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
Activity #2 - Moose Masterpiece

Objectives: Students will be able to write sentences demonstrating comprehension of text in Wildlife Express and complete a shape poem

Method: Students read & discuss natural history of moose. Students write factual sentences from the information they gained. Students edit sentences and create a shape poem.

Materials:
- Moose Masterpiece worksheet on the following page
- Drawing paper
- Pencil
- Thin felt tipped marker or pen

Procedure:
1. After reading Wildlife Express, ask students to write (on a scratch piece of paper) at least 8 sentences related to what they learned about moose.
2. Next tell them they will learn how to draw a moose head by using shapes and their hands. Handout the worksheet on next page or show on projector. Go over directions and have students practice their drawings. If students would like, they can create their own moose drawing. This is for those less confident with drawing ability.
3. When they are ready, pass out final draft paper. Students should trace the rough draft outline onto this final draft paper. To begin with the final draft should be an outline lightly drawn in pencil.
4. Next, students should exchange sentences they’ve written and peer edit.
5. When editing is complete, students should write their sentences on the outline in pencil.
6. When draft is complete, students should use a thin marker to write over the sentences.
7. After marker dries, erase pencil lines and share!
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) $32 \times 16 =$
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 ÷ 69 =
B) 341 x 15 =
C) 9,777 – 9,763 =
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K) (213 x 3) + (5 x 27) =
L) (12 x 26) + 85 =
M) 32 x 16 =
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

Developed by Gregg Losinski - July, 2003
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.

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.
NEWS RELEASE

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

IDAHO FALLS - Newly-enacted prohibitions have helped to build snow packs that will hopefully push the region out of the last few years of drought conditions. Hunters and anglers are happy about the moisture, but wildlife managers know that you can get too much of a good thing. Hunting snow packs could have a negative impact on deer, elk and antler activity in certain areas. Now, wildlife managers wonder what the winter debris deposited on the snow could mean for the future.

Antler hunting prohibitions have been in place for decades as a way to help protect the deer and elk populations. But this year, the restrictions have been extended to cover areas where deer and elk have been placed in a special category. The state has also extended the restrictions to cover areas where antlers have been found.

The restrictions are effective from January 1, 2002, and will continue through the end of the antler season. During this time, antlers must be collected only from the area where they were found. The restrictions apply to all areas within the state, including those in the Blackfoot, Beaverhead, and Bitterroot forests.

This is the second year that antler hunting has been prohibited. In 2001, the restrictions were lifted after a successful first year. The antler season ended on October 31, 2001.

In addition to the restrictions, the Idaho Fish and Game Commission has implemented new regulations to help protect the deer and elk populations. These include the prohibition of hunting snow packs, which are kept for a minimum of 10 days. Hunters must also obtain a special permit to hunt snow packs.

The new regulations are designed to help protect the deer and elk populations, which have been declining in recent years. The state has also implemented new regulations to help protect the antler collecting activities. Existing permits are valid through December 31, 2002.

The new regulations are part of a larger effort to help protect the deer and elk populations. The state has also implemented new regulations to help protect the antler collecting activities. The new regulations are designed to help protect the deer and elk populations, which have been declining in recent years. The state has also implemented new regulations to help protect the antler collecting activities.

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### Antlers and Horns: MOOSE - PALMS

<table>
<thead>
<tr>
<th>Lot #</th>
<th>Qty Avail</th>
<th>Description</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>2550-0011</td>
<td>0.03 lb / 1 Piece</td>
<td>Palm, stem removed, hard dark brown to light brown, #1 quality</td>
<td>$6.00 lb</td>
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<tr>
<td>2550-0022</td>
<td>10.12 lb / 6 Pieces</td>
<td>Stem removed, hard dark brown to light brown, #1 except very slightly damaged</td>
<td>$5.50 lb</td>
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<tr>
<td>2550-0033</td>
<td>7.66 lb / 4 Pieces</td>
<td>Palm, stem removed, hard dark brown to light brown, #1 except tip porky chewed</td>
<td>$4.50 lb</td>
</tr>
<tr>
<td>2550-0044</td>
<td>10.52 lb / 7 Pieces</td>
<td>Palm, stem removed, hard brown, #1 except slightly damaged</td>
<td>$4.50 lb</td>
</tr>
<tr>
<td>2550-0012</td>
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<td>Palm, stem removed, hard brown to light brown, #1 except slightly damaged</td>
<td>$4.00 lb</td>
</tr>
<tr>
<td>2550-0013</td>
<td>5.30 lb / 2 Pieces</td>
<td>Palm, stem removed, hard dark brown, #1 except distal end of palm, porky chewed, extra hard inside</td>
<td>$3.75 lb</td>
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<tr>
<td>2550-0014</td>
<td>2.14 lb / 1 Piece</td>
<td>Palm, stem removed, hard light brown, some faint cracks, some leaf scars, #1 except tip chewed, some tooth marks along outer edge of palm</td>
<td>$3.50 lb</td>
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<tr>
<td>2550-0017</td>
<td>2.06 lb / 1 Piece</td>
<td>Palm, stem removed, hard light brown to brown, #1 except distal edge of palm, tip of points chewed</td>
<td>$3.95 lb</td>
</tr>
<tr>
<td>2550-0018</td>
<td>5.26 lb / 2 Pieces</td>
<td>Palm, stem removed, hard light brown to brown, #1 except tip, distal edge of palm, edge of palm chewed</td>
<td>$3.50 lb</td>
</tr>
<tr>
<td>2550-0019</td>
<td>6.50 lb / 3 Pieces</td>
<td>Palm, stem removed, one side hard brown, one side light brown with algae stain, #1 except tips chewed</td>
<td>$2.95 lb</td>
</tr>
<tr>
<td>2550-0023</td>
<td>2.70 lb / 2 Pieces</td>
<td>Palm, stem removed, hard brown to light brown, few cracks on inner edge, #1 except distal edge of palm, tips chewed</td>
<td>$3.00 lb</td>
</tr>
<tr>
<td>2550-0024</td>
<td>2.29 lb / 1 Piece</td>
<td>Palm, stem removed, hard brown, #1 except tip porky chewed, 4x2&quot; area of inner surface of palm chewed along outer edge, Good hard inside</td>
<td>$2.95 lb</td>
</tr>
<tr>
<td>2550-0025</td>
<td>2.30 lb / 1 Piece</td>
<td>Palm, stem removed, hard light brown to brown, leaf scar on inner edge, #1 except very slightly damaged</td>
<td>$3.95 lb</td>
</tr>
<tr>
<td>2550-0114</td>
<td>5.98 lb / 2 Pieces</td>
<td>Palm, stem removed, one side hard brown, one side white, some cracks, hard inner, #1 except tips of lines with porky chewed</td>
<td>$4.25 lb</td>
</tr>
<tr>
<td>2550-0114</td>
<td>3.64 lb / 1 Piece</td>
<td>Palm, stem removed, outer edge hard brown, inner edge hard light brown to hard white, has some cracks, faint red algae stain, #1 except tip porky chewed</td>
<td>$5.25 lb</td>
</tr>
</tbody>
</table>