Farm to School Month – Week Two: Reindeer Day!!

REINDEER
Let’s learn about reindeer today!! Reindeer? YES!! The revenue from herding reindeer is currently around $100,000, but the potential for this industry is near $2 million!!

Aside from the money, why take a whole day to look at reindeer? Well, reindeer has been a livestock animal in Alaska since their introduction in the 1880s. Alaska Native herders are still actively raising reindeer for meat for sale in stores all around Alaska. Reindeer are part of our history and are an excellent agricultural product for our future!

A Little History to put Reindeer in Alaska

While reindeer now live exclusively in the northern points of the globe, when the earth was cooler and humans were less of a threat, their territory was larger. In fact, reindeer used to live all the way down in Nevada, Tennessee and Spain during the Pleistocene area. Its habitat has shrunk considerably in the last few centuries. In the 19th century, reindeer still lived in Southern Idaho.

Moving to more recent times, throughout the mid to late 1800s, whaling ships moved up and down the Bering Sea coast of Alaska. Traders from these ships came ashore and traded guns, ammunition, tobacco, alcohol, and foods like sugar and flour for pelts, meat and hides. Unfortunately, by the time they left, the local populations of marine mammals had been severely impacted, leaving the Alaskan Natives without one of their major food sources. Diminished wildlife populations combined with a new dependence upon the food and goods introduced by the whalers left Alaska natives in uncertain circumstances.

By the late 1880s, there were reports of starving Alaska Native populations in western Alaska due to the decimation of marine mammals from the whaling industry and scarce numbers of caribou. Dr. Sheldon Jackson, a U.S. general agent for education and a Presbyterian missionary, lobbied for federal monies to assist Alaska Natives. He built mission schools and in the late 1800s introduced reindeer into Alaska from Russia as a source of protein and revenue. Reindeer were brought to Alaska on Captain Healy’s U.S. Revenue Cutter, the Bear. Siberian herders and then Saami herders were brought to western Alaska to teach Native Alaskans how to herd reindeer. The reindeer industry grew until there were over 600,000 animals
present in the 1930s. Mismanagement and losses to wolves and caribou sparked a dramatic decline to only 50,000 reindeer by the 1950s. The Reindeer Act of 1937 allows only Alaska Natives to own reindeer.

The Roots of Reindeer History

- Reindeer and people have a connection that is thousands of years old in what is today called Norway.
- In 98 AD, the Roman historian Tacitus wrote about a people in Thule, who used fur clothes, hunted reindeer and travelled with skis.
- In the 800s the Norwegian chief Ottar visited King Alfred and the English court and Ottar related to the king about the Sámi and that reindeer were domesticated and managed in herds.
- The Sámi people lived and worked in so-called “siiddat” (reindeer herding groups) and reindeer where used for transport, milk and meat production.
- In 1894, Sami herders were brought to the Seward Peninsula in 1894, which brought increased commercialization and a large increase in numbers (over 600,000 by 1932).
- The Canadian government initiated their Reindeer Project in the 1920’s, and by mid 1930, reindeer had been brought from Alaska to the Mackenzie Delta.

Let’s Move into the Science of Reindeer

Pronunciation:ˈrɛɪndə(r)
Spanish name: Reno
Yup’ik name: Qusngiq
Inupiaq name: Qunfiq
Dena’ina name: Vejexhla
Unangam Tunuu name: Itxaygił
Family: Cervidae
Genus: Rangifer
Species: R. tarandus tarandus

Reindeer and caribou are the same species but different subspecies. Alaskan reindeer are classified as Rangifer tarandus tarandus while Alaskan caribou are known as Rangifer tarandus granti. As a result of thousands of years of domestication and selective breeding, reindeer and caribou have some distinguishing physical and behavioral characteristics.

Caribou are migratory creatures, traveling long distances to winter pasture and back again for spring calving. They tend to be lean, with long legs well suited to long migrations. When herded, or chased, caribou tend to spread out and scatter. Caribou bulls may be larger than reindeer bulls, but females are usually similar in size.

Reindeer are much more sedentary than caribou. While they do exhibit seasonal grazing patterns, their movements remain primarily within a well-established home range. Reindeer tend to have a more robust body shape, with shorter legs and a flatter face. When herded, reindeer gather together into a cohesive unit instead of spreading out. It is interesting to note that just one or two caribou in a reindeer herd will cause the entire herd to behave more erratically and scatter.

Life on the Alaska tundra is hard, but reindeer have it easy thanks to their amazing evolutionary enhancements. Their noses are specially adapted to warm the air they breathe before it enters their lungs and to condense water in the air, which they then use to keep their mucous membranes moist.
Their fur traps air, which not only helps provide them with excellent insulation, but also keeps them buoyant in water, which is critical being as how they often travel across massive rivers and lakes while migrating. Even their hooves are special. In the summer, when the ground is wet, their foot pads are softened, providing them with extra traction. In the winter, though, the pads tighten, revealing the rim of their hooves, which is used to provide traction in the slippery snow and ice.

**How to Raise a Reindeer in Alaska?**

To raise an Alaskan reindeer, you must be an Alaska Native. Remember, the Reindeer Act of 1937 allows only Alaska Natives to own reindeer.

Non-native reindeer owners in Alaska have purchased reindeer that are not from an original Alaskan herd but are generally from Canada.

Reindeer are now being raised and shown at agricultural fairs around Alaska as 4-H projects.

No barns or heated facilities are needed to raise a reindeer but you will need some basic materials to keep a healthy reindeer:

- Lots of space for them to graze
- Strong fencing to keep them from wandering off with caribou or where you don’t want them and to keep predators out
- Fresh water in the summertime and fresh snow in the wintertime
  - When given the opportunity to select different kinds of water while on winter diets, reindeer almost always choose snow. They refuse to drink seawater, warm water, salt water or cold water.
  - Researchers at UAF in the Reindeer Research Program believe that because snow contains no minerals, the daily water requirement for reindeer is minimized and body heat that would have been needed to warm larger amounts of water is conserved.
- For food
  - In the summertime, reindeer eat large quantities of highly nutritious green vegetation. It is during this time that reindeer grow and deposit large pads of fat beneath the skin of the rump and back. These fat pads enable the reindeer to survive the long cold winter when food supplies are scarce.
  - As the temperatures drop and sunlight decreases, reindeer expend less energy during the winter and they almost always lose body weight and body substance (mostly fat). It is now know that reindeer have evolved to survive by using their body tissues for essential body functions and by living a sedentary life during the long winter months.

**Reasons to Eat Reindeer**

A 3 oz of cooked reindeer provides:

- A great source of protein.
- An excellent source of vitamins A and B. It contains 100% of the daily need for B12.
- A mineral-rich meat that is an excellent source of selenium and zinc, a very good source of phosphorous and potassium, and a good source of iron and copper.

**What is B12?**

- B12 is a B-complex vitamin, which is a family of water-soluble vitamins.
• B12 plays a key role in the normal functioning of the brain and nervous system because it plays a part in building myelin.
• It is critical in the formation of red blood cells.
• B12 cannot be produced in plants or humans.
• Low levels of B12 can slow the body’s metabolism and make a experience symptoms of fatigue, depression, poor memory, and headaches.

Some Great Reindeer Meat Facts
• Norwegians eat on average 300 grams (0.7 lbs) of reindeer meat per year.
• 3.5 oz serving of reindeer meat contains the daily recommended dose of omega-3 and 6.
• The protein content of reindeer meat is as high as 22%.
• The lack of fat in reindeer meat means that if you cook them like beef steaks, the result will most likely be disappointing at best. To ensure your reindeer steaks cook up tasty and tender, refer instead to cooking methods appropriate for lean game meat such as venison or bison steaks. Grilling or pan-frying reindeer steaks affords you a better opportunity to control and monitor the steaks as they cook, making both good ways to cook reindeer steaks.
• Due to the high levels of iron in the meat, overcooking will result in very metallic tasting meat.

Let’s eat . . .

Reindeer Sausage and Rice Dish
Serves 4

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reindeer sausage</td>
<td>¾ pound</td>
</tr>
<tr>
<td>Butter</td>
<td>2 Tablespoons</td>
</tr>
<tr>
<td>Oil</td>
<td>2 teaspoons</td>
</tr>
<tr>
<td>Onion, medium dice</td>
<td>1 each</td>
</tr>
<tr>
<td>Celery, washed</td>
<td>2 stalks</td>
</tr>
<tr>
<td>Bell pepper, large dice</td>
<td>1 each</td>
</tr>
<tr>
<td>Garlic</td>
<td>2 cloves</td>
</tr>
<tr>
<td>Tomatoes, diced in juice, canned</td>
<td>14.5 ozs.</td>
</tr>
<tr>
<td>Chicken stock</td>
<td>2 ½ cups</td>
</tr>
<tr>
<td>Long-grain rice, uncooked</td>
<td>1 ½ cups</td>
</tr>
<tr>
<td>Bay leaf</td>
<td>1 leaf</td>
</tr>
<tr>
<td>Salt</td>
<td>To taste</td>
</tr>
<tr>
<td>Pepper</td>
<td>To taste</td>
</tr>
</tbody>
</table>

1. In a large saucepot, heat up butter and oil. Add in onion and cook for 5 minutes or until soft. Add in celery, bell pepper, and garlic. Cook for 3 to 5 minutes. Add in remaining ingredients, stir once, cover and cook on low heat for 25 to 30 minutes, or until rice is fully cooked. Stir together and serve warm.
Yummy Goodness and Tasty Tips!!

- Reindeer can be eaten boiled, roasted, grilled, or dried.
- Reindeer has more protein and iron than the same amount of beef, and less of the unhealthy saturated fat.
- Like the caribou, the reindeer liver, tongue, brain, blood, and kidneys are delicacies that add valuable nutrients and minerals to the human diet.
- Just recently, researchers at University College London discovered reindeer are the only mammals that can see ultraviolet light.
- Before Moore wrote “A Visit from Saint Nicholas” (aka “The Night Before Christmas”) in 1823, no one thought about reindeer in conjunction with Santa Claus. Moore introduced the world to Dasher, Dancer, Prancer, Vixen, Comet, Cupid, Dunder and Blixem (the last two of which were later changed from Dutch to German, becoming Donner and Blitzen). While the first six names all make sense in English, the last two mean “thunder” and “lightning,” respectively.
- Reindeer milk is extremely high in fat and protein. Only sea mammals such as seals secrete more concentrated milk.

Digging in: Classroom or Home Learning Activities

- Compare and contrast reindeer and caribou.
- Research the history of reindeer in Alaska and include histories of Siberian and Sami herders. Write a song or poem to tell the story.
- Plan a meal that includes reindeer. The meal should be low in calories, fat, and sodium and provide at least 20% of the recommended Daily Value for iron, fiber, and calcium. Which reindeer recipe would you select? What other foods (grains, fruits, vegetables, meat/beans, dairy products) would you include to make a complete, balanced meal? Which vitamins are included in your meal?
- Research the history, uses, and folklore associated with reindeer in Russia, Norway, and Finland.
- Play a game of “Balloon Antlers”. Divide players into two teams, and have each team choose who will be the reindeer. Hand each team’s reindeer a pair of pantyhose and give the rest of the teammates a bag of balloons. Set a timer for five minutes and have the players blow up the balloons that the reindeer must then stuff into the legs of the pantyhose.

When the timer rings, both reindeer must race to place the pantyhose antlers on their heads. The first team whose reindeer is wearing its antlers wins. Another variation is to have some judges on hand to determine the winning team based on the better pair of antlers.

Library Connections. . .

- **Elementary:**
  - Reindeer (A Day in the Life: Polar Animals) by Katie Marsico
  - Reindeer: Children Book of Fun Facts & Amazing Photos on Animals in Nature by Ina Felix
  - The Wild Christmas Reindeer by Jan Brett
  - The Reindeer Wish by Lori Evert
- **Secondary:**
  - A Year in Lapland: Guest of the Reindeer Herders by Hugh Beach
  - Reindeer Herders of the Mackenzie Delta by Gerry Conasty
  - Saami, Reindeer, and Gold in Alaska: the Emigration of Saami from Norway to Alaska by Rnulv Vorren and Ornulv Vorren