers gathered illegally, because they were placed outside the boundaries of the collection area. This inversely represents the temptation that people sometimes fall prey to regarding closures or regulations regarding antler gathering.

10. Any student possessing illegal tokens must forfeit all their tokens and pay a \$500 fine. If the student failed to voluntarily admit to possessing the EHC tokens, but was "turned in" by another student, the fine doubles to \$1,000 and the student reporting the crime should receive a \$500 reward, a sum to added to their total score.

11. Students possessing batteries should be informed that the batteries represent stored energy reserves expended by animals because of disturbance by antler collectors. Even though no illegal activity may have occurred, the overall health of the winter animals involved was diminished.

12. Provide students with information regarding the antler trade business, Asian medicines, and wintering wildlife.



NEWS RELEASE

December 19, 2001

ANTLER COLLECTING PROHIBITION TO PROTECT WINTERING WILDLIFE BEGINS JANUARY 1, 2002.

IDAHO FALLS - Nearly non-stop snowfall has helped to build snow packs that will hopefully pull the region out of the last few years of drought conditions. Trappers and anglers are happy about the moisture, but wildlife managers know that you can get too much of a good thing. Heavy snow packs could have a negative impact on deer, elk and antelope in certain areas. How animals weather the winter depends greatly upon the amount of disturbance they receive from humans. January 1, 2002 once again marks the start of special restrictions to limit antler gathering activities to help protect wildlife.

The problem is really not about antler gathering, but more so the unscrupulous individuals who might harass wildlife in the process of attempting to collect antlers that have been shed. The lure of making a few dollars has resulted in an increasing number of humans venturing out in search of "sheds." These collectors go into areas where animals are wintering and in doing so place stress on the animals. Herds are forced to expend valuable stored energy reserves when chased through the deep snow. To help reduce the likelihood of such negative impacts, a number of years ago the Idaho Fish & Game Commission passed a regulation that closed down portions of the region to shed antler pick up during certain portions of the year.

In the Upper Snake Region antler gathering is prohibited in units 60, 60A, 66, 67, and 69 from Jan. 1 - April 30.

This regulation pertains to antlers found on both public and private ground. While certain areas may still remain open for both on and off road travel during this period, it is important that vehicle operators leave wildlife plenty of distance.

In addition to restrictions regarding the collection of shed antlers, January 1, also marks start of the Egno-Hamer Area Closure. This closure prohibits all human activities in the general area around the Egno-Hamer Road until later in the spring. Maps and closure details are available free at the BLM & DFG offices in Idaho Falls, as well as the Fremont and Jefferson County Sheriff's Offices.

#1 OF 18

EXTENSIONS

1. Scatter play money amongst the tokens and have students collect it at the same time. During the tabulation phase, tell students this money represents costs in gas, vehicles and days away from work spent to gather antlers. Students should subtract the dollar amount from the final token amount.

2. If batteries are not used, mark assorted tokens with a large "X" after the number. Whoever ends up with these tokens is responsible for stressing out wildlife as the result of their antler gathering activities.

3. Roll a numbered cube to determine an increase or decrease in the value of antlers from a specific species or all species. Relate this to changes in market conditions due to concerns over the economy or disease issues.

EVALUATION

1. What amounts of money were either earned or lost by students during the activity?
2. Did illegal activity occur? Where they all detected? Did it take a reward to get results?
3. What impacts were noted to wintering wildlife?
4. What are the social and economic factors and concerns involved with antler collecting?
5. How should antler gathering be regulated? What about the sale and trade of other wildlife parts?
6. Discuss with students what wildlife parts they may have in their own homes or have seen somewhere else.



- Antlers & Horns
- Buckskin & Leather
- Tanned Furs
- Feathers
- Skulls & Bones
- Teeth & Claws
- Taxidermy
- Beads & Shells
- Miscellaneous

Antlers and Horns : MOOSE - PALMS

Lot #	Qty Avail	Description
2550-0001	0 88 lb / 1 Piece	Palm, stem removed, hard dark brown to hard light brown, #1 quality \$ 6.00 /lb
2550-0002	10 12 lb / 6 Pieces	Stem removed, hard dark brown to hard light brown, #1 except very slightly damaged \$ 5.50 /lb
2550-0003	7 66 lb / 4 Pieces	Palm, stem removed, hard dark brown to hard light brown, #1 except tips porky chewed \$ 4.50 /lb
2550-0004	10 52 lb / 7 Pieces	Palm, stem removed, hard brown, #1 except slightly damaged \$ 4.50 /lb
2550-0012	0 96 lb / 1 Piece	Palm, stem removed, hard brown to hard light brown, #1 except slightly damaged \$ 4.00 /lb
2550-0013	5 30 lb / 2 Pieces	Palm, stem removed, hard dark brown, #1 except distal end of palm, tines porky chewed. Extra hard antler \$ 3.75 /lb
2550-0014	2 14 lb / 1 Piece	Palm, stem removed, hard light brown, some faint cracks, some leaf stain, #1 except tines chewed, some tooth marks along outer edge of palm \$ 3.50 /lb
2550-0017	2 06 lb / 1 Piece	Palm, stem removed, hard light brown to brown, #1 except distal edge of palm, tips of points chewed \$ 3.95 /lb
2550-0018	5 26 lb / 2 Pieces	Palm, stem removed, hard light brown to brown, #1 except tips, distal edge of palm, edge of palm chewed \$ 3.50 /lb
2550-0019	6 50 lb / 3 Pieces	Palm, stem removed, one side hard brown, one side light brown with algae stain, #1 except tips chewed \$ 2.95 /lb
2550-0023	2 70 lb / 2 Pieces	Palm, stem removed, hard brown to light brown, few cracks on inner edge, #1 except distal edge of palm, tines chewed \$ 3.00 /lb
2550-0024	2 20 lb / 1 Piece	Palm, stem removed, hard brown, #1 except tips porky chewed, 4x2" area of inner surface of palm chewed along outer edge Good hard antler \$ 2.95 /lb
2550-0025	2 30 lb / 1 Piece	Palm, stem removed, hard light brown to brown, leaf stain on inner edge, #1 except very slightly damaged \$ 3.95 /lb
2550-0111	5 98 lb / 2 Pieces	Palm, stem removed, one side hard brown, one side hard white, some cracks, hard interior, #1 except tips of tines with porky chews \$ 4.25 /lb
2550-0114	3 64 lb / 1 Piece	Palm only, stem removed, outer edge hard brown, inner edge hard light brown to hard white, has some cracks, faint red algae stain, #1 except tips porky chewed \$ 3.25 /lb