



Teaching Curriculum for the North American International Livestock Exposition (NAILE)

by Stephanie Darst

The North American International Livestock Exposition is the world's largest purebred, all-breed livestock show. It is held, annually in November, at the Kentucky Exposition Center in Louisville, Kentucky.

This publication was produced by the Kentucky State Fair Board, a state agency in the Commerce Cabinet, and presenter of the North American International Livestock Exposition.

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**NORTH AMERICAN INTERNATIONAL
LIVESTOCK EXPOSITION**

Dear Educator:

The North American International Livestock Exposition (NAILE) would like to thank you for participating in the NAILE Educational Program. Please use this publication, Teaching Curriculum for the North American International Livestock Exposition. The curriculum is just one part of the Educational Program. The other component of the Educational Program is the school tours held during the NAILE, these tours serve thousands of students each November.

The Teaching Curriculum for the North American International Livestock Exposition is presently in a flexible and changing format. It is photocopied on loose-leaf pages to facilitate sharing and further photo-reproduction. (Although these materials are copyrighted, we fully intend for them to be duplicated for educational purposes. Please seek permission should you wish to alter or publish any of the enclosed materials.) We ask that all teachers receiving this publication become an important part of our evaluation process. Please return the completed evaluation form to us as soon as possible, so that we may improve this resource. When you share these materials with other teachers, please copy the form for them as well, encouraging them to evaluate what they use.

This curriculum was created in 1998, the 25th anniversary year of the world's largest purebred livestock show by Stephanie Darst, with the contributions and reviews of many others.

Enjoy implementing these suggestions for livestock-related activities in your classroom! Be sure to visit the NAILE website at www.livestockexpo.org. Please address any correspondence related to the NAILE Education Program to:

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A BRIEF HISTORY OF THE NORTH AMERICAN INTERNATIONAL LIVESTOCK EXPOSITION

In June of 1973, Governor Wendell Ford announced the formation of a major livestock show for the state of Kentucky to be held at the Kentucky Fair & Exposition Center. Governor Ford pledged \$50,000.00 to support a Beef Show and related activities, such as Livestock Judging Contests, plus an additional \$25,000.00 for rental of the Kentucky Fair & Exposition Center.

This major livestock show was placed under the direction of the Kentucky Department of Agriculture and a committee was formed to develop the show. Agriculture Commissioner Wendell Butler, by virtue of his office, served as Chairman of this committee. Barney Hornback, Director of the Division of Shows and Fairs, was appointed Vice Chairman; and Harold Workman was appointed to the committee and named Manager.

Three committees were set up immediately: a Beef Advisory Committee, a Publicity Committee and a Consultant Committee.

The Angus, Hereford, Polled Hereford, Shorthorn and Charolais Associations of Kentucky each recommended two persons to serve on the Beef Advisory Committee, while each of the national breed associations recommended one name to serve on this committee.

The Publicity Committee was formed of farm editors and broadcasters from various locations in Kentucky, members of the Department of Public Information Staff, and a member of the Kentucky Department of Agriculture, Division of Promotion.

The Consultant Committee was formed of people representing industries related to the show, such as the Kentucky Fair & Exposition Center, the Governor's Council on Agriculture, the Kentucky Livestock Improvement Association, the Louisville Convention Bureau, the Kentucky Beef Cattle Association and the University of Kentucky.

Each of these three committees elected a Chairman who would sit on the Executive Committee along with the Commissioner of Agriculture, the Director of the Division of Shows and Fairs and the Manager of the show.

Various names were presented to the Executive Committee and finally, in 1974, the name North American Livestock Exposition was selected, and November was set as the month for the Exposition.

The first Exposition hosted beef shows, beef sales, a 4-H Livestock Judging Contest, and Commercial Exhibits. There were approximately 2,100 head of beef cattle entered in the first North American.

In 1975, the second year for the NAILE, the Executive Committee wanted to expand the Show to include sheep and swine. A request was made of Governor Julian Carroll for an additional \$30,000.00 to support these two new activities, as well as an additional \$10,000.00 for the rental of the Kentucky Fair & Exposition Center, bringing the total to \$35,000.00 for rental. This request was granted.

The Sheep Show was initiated in 1975, but the Swine Show had to be postponed. At this time, a Sheep Advisory Committee was appointed, with a Chairman elected. The Chairman also became a member of the Executive Committee.

The 1975 NAILE featured over 2,200 head of beef cattle and 1,500+ head of sheep, 4-H and Collegiate Livestock Judging Contests, Commercial Exhibits, beef cattle sales and a 4-Day Rodeo.

In 1976, the Rodeo was eliminated and a Junior College Livestock Judging Contest was added. Entries were considerably higher in 1976: 3,000+ head of sheep entered and 2,500+ head of cattle.

Even before the 1976 NAILE, plans were underway to expand again in 1977 with the addition of a major Dairy Show and a Swine Show. The show was also extended from one week to two weeks. Additional funds were requested of Governor Julian Carroll.

The Dairy Advisory Committee was appointed following the same guideline as the Beef Advisory Committee, with each of the five state dairy breed associations presenting one name. Advisory Committees were also appointed for the Swine Show and the Quarter Horse Show. A Chairman was elected for each of these three committees, and this chairman was added to the Executive Committee, bringing the total membership of the Executive Committee to eleven members.

The North American has shown remarkable growth through the years. From a “beef cattle only” event in 1974 with around 2,000 entries, the show has grown to include nine divisions and more than 20,000 entries. Quarter Horses were added in 1978; Draft Horses in 1983; Dairy Goats in 1988; Llamas and Stockdogs in 1992. Total premiums and awards for all events exceed \$500,000 and exhibitors represent 47 states and Canada. More than 200,000 people attend the NAILE each year.

“What’s that smell?!”

and Other Questions Commonly asked by Students during NAILE Tours

When walking through the barns at a livestock show, children often see or experience things they may not understand. Here are some commonly asked questions, and answers you may wish to respond to them.

1. What is that smell?

You will smell some strong odors when walking through the barns. The strange smell is usually stall bedding. Each stall has a mound about eight to twelve inches high of wood chips and straw. The bottom layer is usually wetted down to make it firm – this is kind of like the smell of your dog on a rainy day. The animals are stalled on this bedding for a few days so their waste (when they go to the bathroom) also accounts for some of the smell. People complain about the smell of manure, but usually the disinfectant (cleaner) that is used on the floors smells much worse.

2. Why do I need to watch where I step?

Manure does not look or smell good on your shoes. However, stepping in it won't hurt you. If you stay in the aisles and watch where you step, you should be okay. But do not step in the stall areas – it's messier there and you might frighten an animal.

3. Does it hurt when they shear the sheep?

Shearing does not hurt the sheep. Shearing sheep is similar to getting your hair cut. In the summer they need to be sheared to keep them from getting hot. Plus, the wool is an important product that sheep produce. Wool sheared from the sheep can be used to make clothing like sweaters, coats and blankets. Wool is also used to make car seat covers, dog beds, rugs and more, plus the lanolin in wool is used to make lotion. Just like all livestock products, wool has many uses.

4. Why don't they hand milk the cows? Don't the machines hurt?

Milking machines are much more efficient than hand milking. A person can hand milk 6 cows per hour, while a machine can milk 35 cows per hour! The machines are designed not to hurt the cow and they help in getting more milk from each cow.

5. Why do you keep the animals in cages/stalls/chutes?

Animals are kept in stalls while at the North American for many reasons. Tying them in stalls gives you the opportunity to view them from far away and up close. If all the animals were running free, it would be hard for the exhibitors to figure where their animals were. Grooming chutes or stands are used to keep the animals from moving around while they are being groomed.

6. How did you get the cows here? Did you walk them here?

Most of the animals were brought in stock trailers to the Exposition Center. The cattle are unloaded off the trailer at the entrance of the barns. Then the cattle are walked into the barn and tied into stalls.

7. How much do they weigh?

An average bull weighs 1800-2100 pounds. An average cow weighs between 1200-1500 pounds. An average steer shown at the North American is 1250 pounds. If the average 8-year-old child weighs about 60 pounds that means that the cow you see in the barns today weighs about the same as 20 eight-year-old kids!

8. What do they eat?

Show cattle are fed many different types of crops. Corn, Oats, Soybean Meal, Beet Pulp, Molasses and other feeds.

9. How much do they travel?

Cattle travel from across the United States and Canada to show in Louisville. Some cattle may only compete in one or two shows a year, but some champions may show as often as a dozen times.

10. Why do they have pierced ears? Rings in their noses? Brands/tattoos?

Animals have tags in their ears for identification purposes. Each farmer will give the animals an identification number that is written on a plastic or metal tag placed in the ear.

Bulls that are over a year old are required to have a nose ring in order to enter the show. Nose rings are used to make the bull behave or pay attention. (Similar to your parents grabbing your ear to make you behave or pay attention.)

Brands are like tattoos on the cattle. Some farms have a unique brand design that they use to identify their cattle, so they don't get mixed up with the cattle of their neighbors.

11. How smart are the animals? Do they like going to livestock shows?

Animals react in different ways to coming to cattle shows. Just as some kids like to get up in front of class and talk, some cattle like to come and show off. Some kids don't like going on vacation, because they miss their home and friends. Some cattle are the same, they miss being at home and being with their friends.

12. Do the animals bite? Can they hurt me?

No, cows will not bite you. However they kick, so you need to be cautious when walking behind the animals.

13. Can I touch the animals?

Petting the animals is allowed in the Children's Barnyard Area. However, when walking through the barns, it is not permitted to pet the animals. Please do not put your hand through the fences because you might scare the animal. A scared animal could accidentally hurt you.

CLASSROOM TEACHING CURRICULUM

The following activities are suggestions for pre- and post-tour activities tied to your visit to the NAILE, held each November at the Kentucky Exposition Center in Louisville, Kentucky. One important goal of the NAILE Education Program is to expand, evaluate and improve teaching materials to complement the Show and make new resources for agriculture (particularly livestock) education available to all teachers.

The following activities are grouped by skill/discipline/concept subheadings loosely tied to Kentucky Education Core Content. Teachers are encouraged to evaluate the materials using the accompanying evaluation form and contact Susan Simmons at NAILE to share any of their own suggestions for related teaching activities and strategies.

Suggested grade levels follow each activity (P=Preschool, E=Elementary, M=Middle, H=High). Activities with specific activities related to NAILE (Pre-tour, during tour or post-tour) are indicated by an asterisk*. Many words found in this packet's Livestock Vocabulary are given in italics.

Locating Sources

1. Collect information about agriculture-related jobs through reading and interviews (see interviews with NAILE participants in this packet); create a database of your findings. **EMH**
2. Create a bibliography of novels set on a farm. **EM**
3. Contact your local extension agent for brochures on agriculture and the environment. Create an informative bulletin board display, brochure rack or resources folder for your school library. **EMH**
4. Watch the farm report on the television news (or listen to the radio farm report) or clip the ag pages from the local newspaper for one week, making notes daily. At the end of the week, compile a vocabulary. **EM**

Reading

1. Start a scrapbook of clippings related to agriculture from newspapers and agriculture publications. **EM**
2. Read food labels/recipes/menus for dairy/beef/pork/lamb and other livestock-related products. **E**
3. Read stories and poems about farms and livestock. Create a reading list of your favorites to share with another class. (see Bibliography) **PE**

4. Subscribe to agriculture magazines or investigate them in your library. **MH**

Observing

1. * Introduce students to a variety of farm animals using picture books (with photographic illustrations, if possible), videos and other sources. Help them identify animals they will see and recognize in the Children's Barnyard and in the NAILE barns. Use the NAILE Breeds Listing in this packet to determine the breeds present in the Show.
2. * Observe the judges in the show ring- What do they do? **PEMH**
3. * Ask judges how observations affect their job. **EM**
4. * Spend time focusing on a specific animal. Discuss its characteristics. Recognize the same breed in another setting by identifying characteristics. **EM**
5. * Observe animals' behavior while in the barn. Do different animals behave differently? **PEM**
6. * Watch the ducklings in the Children's Barnyard. Select one duckling to observe specifically. Does it follow any pattern of behavior? (Staying in the front/middle/back, eating each time it goes down the slide...) **PE**

Listening

1. * Identify and discuss the various sounds you hear in the barns or show areas. Compare the various sounds the animals make at different times/under different conditions (during grooming, in the show ring, at feeding, during stall cleaning, when they are near other animals/people...) Variation: Take a pocket tape recorder with you to the show and tape sounds from various places on the tour. Back in the classroom, play back parts of the tape and have the students describe what they hear/where they think the recording was made. **PEM**

Quantifying

1. * Estimate the weights of various animals and check for accuracy by asking the exhibitor (if he or she is not too busy). Calculate the average weight of the students in the class. Use this average to calculate how many students are equal in weight to a specific animal. **EM**

Visualizing Space

1. * After returning to the classroom, try to re-trace the steps of your tour from memory by drawing paths taken by the group on a blank map of the North American. Compare to a map recorded by the teacher during the tour. **E**

Classification

1. Develop a system to classify and compare breeds. **EM**

2. Create a card matching game by photocopying the pictures of various farm animals, breeds of cattle, etc., and pasting them onto index cards. Create a card game by writing one clue on the back of each card with a picture of the breed on the front. John Pukite's book, *A Field Guide to Cows* (Penguin Books, 1998), has terrific illustrations for this purpose, as do the breeds pages of the University of Kentucky and Oklahoma State University Websites. **PEM**
3. * Develop an illustrated index of breeds in book form by identifying and recognizing images of various animals, then adding the characteristics and descriptions to each. Devote a separate page to each breed. Take a camera to the North American and photograph examples of each breed to add to your book. **EM**
4. Introduce students to the words used to describe young and mature animals. Create a bulletin board or illustration board using images of baby animals and their parents, along with vocabulary words. **PE**

Writing

1. Provide students: with a list of words selected from this packet's Livestock Vocabulary. Create an illustrated dictionary defining the words. **EM**
2. Write a short story set on a farm for your writing portfolio. **EM**
3. * Prior to your tour, assign various students to serve as reporters, covering specific aspects of the experience at the Show. Assign other students to be official photographers. Back in the classroom; create a newspaper, featuring topical articles and photos covering the show. **M**
4. * Immediately after returning to the classroom, prepare, as a class, a list of words describing the smells, sounds and tactile experiences of the North American International Livestock Exposition and the livestock there. Employ at least three of the words on the class list when writing a haiku or other poetic form. **PE**
5. Visit a farm and write a poem that reflects the farm at the particular time of the day or the season of the year when you visited. **EM**

Music

1. * Review animal and farm songs before the visit so the students are familiar with them. At NAILE, remind them of some of the songs as you tour. For example, while in the barns: "Listen to the sounds the animals make. Remember a song we sang featuring animal sounds ("Old MacDonald")? How do the real animal sounds compare to the ones we made in the song?" **PE**
2. * For fun, in the NAILE Children's Barnyard, observe the chicks hatching. Have the students join together to quietly sing "Happy Birthday" to the newborn chicks. Ask them why this song is appropriate here and tell them a little about the hatching process. Back in the classroom, write a song (as a class) about the hatching chicks or some other

memorable NAILE experience. Include words or phrases suggested by the students and set the lyrics to music from a familiar tune. (Bit of trivia: It takes 21 days for a chick to hatch.) **PE**

3. Perform a learning version of “Old MacDonald” using animal facts between each verse to an audience of younger students. **EM**

Movement

1. * Analyze/characterize/describe the various movements in Quarter Horse Show events. **PEM**
2. * Observe movements in the Show Ring. Recreate the animal/human relationships in a movement exercise upon returning to the classroom. **PE**

Electronic Technology

1. Do Internet searches for livestock breeds, agriculture colleges, goats, Clydesdales, etc. **EM**

Science – Patterns

1. The black and white markings of the Holstein breed of dairy cattle are unique and individual. Like fingerprints, no two Holsteins share the same markings. Compare patterns of Holstein’s spots, finding words to describe and classify them. Where else in nature can we find such diversity in patterning? **PE**
2. Interview a farmer about the daily routine of caring for the animals. **PEM**
3. * Describe behavioral patterns observed during the stock dog trial or sheep dog herding demonstrations. **PEM**
4. Ask breeders questions about the breeding cycles of a certain species. Create a model of population growth in a herd of ten, predicting the number of animals in the herd after three seasons, after five seasons... **EM**
5. Investigate water quality in a growing industrial area. Predict the impact this could have on livestock nearby in the future. **M**
6. Chart the gestational cycle of various farm animals on a calendar. **EM**

Science – Systems and Interactions

1. Hogs are often used in medical research because their anatomy is so similar to humans. Create a chart and illustrations comparing the biology of the hog and the human. **MH**
2. * Compare the modern milking machine to hand-milking methods, recording step-by-step procedures. Chart the production variances (av. 100cows/hour vs. 6 cows/hour). During the Dairy Show at NAILE, students may observe milking machines in action in the Milking Parlor. **EM**

3. Research the various uses of the edible and non-edible products and by-products of a particular kind of animal (hog, cattle, and sheep). Discuss the importance of livestock not only as a food source, but also as a source of vital contributions to medicine, manufacturing and technology. Develop a diagram of the animal with animal parts and their uses labeled. Affix the diagram to the center of a large poster board or bulletin board. Surround the diagram with a collage representing the various products and by-products. To expand this activity further, create a similar illustrated board showing how Native Americans made use of virtually every part of the buffalo. Discuss the concept of minimal waste/maximum utilization and how it applies to both examples. **EM**

4. There are many ways to investigate cause and effect as it relates to livestock production. For example, humans need the nutritional values provided by eating a variety of foods, and what we eat affects our overall health. So, too, the food consumed by livestock affects its health and product quality. More than 80% of beef cattle's diet is not edible to humans, so humans are not competing with beef cattle for the same food sources. Even more importantly, however, when cattle eat these foods and then we eat the cattle, some of the nutrients gained through the cattle's diet are eventually passed along to us. Eating cattle may give us nutrients we could not receive any other way. Create a food chain that represents some of these ideas. **EM**

5. Although the NAILE focuses on the farmers involved in livestock production, many farmers produce livestock and crops, and all livestock farmers depend on cultivation or row crop farming to feed their animals. For example, the production of broilers (chickens) is gaining importance in Kentucky agriculture as breeding and processing operations grow around the state. Broilers raised throughout the country are major consumers of corn and soybeans grown in Kentucky. (And talk about efficiency! A broiler can convert less than 2 pounds of feed into 1 pound of meat.) Investigate interdependency in agricultural production and prepare a presentation or video showing the importance of cultivation farming (corn, soybean, grain and hay production, etc.) to livestock production. **EMH**

6. Read about recent research in biotechnology. Write an editorial expressing your speculations about the long-term effects that a particular practice (e.g., genetically engineering strains of livestock or using growth hormones) may have on the ecosystem. **MH**

Science – Models and Scale

1. Diagram a food web involving livestock. **E**

Science – Evolution

1. Make a list of desirable characteristics in a pet (good temperament, soft coat...) and consider this in relation to breeding. How has animal husbandry changed historically? How have the characteristics of breeds changed over time? **EMH**

2. Create a graphic time line recording agricultural practices over time or graph the development of a livestock breed similarly. **EMH**
3. Research the selection of livestock traits in breeding, reporting on some of the various reasons why certain traits have been selected or eliminated in the gene pool (e.g., Holsteins have been selectively bred for milk consumption; the N'dama in East Africa have been selected due to their resistance to a particular disease there...). **MH**

Mathematics – Number Concepts

1. Investigate livestock marketing and margins for profit. Compare expenses and profitability in the industry. **H**
2. Chart costs of cuts of beef at a local grocery. Identify the location of various cuts of meat on a diagram of beef cattle. Read recipes in cookbooks to see how different cuts are used. Chart prices of beef entrees on a restaurant menu. Is there a correlation between the grocery and restaurant prices for specific cuts of meat? **M**

3. * Judging:

One important aspect of a livestock exposition is that animals and their owners have opportunities to compete against other animals and owners. Different shows and different breeds have different judging and scoring methods. A few of the shows at the NAILE employ a numeric scoring system. One of these is the Lead Line, a style show connected to the Sheep Show. In this competition, children wearing wool clothing lead sheep in the ring. Judges score the participants, and the competitor with the highest score takes first place.

The Feeder Calf and Feeder Steer Shows use a three-man judging system (other shows use one judge or one judge plus a breed association representative). In the three-judge system the animals are ranked in the same way that ordinals are assigned to athletes during the Olympic Games.

While animals are judged based on the specific desired characteristics of their breed and their ability to carry these preferred characteristics on in their offspring, some awards are also given based on the market quality of the product(s) for which they are raised. For example, in the Dairy Show, special awards are given for the highest milk production (measured in pounds) recorded.

Another important aspect of the exposition is the training, competition and recognition of young livestock owners. For example, in the National Junior Holstein Show, for exhibitors under the age of 21, an outstanding exhibitor award is given based on the junior exhibitors' sportsmanship, herdsmanship and knowledge.

Discuss various scoring and judging methods the students have experienced or are aware of. Compare ways of scoring various sports (football vs. baseball, Olympics vs. professional, etc.) or popular games, beauty pageants and talent contests, etc.

Establish some sort of competition in the classroom. Determine the qualities to be scored and assign specific numeric values to each. Score various entries in the competition. Evaluate the effectiveness of the judging. Ask a group of judges outside of the classroom to judge the same entries but do not give them any information about your scoring system. Compare results. Discuss differences in objective and subjective

methods. Discuss instances when subjective evaluation is important and/or necessary. **EM**

Mathematics – Measurement

1. * The weight of an animal is often an important statistic at livestock expositions and at the market when farmers go to sell the animals. For example, at the NAILE hog show, the classes are divided into weight categories, and the exhibitors of both beef steers and market lambs must declare a market weight. The animal must weigh in within the range of its declared market weight in order to qualify. This keeps exhibitors from engaging in artificial filling or overfeeding the animals to achieve a higher weight just before the judging. Brainstorm about the various ways that we use weight measurement (of humans, animals, products, etc) in our daily lives. **EM**
2. In many livestock shows, the animals are scanned for fat/muscle content before judging using ultrasound technology. Producing just the right amount of fat in a meat animal (beef, swine or sheep) is one of the great challenges of farmers who breed and raise livestock. (Just as the weight of humans is effected by both genetic and dietary factors, so too, is the weight of animals). Today, consumers look for leaner meats, and butchers who purchase meat by the pound does not wish to trim off waste they cannot sell. But livestock judges look for an ideal amount of fat, for marbling ensures tenderness and flavor in meat, and some backfat (fat around the outer carcass; it becomes the trim around steaks and pork chops) is necessary for an animal to be healthy and protected. Investigate ways the fat/muscle of humans is measured by health care professionals. Compare the procedures/results/significance of these analyses in animals and humans. **EM**
3. * At the NAILE beef show, a computer calculates an important number on each competing animal: a weight per day of age. Figured by the formula, weight divided by the number of days old, an animal's weight per day of age is one way to determine its growth ability or growth potential. This figure may have an impact on how well the animal does in competition and how successful it will be at breeding or sale. "Adopt" a newborn animal on a local farm. Correspond with the farmer about the growth of the animal over the season. Chart the animal's weight over time and represent in various graphic ways. **EM**
4. Discuss the relation of measurements of various milk containers to one another: knowing that the average dairy cow produces 7 gallons of milk per day, compute the daily production in half-gallons, quarts, pints, half-pints...representing each with a graphic. **E**
5. Convert measurements of milk in recipes to measurements in packaged containers (one cup equals one half-pint, etc.). Determine the amount of milk to add to the shopping list in order to make all of the recipes in a selected group. **EM**

Mathematical Structure

1. Discuss divisions of livestock into classes and subclasses. **EM**

2. Investigate bloodlines. **EM**
3. Study a chart of the foundation animals and genealogy of a particular breed. Create your own family tree. Compare. **EM**

Social Studies – Democratic Principles

1. Develop definitions of “animal rights” and “animal welfare.” Examine various viewpoints by sending for literature, running Internet searches, reading articles, conducting interviews. Be sure to include the viewpoints of farmers in your study. Consider how myths, emotions, human behaviors, economics and cultural/environmental differences among people may figure into these issues. Throughout the lesson, keep a journal of different viewpoints, meaningful quotes and your personal views. Variations: write and editorial for your portfolio expressing your personal views on a related subject or stage a debate representing various viewpoints. **MH**

Social Studies – Social Systems

1. * Interview a young member of a family exhibiting at the NAILE about the roles of family members on a farm. **PEM**
2. * Discuss rules of behavior during barn tours, including reasoning behind rules (animal welfare, student safety, etc.) Have students create hand signals or code words associated with the rules to use during your tour when fellow students need gentle reminders. **PE**
3. * Write a poem, rhyme or rap song incorporating barn behavior rules to sing on the bus. **E**
4. * Evaluate class behavior after the field trip. **PE**
5. * Invite a farmer to talk to the class about the ways that animals are cared for on the farm. Ask about concerns that you may have for the welfare of the animals and allow the farmer to respond to them. After the visit, discuss how farm animals are different from pets. Write a Farm Animal Bill of Rights. On your tour of the North American, observe how families are involved in caring for most of the animals and how important good care is to raising healthy animals that will provide high quality food and other important resources for us. If you see things that concern you on your tour, don't be afraid to ask about them. Many children wonder if shearing the sheep hurts them or makes them cold, for example. Your guide or even an exhibitor (if he or she is not too busy at the time) can tell you why certain things are done and how the animal feels about it all. **EM**
6. * At NAILE, observe the Sheep Herding Demonstrations. Back in the classroom; invite a dog trainer or veterinarian to visit. Ask questions about how dogs are trained, describing to them your experience at the NAILE demonstrations. At, interview a neighbor or family member about the training of their pet. What behaviors has the animal learned and how did the animal learn them? Compare more effective with less effective training techniques. Write an instructional piece featuring the methods of an interviewed trainer (professional or amateur) or write about your own experiences training your pet. **EM**

7. Introduce the word anthropomorphism to the class and ask the class to provide literary examples (or examples from other media) where farm animals are given human characteristics and behaviors. Read or view examples as a class (the novels *Animal Farm* or *Charlotte's Web* or the film *Babe*, for example). Discuss aspects of these depictions that are unrealistic and why. Speculate as to why these conversations are so popular (or, for older students, how they help make the story more universal). Find other examples of anthropomorphism (pets that talk in television commercials; cartoon animals that think human thoughts; cats that appear to “meow” to *Jingle Bells* thanks to the magic of editing; legends or myths that give the winds, the ocean or other natural elements human qualities; M&M candies that appear in ads with arms, legs and attitudes...). Write or tell a short story that features animals or other non-human elements with human qualities.
EM

Social Studies – Cultural Diversity

1. Research the significance of cattle/swine/goats in various world cultures, documenting differences in beliefs, diet, recipes, popularity, etc. **EM**

Social Studies – Economics

1. Research market trends/consumption and production over a 100/150-year period for milk/pork/beef...speculate as to the causes of change (advertising, costs, availability, storage capabilities, new products/uses, etc.). **MH**
2. Chart the number and size of farms in Kentucky during each decade of the 20th century. **EM**
3. Locate current figures for the export and import of agricultural products. Design a graphic chart to represent on aspect of your findings, e.g., the top five countries importing U.S. livestock products. **EM**

Social Studies – Geography

1. * Interview a young family member exhibiting at the North American about the importance of the trip to this show. **EM**
2. Make a list of the kinds of responsibilities you would have as a family member on a working farm. Compare this list with a list of your family responsibilities now. Variation: correspond with a pen pal or e-mail pal about the differences/similarities in your city/farm responsibilities.
3. Research the percentage of agricultural land used in various countries. How much of the designated agricultural land is cultivated? How much is permanent pasture? Reflect the results in pie charts. **EM**
4. Compile a list of various livestock breed names, noting the names that include a geographic reference/incorporate place name. (Examples ... Dairy Cattle: Ayrshire, Brown Swiss, Guernsey, Jersey; Beef Cattle: Australian Lowline, Belgian Red,

Galloway, Hereford; Goats: Alpine, Nigerian Dwarf, Russian White, San Clemente; Draft Horses: Belgian, Clydesdale, Dutch Draft; Sheep: Border Leicester, Dorset, Santa Cruz, Scottish Highland; Swine: Arapawa Island, Hampshire, Lithuanian Native, Ossabaw Island.) Locate each of these place names on a map. Where are many of them located? Brainstorm about other examples of place names incorporated into our language (e.g., dog breeds, foods, furniture styles...) Note: Some Websites and resources that describe breeds include history and geographic origins (www.ansi.okstate.edu/breeds). **EM**

5. Prepare an illustrated map of the locales of origin of breeds of a particular species. Advanced: Indicate movement of the breeds to the first established locales in the U.S. (including dates). Analyze U.S. import sites in relation to land resources. **EMH**
6. Create a cookbook compiled of pork recipes from various countries. Compare differences in preparations, cuts of meat, spices, flavors, etc. **EM**
7. Compare the physical features of various breeds in relation to their climates of origin. Chart the features that would be beneficial according to climate. **EM**
8. Investigate real estate in your community to find the ideal site for a new beef cattle farm. What characteristics make the land desirable? Prepare and advertisement for the land as “prime farm land.” **EM**
9. Create a map of the farms in your community, developing symbols for horse, dairy, beef, etc. Variations: Record the herd size at each farm through field study or by contacting owners. Record the names of the farms and discuss their meanings. Which name is your favorite? If you had a farm, what would you name it? **EM**
10. Research the occurrences of a livestock disease (e.g., Mad Cow Disease) and chart its movement. Collect articles and reports on efforts to control the disease. **MH**
11. Using the most recent issue of Kentucky Agricultural Statistics, available from the Kentucky Department of Agriculture, develop a map locating the top three Kentucky counties producing dairy, beef, thoroughbreds, sheep, goats, poultry, etc., using symbols to designate each commodity. Add the top counties in corn, soybean, wheat, and hay and burley tobacco production. Are some counties/regions more prominent agriculturally? Discuss the relationships between terrain/natural resources/climate and land use. **EM**
12. Ask students to bring in a traditional recipe from a particular country or region of the U.S. The recipes should reflect long-standing (historic) ways of cooking common to that geographic area. Look for connections between regional agricultural traditions and ingredients. For example: Do dairy states feature cheese products in their traditional recipes? Why does many Kentucky or southern recipes include country ham or salt-cured meats? What famous alcoholic beverage may be found in many Kentucky deserts, and what does this have to do with agricultural history? Create a cookbook featuring the contributed recipes and brief descriptions of their historic significance.

13. Prepare a colorful bulletin board using agriculture facts from Kentucky counties, based on information found in the most recent issue of Kentucky Agricultural Statistics (available from the Kentucky Agricultural Statistics Service – see Resources page). Assign each student to at least one Kentucky county (there are 120 total). Using a simple map of Kentucky counties, photo-enlarge each county onto a large piece of colored paper, using a variety of paper colors. (Enlarge all counties to the same percentage, so that the scale will be the same.) Trace the outline of the county with a bold black marker to define it and cut out each county. The students will research their assigned county and write the following information on the county cutout: name of county; number of farms this year; top three commodities (if the county is top-ranking in one or more of the commodities for the state indicates this, too); number of acres of farmland. Piece all of the counties together like a puzzle, forming a giant bulletin board map. Use the map as a springboard to discuss regionalism in commodity production, urban versus rural populations, growth or reduction in agricultural activity (past years are also listed for comparison in the County Data section of the statistics publication). **EM**

Social Studies – Historical Perspective

1. Read journal entries, letters from pioneer Kentucky and novels about that time to determine how food was obtained, grown, stored, prepared. Include the role livestock played in pioneer Kentucky. Summarize your findings in an illustrated report featuring excerpts from sources. (See the “Frontier Farming” unit and student worksheet included in this packet.) **EM**
2. Create a poster illustrating pioneer foods and food sources. Create a poster illustrating modern foods and food sources. Compare and contrast the two posters. **E**
3. Videotape interviews with several generations of a farm family to discover changes in goals, skills, roles, education, daily routines, etc. Edit the tape adding music, graphics and visual effects to enhance the expression of rapid, gradual or minimal change, as your findings indicate. **MH**
4. * Review farming catalogues to find the latest equipment and technologies used on today’s livestock farms. Look for illustrations of milking machines, automatic feeding and watering machines, incubators, electric shearing tools, etc. Discuss the changes in farming and the agricultural industry since the introduction of various technologies. Design a poster contrasting the modern equipment with the “old-fashioned” ways of doing things. Consider the many ways that agricultural productivity has increased due to advancements in transportation, communications, animal care (including veterinary and genetic advancements) and production/processing. When visiting the North American International, look for modern products and technologies in use. **EM**

Arts and Humanities – Production

1. * Look for brands (hot iron stamp markings) on animals at the NAILE. Consider their designs. Back in the classroom, design a brand to identify your belongings. Use reductive methods to create a stamp featuring the design on a potato or cut a sponge into the shape. **EM**

2. * Observe farm banners at the NAILE. Design a farm logo banner. Create the banner using colored paper on felt. **E**
3. * Observe the farm/ranch/stable displays in the barns and discuss how the exhibitors ornament their areas with logos, banners, plants, awards and decorations. Back in the classroom; have students design a barn display for their “farm.” **EM**
4. * Look for animal motifs in western wear (clothing and accessories). (Note a wide variety of western wear may be observed in the trade show area of the East Wing during NAILE.) Design your western vest or shirt using animal motifs. **EM**
5. Research the use of animal motifs in traditional Native American clothing and accessories. Create a mini-exhibit based on your research. **EM**
6. * Write and illustrate a children’s book based on a day at the livestock show, either from the perspective of a show animal or a visiting students. **EM**
7. Collect nursery rhymes and songs with farm or farm animal themes. Perform them in the classroom. Make books with a different poem/song on each page, leaving room for illustrations by students. **PE**
8. * Prepare an illustrated handbook to the NAILE for younger students. Include vocabulary, a map, pictures and a list of “what not to miss” or a Top 10 list of exposition highlights. **EM**
9. * Create a commercial or printed ad to “sell” the NAILE field trip program to other students. **EM**
10. Design a certificate of registration for a fictitious animal. **EM**
11. Create cartoons to illustrate the livestock-related jokes on the Jokes page of this packet. Publish the student’s cartoons in a special comic book or the school paper. **EM**

Arts and Humanities – Analysis of Forms

1. * While in the Coliseum at the NAILE, listen for the organ music played during the livestock events. Let students know that the North American is one of the few livestock shows in the world still using live musical accompaniment, although some horse shows still us organs. Ask these questions: What kind of mood is created by this music? Does the music compliment the action of the show ring? Why or why not? Do you recognize any of the tunes being played? What are they? How have these familiar tunes been changed (tempo, mood, pitch, etc.)? Where else would you hear organ music? Back in the classroom, discuss other places where background music is used (ball games, elevators, doctor’s offices, restaurants, stores, etc.). Compare the background music used in various places. Have each student or small group of students’ select one example and answer the

following questions: What purposes does the music serve in these places? Does it serve its purpose effectively? **EM**

2. Listen to selections of rodeo and western music, including cowboy songs. Select a number of songs that you feel best convey your impressions of the lifeways of farmers/ranchers/cowboys with livestock. Make lists of the words or phrases unique to this genre or subject. Record the mood and message of each song. What instruments do you hear? Compare students' responses to the above and select some of the more interesting responses. Prepare a musical program during which each selected song is played following brief commentary based on the student responses. Perform the "concert" for another class. **EM**
3. Design a survey to find out the most popular farm animal among students. Create a graph based on the data. **PE**
4. Hold an election to vote for "favorite farm animal." Prior to the election, use descriptive and persuasive language in developing a campaign to convince others why your animal is "best." **E**
5. * Analyze the criteria for a breed show. What are the judges looking for? Observe the show and the evaluating comments made when the awards are given. Back in the classroom; prepare a list of criteria for evaluating a "cool" outfit, a video game, a mystery novel, a rollercoaster, or some other category of interest to students. Then critique specific examples according to the criteria. You may even want to award a "champion" and "reserve champion!" **EM**

Arts and Humanities Aesthetics/Appreciation

1. * View the Saddle & Sirloin Portrait Collection, a collection of paintings of leaders in the livestock industry from 1903 to the present, housed at the Kentucky Exposition Center. (Most are displayed in the West Hall.) Discuss the use of brushstrokes, color, and light. Make comparisons of style, pose, background, and feeling. **EM**

Arts and Humanities – Cultural Diversity

1. Obtain menus from various ethnic restaurants. Compare beef and pork dishes in different cultures. Interview restaurant owners/chefs or individuals from different cultural backgrounds about ways beef and pork are used in their home country that may not be marketable/accepted in the U.S. By restaurant, chart the frequency of beef and pork dishes compared to the total offerings on the menus. **EM**

Arts and Humanities – Language

1. Collect an assemblage of popular phrases and sayings that include or relate to livestock ("go hog wild," "a pig in a poke," "sheepish grin," "cattle calls," "till the cows come home," etc.). Investigate the origins of these sayings and create an illustrated humor book to recount the origins. (Note that some phrases may have surprise livestock connections, for example, Wall Street in New York was so named for the wall once constructed there to keep free-roaming hogs from running through the New York City grain fields in that

area.) Discuss how our past dependence on agriculture is still reflected in our language.
EM

Practical Living – Consumerism

1. Help children understand how their food relates to farming and trace the food path from farm to consumer, using the preschool activity, “Where Does Food Come From?” in the Agriculture in the Classroom curriculum. **P**
2. Create a chart correlating a number of foods produced from the livestock industry with their various nutritional benefits. **EM**
3. * After observing the wool exhibits and shearing/dyeing/spinning demonstrations in the East Wing at the NAILE, organize a wool fashion show in the classroom with each student wearing at least one garment or accessory made of wool. Alternately, students can compare a variety of wool fabric swatches.
4. Characterize the various applications of wool, comparing their texture, thickness, color and other qualities. **PE**
5. Although 80% of the calories humans consume come from plant sources, one-third of the protein we consume comes from animal sources. Investigate world plant and animal food consumption and chart statistics for various countries. **EM**
6. To illustrate how livestock impacts our daily lives in so many ways, create lists of product categories and the animals from which they derive. (For example, Household Products: soap (cattle tallow), lotions (lanolin from sheep wool), china (cattle bones)...Clothing: wool (sheep), leather (cattle, swine, sheep), cashmere (goat)...Treats: ice cream (cow’s milk), chewing gum and marshmallows (cattle gelatin)... Food and drink: milk from cow, cheese from cow and goat, hamburger from cattle, bacon from swine...) Using magazines, advertisements, coupon pages and product labels, create a collage of these products related to the livestock industry. **EM**

Practical Living – Physical Wellness

1. Research biomedical uses of livestock by-products. Present findings in a presentation/report entitled, “The Importance of the Livestock Industry to Human Health.” **MH**

Vocational Studies – Career Path

1. Interview individuals/investigate careers in the livestock industry (farmer, breeder, processing plant worker, veterinarian, etc.) Prepare reports on the required skills and necessary education to work in these positions. What are the advantages/disadvantages of each career? Include in your report potential

schools with programs geared towards this career. Identify local, state and regional locations with employment opportunities related to/dependent upon the livestock industry. **MH**

2. Research the various uses of technology in the livestock industry today. How have career preparation/needed skills changed in the last 50 or 100 years? **EM**

Self-Sufficiency – Healthy Lifestyle

1. Using cookbooks, computer programs or advice from nutritionists, revise popular recipes featuring dairy, beef and pork products to reflect healthier eating habits. Write a magazine article including some of the revised recipes or feature at least one recipe in an advertisement created to sell consumers on the health benefits and low-fat options of these food categories. **MH**
2. Investigate guidelines for the proper and safe handling and preparation of all kinds of meat, using a variety of sources. Prepare an illustrated poster for display in your cafeteria or design an illustrated brochure for distribution to all students' families summarizing these recommended food safety guidelines. **M**

Self-Sufficiency – Ethical Values

1. Research animal welfare and animal rights, preparing definitions for each. Obtain relevant materials from the livestock industry, ag. programs in universities and activist organizations. Debate one or more aspects of the issue from the perspectives of various interested parties. **MH**
2. Research the recent success in sheep cloning. Discuss the impact the implementation of such practices would have on the livestock industry and livestock shows. Write an editorial expressing your opinions on the subject. **MH**

Responsibility/Community Service – Caring Behavior

1. Chart the daily/weekly/monthly responsibilities involved in caring for your pet. Prioritize these responsibilities based on the animal's needs. Interview a farmer about the daily/week/monthly responsibilities involved in caring for livestock and chart the responses. Compare charts. **PE**

Integrating Knowledge/Acquiring New Information – Using Existing Knowledge

1. * Before NAILE, expose students to the various colors and markings of animals. Begin by emptying a wide variety of crayons into a container and asking the children to sort out colors that they might find on cattle, sheep, horses, hogs, etc. Create a palette on a piece of paper using swatches from the colors they select (individual or group activity). Introduce a vocabulary of animal color and marking terms (roan, bay, sorrel, chestnut, dapple...). While touring the show, discuss the color and marking terms you have learned, associating them with animals you see. Back in the classroom, review your palette. How accurate were the colors you first selected? Which colors should be removed/added based on your experience? **PE**

Integrating Knowledge/Acquiring New Information – Expanding Existing Knowledge

1. * Using illustrations, match baby animals to the corresponding full-grown adults. Learn the associated vocabulary (calf, piglet, lamb, chick, duckling, foal, etc.). On your field trip, look for opportunities to encounter baby animals and adult animals. Discuss how the baby animal will change in size, proportion, body covering, color, etc. as it grows. Provide some examples of how much weight a particular animal will gain and how long it will take them to reach adulthood. What do these baby animals need? Back in the classroom; compare baby animals with human babies. As a class, make a “baby book” for a newborn animal, documenting its birth, charting its growth, and collecting pictures of it at various growth stages. **PE**
2. * As a class, study vocabulary words related to livestock before attending the NAILE (see the Livestock Vocabulary in this packet). **EM**

NAILE BREEDS LISTING

The North American Livestock Exposition displays many breeds of animals. Below you will find a list of breeds that are represented during the exposition. While most people in the livestock industry seem to be striving for the perfect animals, perfection is probably not quite possible today. There are so many different breeds of beef cattle and dairy cattle and swine for a variety of reasons. Different characteristics are preferred in different climates and geographic areas, for example. Human preferences for animal characteristics differ, too. Some farmers may prefer to raise leaner beef cattle to meet the demands of a specific market. Each breed has its own particular characteristics, and shows at the North American usually judge an animal against others in the same breed.

The Department of Animal Science at Oklahoma State University have developed areas on their Website to give further information and a brief history of many of these breeds, plus much additional information on livestock. (www.ansi.okstate.edu/breeds)

BEEF CATTLE

Beef cattle are divided into shows by breed, which are co-sponsored by their breed association. Cattle are judged for breeding characteristics that vary from one beef breed to another. Overall quality and health are also very important. In a funny way, beef cattle competition is similar to human body building competition. Judges look for muscle development and minimal fat. Size is important, but extreme body characteristics are not usually favored. The profitability of the cattle – how much money they are likely to bring at market – is tied into the animal's efficiency: how effectively it can translate grass and hay into quality meat.

Angus	Maine-Anjou
Balancer	Maintainer
Belted Galloway	Miniature Hereford
Braunvieh	Peidmontese
Charolais	Red Angus
Chianina	Red Poll
Chiangus	Salers
Gelbvieh	Santa Gertrudis
Hereford (polled & horned)	Shorthorn
Limousin	Shorthorn Plus
Lim-Flex ®	Simangus/Simsolutions
Lowline Angus (miniature Angus)	Simmental

DAIRY CATTLE

The showing of registered dairy cattle is an important part of the promotion, merchandising and breeding program for many dairy producers. Dairy Cattle are shown by breeds, and judged based on their “dairy character,” the judge’s notion of what that animal should be.

Ayrshire	Jersey
Brown Swiss	Milking Shorthorn
Guernsey	Red & White
Holstein	

SHEEP

Sheep are shown for two purposes: meat production or wool production. Sheep shows at the North American are based on the breed.

Border Cheviot	Natural Colored
Border Leicester	North Country Cheviot
Columbia	Oxford
Corriedale	Rambouillet
Cotswold	Romney
Dorper	Shetland
Dorset (horned & polled)	Shropshire
Hampshire	Southdown
Lincoln	Suffolk
Montadale	Tunis

DAIRY GOATS

Seven breeds of Dairy Goats are shown at the North American. Goats are judged on their overall body style, and also on their dairy characteristics.

Alpine	Saanen
La Mancha	Sable
Nubian	Toggenburg
Oberhasli	

BOER GOATS

Boer Goats made their debut appearance at the 2000 North American. Boer Goats are different from Dairy Goats because they are used primarily for their meat. Boer goats are the only meat goat breed that is shown. They are a horned breed with lop ears and show a variety of color patterns.

LLAMAS

Llamas are shown in three types of classes at the North American; pack classes, competitions for cart driving and obstacle courses and wool classes. In the wool categories, the llamas are judged in female and male categories. Then each class is based on age.

There are three wool categories:

- Light (animals in this category have a slick head – similar to a Labrador Retriever)
- Medium (between Light and Heavy)
- Heavy (animals in this category have bangs over their eyes and fuzzy legs)

SWINE

The swine judged at the North American are Market Hog classes. The hogs are judged on their expected meat quality before being sold and going to slaughter. The show is open to gilts (young females) or barrows (males castrated before reaching maturity). All breeds show together in classes divided by weight. Some of the breeds included in the Market Hog Show are listed below.

Berkshire	Landrace
Chester White	Poland
Crossbred	Spotted
Duroc	Yorkshire
Hampshire	

QUARTER HORSE

Quarter Horse is a breed of horse. Quarter Horse shows have many different classes and divisions. Horses are judged on body confirmation (muscular and skeletal structure) and style in the halter classes. Performance is important in the riding classes. Here there are two divisions: Western Pleasure and English Saddle. In Western Pleasure classes, the showman wears western attire and is mounted on the horse with a western saddle. In English Saddle competitions, the rider usually has on a dark jacket, tan pants and an English hat. The saddle is smaller and does not have the horn that the western saddle has. Pole Bending, Barrel Racing and Cutting Competitions are based on time and performance of the horse.

DRAFT HORSE

The Draft Horse show has two categories: Halter and Hitch Performance Classes. In the Halter classes, the horses are judged on body confirmation (muscular and skeletal structure). In the Hitch classes, the horses are judged on their performance while pulling a cart or a wagon.

Belgian	Percheron
Clydesdales	Shire

MULES & DONKEYS

The Saddle Mule & Donkey show has the following categories: Halter, Performance, Riding and Driving Classes. This show was added in 2007 and is a NASMA Approved “A” Show.

BEEF CATTLE INFORMATION

DID YOU KNOW???

- ◆ A 1,000-pound cow produces about 10 tons of manure a year!
- ◆ The hide from one **head** of cattle (one animal) can be made into 18 pairs of shoes!
- ◆ **Bulls**, or adult male cattle, are required to wear a **nose ring** when they show in the ring. The nose ring helps control the animal.

BEEF VOCABULARY

bovine -- cattle

bull – adult male cattle that may produce young

by-products – all products, except for beef, that come from beef cattle

calf – cattle less than one year old

chute – a stand to hold the animal while it is being groomed

cow – female cattle that has produced young

draft animals – animals that work for us, doing things such as pulling wagons or pulling plows through the fields. Some cattle (or “oxen”) are raised as draft animals, and some horses, especially draft horses, as raised as draft animals.

dual purpose – animals that are raised to be both beef *and* dairy cattle or beef *and* draft animals; *triple purpose* animals are able to serve us in all *three* ways, providing milk and meat, and pulling heavy loads

heifer – young female cattle that has not yet produced a calf

pasture – land where animals may graze and forage plants

rumen – the first of four compartments in the stomach of cattle

ruminates – to re-chew food that has been swallowed once before; it helps digest or process foods such as hay or corn stalks

steer – male cattle that has been neutered (like your cat or dog) so it cannot have young

veal - meat from a calf less than three months old that has been fed only milk

BY-PRODUCTS

Almost all of the beef cattle animal is used to make things we need. Meat is the most important product of beef cattle, but there are many by-products or secondary products from beef cattle, too. Here is a short list of some of the parts of cattle and how they are used:

fats/gelatin made into soap, shampoo, make-up, film

pancreas/liver made into medicines
hides made into leather goods such as shoes, belts, coats, footballs
hair made into paint brushes

Question: What do you call adult male cattle? (Hint: Michael Jordan was one!)
Answer: Adult male cattle are called *bulls*.

LIVESTOCK LAUGHS

How does a farmer keep track of all the cattle?
With a cow-culator!

What do you call a bull that's sleeping?
A bull-dozer!

What's the most important use of cowhide?
It holds the cow together!

Where do cows go to dance?
The meat ball!

NOW SHOWING!!!

The following are beef breeds that have shows during the NAILE!

ANGUS

Roll of Victory **Angus** Bull Show
Roll of Victory **Angus** Female Show

Females of the **Angus** breed show in the Coliseum on Tuesday. Some females will be in the show *with* their babies. This is called a **cow/calf class**. Monday is the male Angus or Angus **bull** show. You may have heard of "Certified Angus Beef" before. Sometimes you see the word "Angus" on restaurant menus or on meat packages at the grocery store. The breed is listed because it shows that the meat is very good quality. Angus is one of the most popular beef breeds in America. These cattle, originally from Scotland, are solid black in color and **polled**, which means that they are naturally hornless.

SHORTHORN

East Major PACE **Shorthorn** Show

Shorthorns are another Scottish breed. They are burgundy and/or white in color and may be solid, patterned or roan. **Roan** means that they have white hairs mixed throughout their main hair color. Shorthorns were the first improved breed (made to be the best it could be) brought to the United States in 1783. (They were called "Durham" then.) Although they are mostly beef cattle today, the early Shorthorns were **triple-purpose**, meaning they could produce milk *and* meat *and* serve as work animals.

Question: Knowing this, why do you think the pioneers liked this breed so much?

Answer: Early American pioneers loved the Shorthorn breed because it served three purposes. When they were moving their family and household goods across the land to a new place, they couldn't take very much with them. Having cattle that could provide both milk and meat, as well as pull wagons or plows was important to them. They would take a small number of male and female cattle (sometimes only one of each) with them to breed at their new homestead.

MAINE-ANJOU

Maine-Anjou Show

As you may be able to tell from its name, the breed originated in France, in the Maine and Anjou river valleys. It is a large breed that is black and white in color. Many Maine-Anjou have a triangular white patch on their foreheads.

HEREFORD

Hereford National Show

The Hereford is one of the most popular beef breeds in America and is raised all over the world. Herefords are an important part of Kentucky livestock history because the famous Kentucky statesman, Henry Clay, imported Herefords to Kentucky from England in 1817. Although the original breed has horns, some cattle *mutated* or changed to be hornless, and an Iowa farmer set out to establish a new Polled Hereford breed. "Polled" means that they were born without horns.

Herefords have blocky bodies with short, stumpy legs and broad heads. Their hair is thick and wavy. They are dark red with a white face, chest, and belly, and white **points**. This means that the "edges" of the cow are white—the ears, nose, hoofs and **switch**.

Question: Does anyone know what a switch is?

Answer: The **switch** is the tip of the tail, and it usually has a nice tuft of hair on it, for chasing away flies, and the like!

RED ANGUS

Red Angus Show

This breed is a variation of the Angus breed. It is red in color, rather than black, like most Angus.

Organizations that keep track of animal breeds are called **Breed Associations**. One important thing that a breed association does is keep a **herdbook**, or a book that records the characteristics of the breed and the individual animals registered in that breed. The first Angus herdbook in the 1860s listed both red *and* black cattle. Someone decided (for no important reason) that Angus should be black, and reds were banned from the U.S. herdbook in 1917. Later, in the 1950s, a group of cattlemen established a separate Red Angus breed.

LIMOUSIN

Medal of Excellence National **Limousin Show**

Although their name sounds like a long, fancy car, they are named after a region in France. They are a strong and beefy breed, well-suited to the harsh climate and rocky soil of the Limousin mountains. It is one of the oldest cattle breeds on earth. In fact, the Limousin may be the breed drawn on the famous walls in Lascaux Cave near Montignac, France, over 20,000 years ago! It wasn't introduced into the U.S. however, until 1971. This breed is solid red-gold in color, and its meat is one of the best. It has become popular in America, since it produces so much meat of the more expensive cuts.

PIEDMONTESE

National **Piedmontese** Show

From the Piedmonte region of Italy, this breed is white or pale gray in color with black points (ears, nose, hoofs, and tip of tail). It is a very old breed that originated 25,000 years ago when two different breeds in the Asian country of Pakistan migrated or moved to Italy. Together, these two breeds produced the Piedmontese. It is most famous for a trait called **double-muscling** or extra long muscles that mean it produces more beef. It has a particularly big and beefy rump!

CHIANINA

National **Chianina & Chiangus** Show

Chianina (key-a-nēna) are the largest beef cattle in the world. Their average weight is 2,500 to 3,000 pounds, and they can stand more than 6-feet tall at the shoulders! The Chianina can gain as much as 4-5 pounds each day! I mean they are *huge*! Their hair is off-white to steel gray, but they have a black nose, hoofs and **switch**. The switch is the tip of the tail, and it usually has a nice tuft of hair on it, for chasing away flies, and the like! The tongue of the Chianina is black, too!

The Chianina is one of the oldest breeds, and they are from the Chiana Valley in central Italy. (A popular type of wine, Chianti, is also named after this part of Italy.) Because they are so large and strong, they were originally draft animals, or work animals that pulled things like wagons and plows. They came to the United States during the time of World War II, when American soldiers in Italy saw the breed for the first time.

Chiangus is a strange name for a breed, but it combines two breeds into one. Chiangus were a result of crossbreeding the Chianina and Angus breeds.

All of these animals must have an **ultrasound** before the show. This is a test that uses sound waves to "see" inside the body (x-rays are another way we can take a picture of the insides of a body). You may have seen an ultrasound picture of a baby before it was born. The judges are looking for fat in the animal when they look at the ultrasound. Fat can give meat flavor and make it tender, but too much is not good. **Marbling** is what they call the fat in the muscle or meat. Next time you go to the grocery, look at a package of meat to see the marbling. It will look like white streaks going through the red meat.

SALERS

Eastern National **Salers** Show

Salers are named for a town in central France, so their name is pronounced with a French accent: *say-lair*. They are large and usually dark red with good-sized horns, but some Salers are black and **polled** (hornless). Ancient cave paintings in France depict the breed, so we know it is thousands of years old. Today, Salers are one of the fast-growing breeds in popularity in the U.S.

BELTED GALLOWAY

National **Belted Galloway** Show

The Galloway is a shaggy, black animal with thick, curly hair. Its hair keeps the cattle warm and protected from wind and rain, but it sheds its coat in the summer. The Belted Galloway is a cross between the Galloway, a Scottish breed, and the Dutch Belted.

Question: Why do you think the breed is called “Belted”?

Answer: If you guessed that this breed looks like it is wearing a belt, you’re right! The unique wide white belt that encircles its midsection comes from the Dutch Belted breed.

SIMMENTAL

North American National **Simmental** Show

This old Swiss breed has a white face and belly, but its color and patterning can vary. They are usually a light yellow-red, but may also be solid white, black, or several other colors. One distinctive feature is their **dewlap**, loose skin that hangs under their neck. Their name comes from the Simme Valley in Switzerland (“thal” or “tal” means “valley” in German).

GELBVIEH

North American National **Gelbvieh** Show

Native to Bavaria, in southern Germany, the **Gelbvieh** breed originated over 200 years ago. Gelbvieh (say “glep-fee”) are red and horned, although a polled or hornless variety was established in the United States.

BRAUNVIEH

Classic **Braunvieh** Show

Although the Braunvieh at the North American are in the Beef Show, the breed originated in Europe as a milk breed, mainly. Braunviehs are still raised primarily for milk in Europe. The name comes from the German words for “brown cattle,” and many shades of brown are found in the breed. The first breeders’ association was established in Switzerland in 1897. In the United States, the breed led to the founding of the American Brown Swiss dairy breed.

CHAROLAIS

Fall National ROE **Charolais** Show

Charolais are considered of Jurassic origin and are one of the oldest breeds of French cattle, they were developed in the region of Charolles in Central France. Charolais came to the United States

in June of 1936, when the King Ranch in Kingsville, Texas bought two bulls from Mexico. Charolais are the all white cattle and are naturally horned, but most that you see in the United States have been bred to be polled.

RED POLL

National **Red Poll** Show

Red Poll cattle served as dual-purpose animals in England, where they originated, they were not only used for their beef, but also for their milk. Red Poll cattle were imported to the United States in 1873, the first ones were brought to New York State. The breed was established with only about 300 head that were brought over from Britain. The Red Poll cattle are naturally hornless and are usually a deep red in color.

SANTA GERTRUDIS

Santa Gertrudis Show

Santa Gertrudis cattle were developed at the King Ranch in Kingsville, Texas, they are a cross of Brahman and Shorthorn cattle. Most of the cattle are approximately five-eighths Shorthorn and three-eighths Brahman. Their name comes from the original land grant, *Rincon de Santa Gertrudis*, purchased by Captain Richard King, who founded King Ranch. The foundation sire, the bull that all present day Santa Gertrudis descend from, was called "Monkey." Santa Gertrudis are a deep cherry-red.

DAIRY CATTLE INFORMATION

DID YOU KNOW???

- ✓ An **udder** (the organ on the underside of the cow that stores the milk) can hold 25-50 pounds of milk! If you are 5-6 years old or younger, that one part of the cow may weigh more than many of you! In the show ring, the cow's udder counts for 40% of the total score.
- ✓ A **heifer**, or young female cow, usually has her first **calf** (baby) at age 2, after being pregnant for nine months (hey, that's how long it takes for human mothers to deliver, too!). She will then start giving milk, working for about 5-6 years as a dairy cow.
- ✓ A newborn **calf** can walk on its own just *one hour* after it is born!
- ✓ A cow produces about 200,000 glasses of milk in her lifetime!
- ✓ **Milking machines** gently suck the milk from the cow's **udder** using a vacuum. They are a very fast way to milk cows. A farmer can hand milk about 6 cows per hour, but can machine milk 100 cows per hour! Cows must be milked every 12 hours, or two times a day.

Dairy cows are usually wedge-shaped with their rear (udder) end much broader than their front end. Can you see why this is a good body shape for milking?

The **lactation period**, or the length of time a cow can produce milk before having another calf, is 305 days. In 305 days, a good dairy cow can produce

2,326	gallons or	
20,000	pounds or	
37,216	glasses	of milk!

Prize-winning dairy cows can make even more milk than that! In the dairy shows at NAILE, special awards are given for highest milk production in pounds.

DAIRY VOCABULARY

butterfat – the fat in milk

cream – the yellowish part of milk that contains 18-40% butterfat

curds - the thick part of coagulated milk. Most cheese is made from fermented milk curd.
(fermented means stuff is added to it to cause it to change form)

homogenize – to blend the butterfat in milk by preheating it and forcing it through a tiny hole.
By reducing the size of the butterfat articles, they won't rise to the top anymore.

pasteurization – a heat treatment to kill germs in homogenized milk

whey - the watery part of milk. Ricotta is one cheese made from whey instead of milk curds.

What's *Your* Favorite Dairy Product?

DAIRY PRODUCTS

butter – a solid made from fat, air, and water when cream is churned; butter is 80% fat

buttermilk – cultured milk made by adding certain bacteria to sweet milk

cheese – food made from fermented milk curd that has been compressed and usually aged
(fermented means stuff is added to it to cause it to change form)

evaporated milk – pasteurized milk that is vacuum-heated to remove 60% of water; it is then homogenized, fortified with Vitamin D, and sealed in containers for long, room-temperature storage

ice cream – a sweetened, frozen food containing cream or butterfat and flavorings

ice milk - a sweetened, frozen food containing skim milk and flavorings

low-fat milk – milk that contains only 1-2% butterfat

skim milk – or fat free milk (milk with less than 0.5% fat)

sour cream – a product made from cream and bacteria that form lactic acid

sweetened condensed milk - pasteurized milk with sugar solution added; much of water is then extracted and product is sealed in containers for long, room-temperature storage

whole milk – milk containing 3-4% butterfat (no butterfat has been removed)

yogurt – a fermented, semisolid food made from milk and the cultures of two certain bacteria
(fermented means stuff is added to it to cause it to change form); sugar, dry milk solids, and flavorings are often added to it

Can *you* think of other foods that contain cow's milk?

Question: In 1856, a French scientist invented a process that makes milk safer to drink and store. Who was this famous guy, and what did he invent?

Answer: Louis Pasteur (1822-1895) invented the process of heating milk to a high temperature in order to kill harmful bacteria. The process, still used today, is called **pasteurization**.

To make	one pound of butter	it takes	232 ounces of milk.
To make	1 gallon of ice cream	it takes	192 ounces of milk.
To make	one pound of cheese	it takes	148 ounces of milk.

How many stomachs do cattle have?

This is really a trick question! A cow (or bull) has only one stomach, but the stomach has *four* compartments (our stomach only has one). The first compartment is called the **rumen**. All that chewing and chewing that cattle do is called **ruminating** or **chewing cud**. After they have swallowed their food, they bring it back into their mouth to chew it again. Ruminating and sending the food through the four compartments makes it possible for cattle to eat foods like hay and grass. We couldn't eat what cows eat, because our stomachs don't can't digest or process that kind of food.

Do other animals eat like cattle?

Yes, these animals are also **ruminants**, meaning they chew cud and have four stomachs: llamas and sheep (both have shows at NAILE), plus camels and deer.

What a Dairy Cow Eats *Each Day*:

20 pounds of grain	grains include ground corn, grain sorghum, oats, soybean meal
75 pounds of forages	forages include alfalfa (hay) and whole corn plants (called silage)

They drink 29 gallons of water each day. That's about a bathtub full!

A Milk Timeline:

1856	Gail Borden III patents condensed milk as a way to store milk without refrigeration
1919	milk is first homogenized
1932	plastic-coated paper cartons are introduced
1942	milk is delivered to homes to conserve the milk supply during World War II
1948	the process of modern pasteurization is developed
1960	plastic milk containers are introduced
1988	skim milk becomes popular

Ask your parents, grandparents, or teachers if *they* remember when milk was delivered to their home!

LIVESTOCK LAUGHS

What do you call the cow that produces the most milk?

The Dairy Queen.

What did the cow say to the bull?

I'm udderly in love with you.

What happened when the cow jumped over the barbed wire fence?

It was an udder catastrophe.

NOW SHOWING!!!

The following are dairy breeds that have shows during the NAILE!

JERSEY

All American **Jersey** Show

Jerseys are a small breed that is fawn brown in color. Because of their color and the shape of their eyes, they are often described as “deerlike.” They originated on the Isle of Jersey in Great Britain. The Jersey’s milk is rich and high in butterfat, so it is usually considered the best-tasting milk.

Question: The Jersey’s milk is also great for making a favorite dairy *dessert*. Can anyone guess what that might be?

Answer: Milk from Jersey cows is a favorite for making ice cream!

** Some Extra Trivia: Elsie, Borden Dairy Company’s mascot, is a Jersey. (The man who started the Borden Dairy invented condensed milk in 1856.) Amaze your friends with these incredible facts!

GUERNSEY

Guernsey Gold Futurity

National **Guernsey** Show (Cows)

Guernseys are brown or fawn colored with white spots. Like the Jersey, the breed is originally from an island in Great Britain. Guernseys also make rich milk that is high in butterfat, protein, and betacarotene. Many years ago, their milk was more popular because people liked to drink creamier milk. Farmers like Guernseys because they aren't very big, so they don't need to eat as much as bigger cows, but they give lots of milk for their size.

One Guernsey show today is a **futurity**, which means that the animals competing today were nominated for the show (registered to compete) when they were born. They are three years old now, so their owners have been preparing them all their lives, knowing this day would come.

HOLSTEIN

Mid-East Fall National **Holstein** Show

The **Holstein** breed is the most common breed in America. In fact, *90% of all dairy cows in the U.S.* are Holsteins. When you think of a typical cow, you are probably thinking of a Holstein. It's that black and white spotted cow you see all around. Here's a fascinating fact about Holsteins: no two are marked alike. That means that their spotting patterns are as unique as snowflakes! Usually, the spots cover about half of the Holstein's body, but some may be all white or all black.

Question: Why do you think this one breed, the Holstein, has become so important? (Hint: Why do we raise dairy cattle?)

Answer: The Holstein produces *more milk* than any other breed. That's why farmers raise more Holsteins than any other dairy cow. Holsteins usually work as milk cows for about 6 years of their life.

AYRSHIRE

Southern National **Ayrshire** Show

Ayrshire cattle are reddish brown and white spotted. Its spots are kind of unusual, because they are usually jagged and small and scattered all over their body. They would normally have long, upright horns, but most are dehorned as calves. This means that their horns are removed when they are very young. The Ayrshire is named after the County Ayr in Scotland, where the breed was first developed.

BROWN SWISS

Southeastern National **Brown Swiss** Show

What color do you think they are? Now, can you guess the country they are originally from? Only the black and white spotted Holstein breed gives more milk than the Brown Swiss. The Brown Swiss is a horned breed. The bulls have short horns with dark color on the horn tips. Not all breeds of cattle have horns; some breeds don't have horns at all and some have their horns removed (kind of like removing the tails in certain breeds of dogs). Cattle born without horns

are called **polled**. The Brown Swiss has fuzzy ears and dark brown **points**. This means that the “edges” of the cow are darker in color—you know, the ears, nose, hoofs and **switch**.

Question: Does anyone know what a switch is?

Answer: The **switch** is the tip of the tail, and it usually has a nice tuft of hair on it, for chasing away flies, and the like!

SHEEP INFORMATION

DID YOU KNOW???

- ❖ Sheep that produce wool are **sheared** (have their **fleece** shaved off) with electric clippers once a year. Shearing doesn’t hurt the sheep at all; in fact, they like it!
- ❖ After the fleece is sheared, the wool is sorted to pull the best quality, then it is washed or **scoured**. It is then **carded** or untangled and straightened. After this, it can be dyed different colors and spun into yarn.
- ❖ You can tell how old a sheep is by counting its teeth. It gets two teeth each year for four years.

SHEEP VOCABULARY

clip – the measure of one year’s wool production from a farm, state, country, etc.

herding dogs or sheepdogs – dogs such as border collies or Australian shepherds that have the job of herding, guiding, and moving the sheep

ewe – adult female or mother sheep

fleece – the wool of a sheep

flock – group of sheep

lamb – baby sheep; also the act of a sheep giving birth; and the meat of a sheep that is usually 4-6 months old

mutton – meat of an adult sheep

pelt – skin of a sheep with wool remaining attached
polled – animals without horns
ram – adult male or father sheep
shearing – shaving the sheep’s wool fleece with electric clippers
wool – fiber covering on sheep

BY-PRODUCTS

Some sheep are raised for their meat. Others are raised for their wool. Besides wool, parts of sheep may be used to make these (as well as other) **by-products** or secondary products:

insulation	piano keys	candles	shampoo
fertilizer	chewing gum	medicines	

A special oil in sheep’s wool, called **lanolin**, is used to make lotions, make-up, and other things.

A Wolf, er, Kid in Sheep’s Clothes

Sheep provide almost all of the **wool** we use to make clothing and blankets. Wool is an important **fiber** because it helps hold the warmth in when it’s cold. Wool is used to make coats, sweaters, suits, socks, scarves, and so much more. Are you wearing anything made of wool today? If you are, thank a sheep!

MEASURE UP!

Wool is measured in many ways. Wool **yields** may be measured by weight, in **pounds** (lbs.). Yields are also measured in percentage, that is, the percentage of wool that is able to be used. The length of the wool is measured, too, in **centimeters** (cm.). Some sheep breeds are considered long wool, some are considered medium wool, and others are considered short wool, depending on the length of their wool fibers. The diameter of the wool fibers is also measured, that is, the thickness of one single fiber of wool. The diameter of wool is measured in units called **microns**.

Centimeters are *one-hundreth* of a meter. One centimeter is equal to a little more than 1/3 of an inch. Microns, also called micrometers, are *one-millionth* of a meter.

Question: Can you guess how we measure microns?

Answer: **Microns are measured by a microscope.**

Have you ever looked at human hair under a microscope? If you have, it’s easy to see that some hair fibers are much thicker than others, just like with sheep!

LIVESTOCK LAUGHS

Where do sheep get their hair cut?

At the Baa-Baa Shop!

What do you call a sheep with no legs?

A cloud.

NOW SHOWING!!!

The following sheep breeds have shows during the NAILE!

SUFFOLKS

North American International **Suffolk** Show

Suffolks are the most popular sheep breed in the United States. These white sheep with black faces are a cross between the Southdown and Norfolk Horned breeds.

OXFORD

National **Oxford** Show

The **Oxford** breed is a cross between the Cotswold and the Hampshire. It is the second-heaviest breed of sheep (only the Lincoln weighs more).

MONTADALE

60th Anniversary E. H. Mattingly National **Montadale** Show

The **Montadale** is prized for its very white wool (*...its fleece was white as snow...*). The wool has very little lanolin in it, so more wool on its fleece can be used.

HAMPSHIRE

National **Hampshire** Show

Hampshires are named for a county in southern England. They are large and have a long face with very little wool on it. The area from their neck to their forehead, called the **woolcap**, is dark in color.

DORSETS

National **Horned Dorset** Show

National **Polled Dorset** Show

These medium-sized, all-white sheep are the second most popular breed in the U.S. Both varieties are showing today, one with horns, the other without. **Horned Dorsets** were developed when the Spanish brought Merino sheep to England, where they were crossed with the Horned Sheep of Wales. As you can tell from their names, these sheep had horns. **Polled Dorsets** were a mutation or genetic change in the original breed that occurred at North Carolina State College in the 1950s. Polled Dorsets are now more common than the horned variety.

SHROPSHIRE

National **Shropshire** Show

This English breed was known for its thick, short wool, said to go from “the tip of the nose to the tip of the toes.” It once had so much wool, however, that the sheep often suffered from “wool blindness,” when the wool covers the eyes too much. Through breeding, the **Shropshire** now has less wool and is popular once again. The Shropshire’s wool is very oily, an adaptation that helps it do well in cold, snowy climates.

BORDER CHEVIOT

Border Cheviot Show

Named for its place of origin, along the border of England and Scotland, the **Border Cheviot** has a white face, pricked ears, and a black muzzle and feet. Its face and legs are wool-free, but the long wool it does produce is special because of its **helical** crimp. That means that the wool fibers are **spiral** and, therefore, are able to spring back to shape when they are stretched.

SOUTHDOWN

National **Southdown** Show

The **Southdown** is named for the hills (the Brits call them “downs”) of Sussex, England. It has a fine, short wool, but it is also the oldest meat breed. It is recognizable for its “teddy-bear face,” that is a light mousy brown in color.

ROMNEY

Romney Show

This breed is popular in the U.S. and also in New Zealand. The **Romney** has a delicate meat flavor, but also has a great fleece (more microns than any other long wool breed!). The wool hangs in separate locks and has a uniform crimp, which means that the fibers have about the same curl to them. This makes it easy to spin, so Romney wool is a favorite of people who do **handspinning**. Romney wool makes terrific sweaters, carpets, and more.

LEICESTER

National **Border Leicester** Show

A long wool breed from England, the **Leicester** used to be the favorite wool of the wool carpet industry in the United States until the 1940s. The wool is long, curly, and lustrous (you know, kind of shiny in the light). Although we don’t make many wool carpets in this country anymore, Leicester wool is popular again because handspinners and crafters like it.

Question:

A famous man is thought to have brought the first Leicesters to America. Can you guess which one? Was it:

- a. Thomas Jefferson b. George Washington c. Jimmy Carter

Answer:

George Washington

Although all of these former presidents were farmers, George Washington is thought to have brought the first Leicesters to America. Washington raised 800 sheep on his Mount Vernon farm. He used Leicester rams, brought from England, to breed with other sheep he had, plus he kept a small purebred flock of Leicesters.

LINCOLNS

National **Lincoln** Show

Lincolns are a crossbreed of the native sheep of Lincolnshire England and another breed showing at the NAILE today: the Leicesters. Farmers in Idaho and Oregon raise a lot of them. Lincolns are, kind-of, record-setters; they are the largest breed of sheep, and they have the heaviest and coarsest wool. They also have one of the longest fleeces in the sheep world, with locks of wool that can be 8-15 inches long, with a spiral twist near the end. As the heaviest breed, Lincoln rams weigh 250-350 lbs. and ewes weigh 200-250 lbs.

COTSWOLD

National **Cotswold** Sheep Show

From Gloucester, England, this rather old breed is known for its long, white wool and dark-colored nose, ears, and hooves. Its name comes from two words that relate to the way it was raised centuries ago: it was housed in shelters called “cots” and pastured on the wild, treeless hills known as “wolds.”

RAMBOUILLET

Rambouillet Show

This breed was derived from the Merino breed, famous for its fine wool. Over 200 years ago, the Spanish government sent Merinos to the Rambouillet farm in Paris, to help improve French sheep breeds. These sheep are descended from this international cooperative effort.

TUNIS

North American Intl. **Tunis** Show

The Tunis is one of the oldest sheep breeds native to the United States. It all started in 1799, when the ruler of Tunisia sent sheep to America as a gift. (Tunisia is on the continent of Africa, between Algeria and Libya, and across the Mediterranean Sea from Italy.) This gift from Tunisia eventually became the Tunis breed – a cross of various African, Middle Eastern and European

sheep. Thomas Jefferson was a big early fan of the breed. Tunis have creamy wool and copper-red faces and legs. The shape of their ears is called “pendulous” by breeders.

NATURAL COLORED SHEEP

National **Natural Colored** Show

The designation “natural colored” doesn’t refer to a specific breed of sheep, but several breeds. Basically, natural colored sheep are sheep that are not white. Thousands of years ago, all sheep were natural colored. Like many animals, their coats blended in with the colors of their native environment, to help protect them from predators. When the idea to dye wool different colors became popular, breeders began to want white sheep, rather than natural colored ones (white wool is easier to dye a whole variety of colors). Because of this, natural colored sheep became less common. Today, natural colored wools are desired by craftspeople who do handspinning, weaving and felting. The natural colors – which include black, gray, silver, brown, beige, red and blonde – are considered beautiful without adding dyes.

SWINE INFORMATION

DID YOU KNOW???

- A mama pig is called a **sow**. When she is expecting babies, or **piglets**, she’s pregnant for 114 days. The group of piglets born at the same time is called a **litter**. Most litters have about 8-12 piglets, but some can have as many as 15! A sow has about 5 litters in her lifetime.
- **Market swine** are usually sold when they are 5-6 months old. They weigh about 230-260 pounds at that age!
- Although there are different breeds of swine, they aren’t divided by breed when they show at the NAILE. The judges are just looking for the animals that will give us the best bacon, ham, pork roasts, and more!

Fascinating Fact: Pigs don’t have sweat glands!

Question:

Can you think of one way that pigs try to stay cool?

Answer:

Have you ever seen a pig wallow or roll around in the mud? That’s one way a pig tries to stay cool!

BY-PRODUCTS

It's not just for breakfast anymore...

Swine are mostly raised for their meat. But the parts of swine we cannot eat may be used to make these (as well as other) **by-products** or secondary products:

insulation	rubber	antifreeze	plastics
floor wax	crayons	chalk	adhesives

Here are a few examples of the ways we use the parts of swine:

- hog blood is used as a leather finish and a plywood adhesive
- hog skins (called **pigskins**) are used for coats, gloves, shoes, etc.
- hog bones are used to make buttons, china, and glue

If you think all that is amazing, swine are very important to **MEDICINE**, too! Check this out:

- Surgeons have replaced sick human heart valves with heart valves from hogs over 35,000 times!
- Insulin from the hogs' pancreas glands treats diabetes in people.
- Fetal pig plasma (the liquid part of the blood of unborn pigs) is used to make vaccines.
- Specially treated hog skins are used to treat people who have suffered from major burns.

Question:

Which food is *not* from swine or hogs?

- a. bacon b. pork chops c. ham d. hamburger e. sausage
f. pepperoni

Answer:

Of all of these meats, only hamburger is not made from swine. Bacon, pork chops, and ham are all swine products. Sausage and pepperoni are made from swine, too, although these two favorite pizza toppings often have beef (from cattle) in them as well.

Eating Like a Pig...

You may have learned that cattle and sheep are **ruminant** animals, meaning they chew their food more than once and have four sections in their stomach to help digest foods such as grass and hay. Swine are *not* ruminant animals, so they cannot eat these kinds of food. (Bet you've never seen a pig grazing in the pasture!)

Hogs eat corn, soymeal, and sometimes leftovers from restaurants and cafeterias. Vitamins and minerals are added to their foods to keep them healthy. Swine have only one compartment in their stomachs, just like people.

LIVESTOCK LAUGHS

Why did the pig eat so much?
It wanted to make a hog of itself.

What do you call a pig that wants everything?
A gimme pig.

Why shouldn't you tell pigs a secret?
They'll squeal!

What kind of pigs do you find on the road?
Road hogs!

QUARTER & DRAFT HORSE INFORMATION

DID YOU KNOW???

- ◆ **Foals**, or newborn horses, can stand up and take steps just minutes after they are born!
- ◆ A **pony** is a grown-up horse that is *less than 58* inches tall.
- ◆ The first horses were brought to North America (to Mexico first) by Hernando Cortes in 1519.
- ◆ Horses have fairly small stomachs with just one compartment (unlike cattle and sheep, which have *four* stomach compartments). Because of this, horses only eat small amounts at a time, but they may graze all day long!
- ◆ “Rodeo” is Spanish for “round-up.”

ABOUT HORSES...

Horses serve many purposes. They can help keep track of cattle and other animals on the farm or ranch. They are important to sports and leisure activities, such as polo, racing, and horseback riding. In the past, horses were important to transportation—people could ride them, and horses could pull wagons and stagecoaches. Long ago, horses also pulled plows to help farmers break-up the soil for planting, and they powered all kinds of machinery before electricity.

When do you see horses today? In what ways do horses work for people today?

HORSE VOCABULARY

brood mare – a female horse that have given birth to at least one foal

colt – a young male horse, under age four

dam – female parent

equine – relating to horses

farrier – person who makes horseshoes and puts the shoes on horses

filly – a young female horse, under age four

gait – a horse's order of foot movements

gelding – male horse that has been neutered (like your cat or dog) so it cannot have young

halter – a collar and leadrope for leading a horse not wearing a bridle

hand – unit used to measure horses; one hand = 4 inches

foal – a newborn horse up to age 12 months, or the act of a horse giving birth

mare – a female horse age 4 and older, or a mother horse

pasture – land where animals may graze and forage plants

sire – male parent

stables – buildings where horses sleep and eat

stall – a space or compartment for an animal in a barn or stable

stallion – a grown-up male horse, especially one that is kept for breeding

yearling – a horse that is one year old, measured beginning the January 1 following the horse's birth

yield mare – a grown-up female horse that has not *foaled*, or given birth to young

WHAT A HORSE EATS

Horses **graze** in the **pasture**, eating grasses, in the warmer months. They also eat rolled oats, barley, bran, and **hay**, which is dried and cured **forage** plants, such as **alfalfa**.

GAITS

A gait is the order of a horse's foot movements. Most horses have four gaits.

walk -- a flat-footed, 4-beat slow gait

trot -- a 2-beat diagonal gait

canter – a 3-beat gait *faster*

gallop – a 4-beat gait *fastest*

OTHER HORSE BREEDS

There are many different kinds of horses besides the Quarter Horses and Draft Horses that show during the NAILE. Here are a few other breeds:

Appaloosa – developed by the Nez Perce Indians in the American West, this popular riding horse is known for its spotted coat

Arabian – a popular breed descended from ancient horses, Arabians are spirited, good-natured, and quick

Friesian – a Dutch breed with a very fast trot, Friesians are always black

Hackney – this breed, with a mixture of Arabian and Thoroughbred blood, is a favorite driving horse

Tennessee Walking Horse – known for its gentle, smooth ride and unusual gaits: the flat walk, running walk, and the rocking chair canter

Thoroughbred – from the Arabic word meaning “pure bred,” this is the most popular racehorse (It is the horse of the Kentucky Derby.)

Saddlebred – the only horse breed founded in Kentucky, this favorite show horse has a fifth gait, the high-stepping gait called the rack

Standardbred – bred to be a good trotting horse for the sport of harness racing, these American horses can also pace, or move both legs on the same side together

QUARTER HORSE

The most popular breed of horse in America, Quarter Horses are the first native breed to this country. They were the original race horse, and they got their name because they were frequently raced in two-furlong (¼-mile) stretches. Quarter Horses are still the fastest horse in a two-furlong gallop; the best can do the quarter-mile in 21 seconds or less! Thoroughbreds have replaced Quarter Horses as the favorite racing breed because they can race longer distances, but Quarter Horses are the cowboy’s favorite.

On farms or ranches, Quarter Horses and their riders separate cattle from the herd by *cutting* and they chase and *rope* calves that try to get away from the herd. Some of the contests at the Quarter Horse Show test these cowboy skills. It is important for Quarter Horses to have a quiet and smooth (not bouncy!) gait, to keep from scattering cattle.

Western Events

In the Quarter Horse Show, the horses and riders compete in roping events. Other breeds of horse can do this, too, including Arabians, Paint Horses, and Appaloosas.

Quarter Horses may be one of 13 different colors:

Bay – brown to red/yellow-brown with black mane and tail

Black – almost all black but may have some white markings

Blue roan – black or brown mixed with white hairs; looks blue

Brown – ranges from light oak to deep dark brown with black mane and tail

Buckskin -- light yellowish dun color with black mane and tail

Chestnut -- deep gold to golden red

Dun – grayish-yellow or sandy with black mane and tail

Gray – dark-skinned with a mixture of white and black hairs

Grullo – solid mouse gray with black mane and tail

Palomino – gold with white or silver mane and tail

Red dun – yellowish-red with almost a flesh-colored tone

Red roan – reddish brown mixed with white hairs

Sorrel – reddish brown; the most common Quarter Horse color

Quarter Horses can only have white markings on their face or on the lower parts of their legs. White markings on the face are called words like star, blaze, strip, and snip. This picture shows the different markings that are allowed and what they are called.

PARTS OF THE HORSE

Fetlocks can sometimes have a fringe of hair around them to help protect the horse's legs. To see this, look at the draft horse pictures.

The *withers* is the top of the horse's back. When you measure a horse in *hands*, you measure from the withers (not the top of the head) to the ground.

The *mane*, *forelock*, and *tail* move around quite a bit on horses, because they help to keep the flies away!

The *muzzle* is the jaw and nose.

The *hoof* is similar to our fingernails; it's hard, it protects the foot, and it needs to be trimmed often. *Horseshoes*, U-shaped bands made of steel or aluminum, are often fitted to hooves to further protect them.

DRESSING LIKE A COWBOY (OR CATTLE WOMAN)

In the Western events of Calf or Steer Roping, Barrel Racing, and Pole Bending, the riders wear Western clothing: a Western hat called a Stetson, a long-sleeved shirt with collar, Western boots, and chaps (leather leggings). They wear this in the rodeo, too.

TACK

a horse's gear or equipment

bit – piece of metal or plastic placed in the horse's mouth, so that when the rider moves the reins, the horse knows what to do

reins – strap fastened to the bit used by the rider to control the horse

saddle – seat for the rider; different kinds of saddles are used for different types of work

stirrup irons – rings that hang from the saddle to support the rider's foot

DRAFT HORSE

These are various breeds of large, strong work horses. Draft Horses are the world's biggest horses. They can be as tall as 19 hands (over six-feet-tall at the shoulders!) and weigh as much as 2,500 pounds! Percherons, Belgians, Clydesdales, and Shires are the breeds that show at the NAILE Draft Horse Show.

- *Belgians* have massive shoulders and quarters. They are often chestnut or roan in color.
- The *Percheron* is a French breed with a deep chest and compact body. The largest horse in the world was a Percheron, at 21 hands high! They are often gray or black.
- The *Clydesdale* is a British breed that worked in the coalfields of Scotland in the 1700s. Called the "gentle giant," its colors are bay, brown, and black.
- The *Shire* is also a British breed. It dates back to Elizabethan times, more than 400 years ago, when the strong Shires carried knights in armor. They are heavy and rather slow and can pull up to 10,000 pounds! Colors include bay, brown, gray, and black.