LESSON PLANS 2013
VOLUME II

The Nebraska Food Project
Daily Lesson Plans 2013 Volume II

Table of Contents

Table of Contents (Continued)

Nebraska Food Project - 2013
Lesson Plan

Author: Julie Lokie

Lesson Title: A New Perspective – Introduction to Where Does My Food Come From?
Learning Objectives (*As a result of this lesson, students will be able to):* Be prepared to look at where food comes from in a new way.
Required Materials for Lesson: • Paper and pencil. • Cameras. • Projector and screen.
Lesson Opening *(Designed to prepare students for learning):* Have you ever climbed a tree and looked down or taken a bus and looked at your world from a different place or perspective? What did you see or do you think you would see that looks different? We can learn more about a place from looking at it from a different perspective. You will be using cameras to take pictures of the class room from different places or close up to see what new things you can learn about the room.

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*
• Taking pictures for new perspective – Have students take one or two pictures from different perspectives.
• Download the pictures so they can be projected on the screen.
• View the pictures and have students answer the following questions:
  ○ What did you learn about the room that was new?
  ○ Interesting?
  ○ Different?

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Now that you have seen the classroom and learned new things about it from a new perspective, I want you to keep that in mind as you learn about where your food comes from.

Nebraska Food Project - 2013
Lesson Plan

Author: Marilynn Schnepf

Lesson Title: Antibiotics & Animal Health
Learning Objectives (*As a result of this lesson, students will be able to):* Discuss role of antibiotics in animal health and identify issues which may impact human health.
Required Materials for Lesson: Internet search on history of antibiotics, current uses in animal production, benefits & problems.
Lesson Opening *(Designed to prepare students for learning):* Discuss why antibiotics are important in human health & how they have come into use as growth promoters in animal production.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* After obtaining basic information on current use of antibiotics, interview local veterinarians, doctors and/or feed lot managers to obtain their opinions. Students could debate the pros & cons of the use of antibiotics.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Each student should write a paper giving his/her opinion on the future use of antibiotics in animal production.

Nebraska Food Project - 2013
Lesson Plan

Author: Nurita B. Lambert

Lesson Title: Aquaponics – Sink or Swim
Learning Objectives (*As a result of this lesson, students will be able to):* How fish waste can be a nutrient for plants, conservation of water, and how both systems can benefit each other.
Required Materials for Lesson: • Fish aquarium. • Aquarium heater. • Oxygen pump. • Herbs. • Gravel. • Fish. • Plant light/bulbs.
Lesson Opening *(Designed to prepare students for learning):* Have the students watch a video on aquaponics and get them excited about having a fish aquarium in the classroom and how it can be used to grow herbs.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* Day 1: Learn about aquaponics. Day 2: Set up the aquarium. Day 3: Set up the gravel and plant area.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Have the students explain what they learned over the 3 day period and how it can used to "green" our environment.

Nebraska Food Project - 2013
Lesson Plan

Author: Nurita B Lambert

Lesson Title: Be a Spy and Figure it Out
Learning Objectives (*As a result of this lesson, students will be able to):* Learn where various food ingredients on the label come from and their origin.
Required Materials for Lesson: • Computer. • Ingredient labels.
Lesson Opening *(Designed to prepare students for learning):* Hand each student an item such as gum, pop, food related toys such as a PEZ dispenser.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* The students will take the item that they are given and have the class period to find what the ingredients are and where they come from.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* The students will give an oral report to the class.

Nebraska Food Project - 2013
Lesson Plan

Author: Marilynn Schnepf

Lesson Title: Beef Color & Quality
Learning Objectives (*As a result of this lesson, students will be able to):* • Recognize the age of meet by its color. • Identify the three major pigments in red meat. • Identify different packaging used in retail to extend shelf life of meat.
Required Materials for Lesson: Beef packaged by different methods including: • Paper. • Vacuum sealed. • Modified atmosphere (Hy-Vee, Walmart).
Lesson Opening *(Designed to prepare students for learning):* Discuss what makes meat red: • Function of myoglobin in muscle. • How it changes to oxymyoglobin when exposed to air. • Eventually goes to metmyoglobin when old.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Have students open a package of vacuum packaged beef to see if it turns bright red (oxymyoglobin). • If possible, seal meat in a vacuum package & observe the color change. • Cut open a package of hamburger & see what pigments are present.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Discuss how consumers judge meat quality by color.

Nebraska Food Project - 2013
Lesson Plan

Author: Nurita B. Lambert

Lesson Title: Beekeeping
Learning Objectives (*As a result of this lesson, students will be able to):* • Learn about the history of bees. • Where honey comes from. • Nutritional value. • How they can use it in cooking.
Required Materials for Lesson: • Bottle of honey. • Internet research. • Downloaded YouTube video on bees. • Purchase ingredients to make honey butter (butter, honey, cinnamon, pop open biscuits).
Lesson Opening *(Designed to prepare students for learning):* Have a bottle of honey in hand when students walk in. Ask students to tell you what they know about honey. (Small tokens are given to students who answer).
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* Have the students get together in groups of two produce a short PowerPoint due by the end of the period on beekeeping. PowerPoints will be shown the following day. Assign topics such as: • Bee colonies. • Study of honey bees. • How to harvest honey. • How to make bee hives. • Life cycle of bees. • Beekeeping equipment.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Demonstrate how to make honey butter and sample on hot biscuits.

Nebraska Food Project - 2013
Lesson Plan

Author: Nurita B. Lambert

Lesson Title: Bloom Away!
Learning Objectives (*As a result of this lesson, students will be able to):* Students will understand and relate the concept of "blooming" when it comes to meat packaging and look at the shelf life of the beef in the meat department.
Required Materials for Lesson: Different examples found in the meat department of how ground beef is packaged. Examples: • Cryovacing. • Shrink-wrapped. • In butcher paper. • Preserved with gases (Hy-Vee).
Lesson Opening *(Designed to prepare students for learning):* Have the students visually examine the ground beef in the packages. Student can visually observe and discuss verbally, use a rubric worksheet and/or write a short description on paper.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Have the students open one package at a time. • Write down results that they can see and smell. • Discuss oxygenation and the term "blooming." • Grill/fry the beef and have a tasting lab.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Have the students write a ½ page summary of the lab and relate the information to how it affects the consumer and the retailer.

Nebraska Food Project - 2013
Lesson Plan

Author: K. Boyes

Lesson Title:
Bridge Ag to Your Life

Learning Objectives (*As a result of this lesson, students will be able to):*

- Define genetics.
- Understand the relationship between agriculture and everyday life.

Required Materials for Lesson:

YouTube video - Science in Your Shopping Cart by Utah Ag Classroom: www.youtube.com/watch?v=kudtlgMlgO8

Lesson Opening *(Designed to prepare students for learning):*

Quick Write: "So far today, how has agriculture affected your life?"

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*

- Share answers to the quick write and add teacher's answer.
- Discuss adventure on week long NE Food Project.
- Show and discuss video jotting down ideas that come to mind when they think of "genetics":
  - Improvements in food quality.
  - Better business practices.
  - Safe food.
  - Define genetics: A branch of biology that deals of heredity and variations of organisms.
    - Example- a soybean that has been specially modified to be impervious to the application of a specific pesticide.
    - Example- seedless watermelon.
- In a small group, list food products altered to make them a better product.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*

Nebraska Food Project - 2013
Lesson Plan

Author: Erik Wilson

Lesson Title: Careers . ied to Agriculture
Learning Objectives (*As a result of this lesson, students will be able to):* • Develop a career list that has an agriculture tie in their interest area. • Understand what it will take to pursue that career.
Required Materials for Lesson: • Internet. • Companies.
Lesson Opening *(Designed to prepare students for learning):* Class discussion as to types of careers tied to agriculture to help kids understand how broad this topic is.

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*
• Students will research and develop a list of careers that are tied to agriculture (prize for the longest list).
• Pick one of those careers that interests them and research:
  ○ Schooling.
  ○ Pay.
  ○ Benefits.
  ○ Job future.
• Report back to class in a PowerPoint presentation.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Journal and discuss what they learned and if their minds were changed about the careers and option for their future**.**

Nebraska Food Project - 2013
Lesson Plan

Author: K. Boyes

Lesson Title:
Concept of Sustainability

Learning Objectives (*As a result of this lesson, students will be able to):*

- Define sustainability: Maintaining ecological balance; in ecology it describes how biological systems remain diverse and produce over time; of, relating to, or being a method of harvesting or using a resource so that the resource is not depleted or permanently damaged – demonstrate food cycle.
- Understand becoming "steward of the land".

Required Materials for Lesson:

Lesson Opening *(Designed to prepare students for learning):*

- Where does your food come from?
- What has to happen first? Then what?
- Is there waste? What happens to that?
- What factors influence crop and livestock production?

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*

- Discuss notes from NE Food Project.
- Use graphic organizer to show food cycle images are on-line.
- Brainstorm student ideas on how one can become a "steward of the land" (note from Russ Vering, Howells).
    - What does one look like?
    - How is their behavior?
    - Why is it important?

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*

Nebraska Food Project - 2013
Lesson Plan

Author: Hilary Maricle

Lesson Title:
Cow Comfort

Learning Objectives (*As a result of this lesson, students will be able to):*

Quantify the importance of cow comfort on a dairy farm.

Required Materials for Lesson:

- Old Dairy Magazines (Hoard's, Dairy Today, etc.) or on-line access.
- www.manitowoc.uwex.edu/files/2011/10/Cow-Comfort-Issues-2005-Dairy-Road-Show-12-9-04d1.pdf
- www.extension.umass.edu/cdle/fact-sheets/bedding-options-dairy-cows

Lesson Opening *(Designed to prepare students for learning):*

- Review feet and leg scores and (BCS) condition scores.
- Open a discussion on the expectations that we put on a milk cow and average daily production.

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*

- 3 different types of bedding for free stalls/barns will be evaluated.
    - Watch video clip on a deep sand barn.
        - 10 minutes with iPads or old magazines to find an article promoting this type of bedding.
        - Must include information on cow comfort as related to milking ability.
    - Repeat process with mattress based (water/rubber/foam filled).
    - Repeat process with rubber mats.
    - Many others could be included.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*

- Split into pairs based on articles found.
- Each team is given 5 minutes to prepare for a presentation about why "their" type of bedding excels in terms of milk production.
- Close with the key that type of bedding depends on individual setting and farmer has choice – what matters is cow comfort.

Nebraska Food Project - 2013
Lesson Plan

Author: Hilary Maricle

Lesson Title:
CPM Feeding Habanero Peppers (Capsicum)/ Chili Powder

Learning Objectives (*As a result of this lesson, students will be able to):*

Recognize the value of unique cattle feed rations on heat stress.

Required Materials for Lesson:

- Habanero Peppers, chili powder and recipe ingredients.
- http://www.allaboutfeed.net/nutrition/feed-additives/2008/4/positive-results-of-plant-extracts-for-beef-cattle-AAF011362W/
- www.service.admani.com
- www.journalofanimalscience.org

Lesson Opening *(Designed to prepare students for learning):*

What do you eat that's hot? Do certain foods help you stay cool in the summer?

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*

- Prepare a very spicy dish as a class that gets its heat from capsicum.
- Students then taste test and record body reactions.
    - Sweating.
    - Temperature.
    - Watering eyes.
    - Do you drink more water?
- Relate their reactions to cattle with heat stress (the need for water).
- Lead into effects of capsicum in beef diet. Capsicum in beef diet opens capillaries and increases consumption of water and feed.
- Why would we add supplements to cattle feed?

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*

Quick journal: Agree or disagree with feeding capsicums to beef cattle.

Nebraska Food Project - 2013
Lesson Plan

Author: K. Boyes

Lesson Title: Cuts of Beef or Pork
Learning Objectives (*As a result of this lesson, students will be able to):* • Identify various cuts of beef. • Identify various ways one can tell if cut is tender or not. • Describe what each part of the grain does and produces.
Required Materials for Lesson:
Lesson Opening *(Designed to prepare students for learning):*
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Match cuts of meat by images to their name. • Design a puzzle to help identify where various cuts are located on the carcass. • Use sticky notes on chart. Could be modified to show parts of the corn kernel or soybean.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*

Nebraska Food Project - 2013
Lesson Plan

Author: Cindy Reeves

Lesson Title:
Dairy – Not Just From Mammals!

Learning Objectives (*As a result of this lesson, students will be able to):*

Describe different sources for dairy products and why it is important to have alternative sources for dairy.

Required Materials for Lesson:

- Internet Access.
- 3 A Day Nutrient Lesson, download free at: www.dairyspot.com/schools/nutrition-education/lesson-plans
- PowerPoint on benefits of dairy and nutritional importance.
- Samples of different milks: whole, 2%, skim, soy milk, almond milk, powdered.

Lesson Opening *(Designed to prepare students for learning):*

Using a process of selection, choose a student to taste test soy milk vs. 2% and see if they can differentiate between them.

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*

Students will complete 3 Every Day Nutrient lesson activities. Then each student will get to sample the varieties of milk.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*

Use the quick A,B,Cs methods to see what students have learned. Write the alphabet on the board, etc. and have each student choose a letter to write a word or concept they learned about dairy and the need for three servings a day. This allows for review of lesson concepts and the opportunity to fill in any gaps in learning that may have occurred.

Nebraska Food Project - 2013
Lesson Plan

Author: Cindy Reeves

Lesson Title:
Demystifying Pork: If it Cooks Like a Steak, It's a Steak!

Learning Objectives (*As a result of this lesson, students will be able to):*

- Identify different cuts of pork, the correct cooking methods and temperature for the cut.
- They will also recognize pork as a nutritionally lean meat.

Required Materials for Lesson:

- Internet Access – use links below to demonstrate different cuts in beef and pork. Emphasize new names in pork cuts. Or you can use posters as an alternative to the internet.
- Poster with beef cuts: www.beefitswhatsfordinner.com
- Poster with pork cuts: www.porkbeinspired.com/cuts
- Use websites to identify and explain cooking methods.

Lesson Opening *(Designed to prepare students for learning):*

Use unlabeled pictures of beef and pork and ask students what type of meat, what is the correct cooking method and temperature for each.

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*

- Students will review terms (methods, cuts) and correct cooking temperatures.
- They will then pair off and use resources to create flashcards to use in a memory and meat identification game to play with the class in teams.
- Winners choose a recipe from a group of recipes teacher has gathered and will then cook. The other team will have another recipe.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*

- After preparing their recipes, students will be able to describe cut, cooking methods and temperature.
- They will also evaluate the success of their cooking experience based on taste, texture, appearance, etc.

Nebraska Food Project - 2013
Lesson Plan

Author: Cindy Reeves

Lesson Title:

Don't Just Blab – Blog!
Using Blogging to Share Agriculture Experiences from Farm to Table.

Learning Objectives (*As a result of this lesson, students will be able to):*

Recognize the use of blogging and social media to advocate professional and safe practices in agriculture.

Required Materials for Lesson:

- Internet access for the following blogs:
  www.agriculturepround.com/2012/01/2_4/my-favorite-agriculture
  www.delish.com/food/best-of-food-blogs
  http://library.albany.edu/usered/eval/evalweb/blogswikis.html

Lesson Opening *(Designed to prepare students for learning):*

- Start a conversation with students.
- Ask them to define what a blog is and its purpose.
- Have them compare them to other forms of media.

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*

- Have students select a blog with a connection to Ag, FCS, commodities, etc.
- They will then use a criterion to evaluate the blog and share their findings with the class.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*

- Underscore elements of a quality blog.
- Share tips about Blogging: www.problogger.net/archives/2006/02/14/blogging-for-beginners-2/

Nebraska Food Project - 2013
Lesson Plan

Author: Nurita B. Lambert

Lesson Title:
E-coli/Food Borne Contaminants Are Not Your Friend

Learning Objectives (*As a result of this lesson, students will be able to):*
- Learn about food-borne illnesses and how they can reduce the chance that it will affect them.

Required Materials for Lesson:
- Video/DVD on food safety.
- Different colors of candy sprinkles.
- Play dough.
- Plastic knife, paper napkins, and styrofoam cups.

Lesson Opening *(Designed to prepare students for learning):*
- The student will be given 1 tablespoon each of multicolored candy sprinkles in a 2 different styrofoam cups.
- Then they will be handed a jar of play dough.
    - Can make from the following recipe: 2 cups of flour, 1 cup salt, 1 tablespoon of cooking oil, ½ to 1 cup cold water and 2 drops of food coloring. Combine all the dry ingredients. Add water slowly to make dough. Knead and add color.

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*
- The students will take the play dough and make two balls of dough.
- Take the first one and roll the ball in sprinkles in the styrofoam cup.
- Then take the ball and cut through it so they have two halves. Save and put on one napkin and set aside.
- Take the second ball of dough and let the students play with it, knead it and just have fun. Place on second paper napkins.
- Have the students write their names on the napkins and put away somewhere for the time being.
- Show the DVD/video on food borne illnesses.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*
Have the students then examine their play dough and explain how important handling raw products, cross contamination, washing their hands.

Nebraska Food Project - 2013
Lesson Plan

Author:

Lesson Title: Every Consumers Right
Learning Objectives (*As a result of this lesson, students will be able to):* • Evaluate the problem of world hunger. • Know every person's right when it comes to food. • Analyze what must be done to insure food for every person.
Required Materials for Lesson: • Pre-reading – Article: The Three Rights – Food, Choice & Sustainability: www.ncbiotech.org/sites/default/files/pages/Three-Rights-White-Paper-Revised.pdf • Computer for research.
Lesson Opening *(Designed to prepare students for learning):* • Ask – Do you think there is a food problem in the world? • Using a question and answer period. With use of thumbs up or down showing your opinion.   ○ Ask questions about where hunger is present and other questions from article.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* Discuss the Three Rights – Food, Choice & Sustainability
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Writing assignment: Try to come up with specific things you can do to help.

Nebraska Food Project - 2013
Lesson Plan

Author: Kathleen Kennedy

Lesson Title: Family Dynamics – Farming Style
Learning Objectives (*As a result of this lesson, students will be able to):* • Students will evaluate the impact and consequences communication has on relationships. • Evaluate conflict prevention, resolution and management skills. • Research family relations and conflict resolution techniques. • Identify how family, paradigms and culture affect communications.
Required Materials for Lesson: • *Family Treasures – Creating Strong Families,* UNL Extension 2006. A research-based training program that helps professionals help families develop their strengths. • *Nebraska Farmer* – Columns – Can This ___?___ be saved? • FCCLA Handbook to Ultimate Leadership (page 49). • Conflict resolution case studies. Guest Speakers: 3 and 4 generation farm operations. • FCCLA STAR Event – Interpersonal Communication.
Lesson Opening *(Designed to prepare students for learning):* • Balloon Juggle: Give 2-3 balloons to each student. Students write on each balloon a responsibility that they have. • Blow up balloons. Class will sit in a circle. Start with one balloon. As a group juggle the balloon. Keep the balloon under control within the circle and off the floor. • Continue to add one or two balloons. Start over as necessary as balloons hit the floor. Relate this to managing a business. • Generate a list of all responsibilities each family member has personally, as well as those of the business.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Distribute article on family farm dynamics from *Nebraska Farmer* magazine or other source. • Discuss as a class thoughts and emotions evoked from the reading. • Review conflict resolution steps/techniques. Practice/Complete case studies.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Create a poster or display on positive conflict resolution practices within families**.**

Nebraska Food Project - 2013
Lesson Plan

Author: Hilary Maricle

Lesson Title:
Family Farming Transitions – Family Dynamics

Learning Objectives (*As a result of this lesson, students will be able to):*

- Students will be introduced to a number of real-world examples of family farm transitions to realize not all transitions are smooth.
- Students will describe key personality traits that may create communication challenges in transitions.
- Could be used for any small family business – best for rural/ agriculture background.

Required Materials for Lesson:

- www.joe.org/joe/2009april/a8.php
- www.extension.iastate.edu/valueaddedag/page/transitioning-farm-business-within-family
- Risk taking/communication/personality styles handout.

Lesson Opening *(Designed to prepare students for learning):*
YouTube video: Webisode 20 – Family Owned, Family Operated, America's Farmers
www.youtube.com/watch?v=_WOfXE3_x30&list=PL8DA7934779B223BB&index=4

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*

- Journal your reaction to the video.
- Open discussion of "the perfect farm".
- Share "horror" story of farm torn apart by personalities and inability to communicate.
- Handout on different personalities, communication, and risk taking styles. Identify the players in your family and categorize them in each area.
- Small groups identify problems they could foresee.
- Discussion of solutions and why each family needs a plan.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*
Summarize joys and challenges of family business. Assign personal interview of family business leader to understand their ideas of how to communicate in family business. This interview becomes the lead in for the next lesson to focus on communication.
NOTE: This is one of my strongest areas of passion if you want to work together on stronger curriculums.

Nebraska Food Project - 2013
Lesson Plan

Author: Dianna Karmazin

Lesson Title: Farm Fabric
Learning Objectives (*As a result of this lesson, students will be able to):* • Identify the benefits of using eco and recycled fibers. • Identify benefits of new products made from farm products.
Required Materials for Lesson: • Samples of corn fabric and carpet (Ingeo, sorona, purlon, smartstrand). • Samples of soy fabric and upholstery.
Lesson Opening *(Designed to prepare students for learning):* Have students look at samples and guess what fibers they are made from.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* Key discussion points • Benefits of using eco/recycled fibers. • Benefits of finding new uses for soybeans and corn – "What other products and by-products are from these products?"
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Through discussion, students will understand the importance of finding new ways to use agriculture commodities.

Nebraska Food Project - 2013
Lesson Plan

Author: Deanna Karmazin

Lesson Title: Farmers Share of Retail Food Dollar
Learning Objectives (*As a result of this lesson, students will be able to):* Identify that farmers and ranchers receive only 15.8 cents of every food dollar that consumers spend on food.
Required Materials for Lesson: Worksheet printed from: www.nfu.org/farmers-share
Lesson Opening *(Designed to prepare students for learning):* Ask - How much do you think goes back to a farmer or rancher on all food products purchased?
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • On PowerPoint show a picture of one of the listed products from worksheet and have students guess how much it cost and how much of that goes back to the farmer – for each product on worksheet. • Ask students to identify all of farm cost of food such as markets, processors, wholesaling, distribution, retailing, etc. Those are 80 cents of every dollar spent.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Discuss what surprised you as we went through this lesson.

Nebraska Food Project - 2013
Lesson Plan

Author: Nurita B. Lambert

Lesson Title: Feed Ration for Cows/Layered Cookie Mix
Learning Objectives (*As a result of this lesson, students will be able to):* Realize the importance of planning the amount and type of feed fed to animals and how it relates to the animals size, nutrition and health of the animal and market value.
Required Materials for Lesson: Ingredients such as: flour, baking soda, chocolate chips, salt, and eggs.
Lesson Opening *(Designed to prepare students for learning):* • On the chalkboard relate the cookie ingredients to grain such as flour = hay, baking soda = minerals, chocolate chips=corn, salt=salt, and eggs= minerals. • Follow a recipe and place into a quart jar in a layered effect.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* Providing proper nutrition to dairy cows is important for health and optimal milk production. Dairy cow rations must contain good quality forages; a balance of grains and protein sources plus minerals and vitamins. These feed sources provide the nutrients needed by the dairy cow for milk production, growth and reproduction. Feeds must be fed in the right amount and combination to provide a balance of nutrients avoiding excesses or deficiencies. When rations are formulated or balanced correctly to meet the nutrient requirements of the cow, optimum feed digestion and utilization results. Feeding a total mixed ration (TMR) that contains all the feeds and nutrients required by the cow is an effective, efficient and profitable way to feed dairy cows.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Have a speaker come and talk to the students about feed (if time allows). Otherwise have the students get on the internet and come up with 10 questions to ask a farmer/rancher. Then the next day have a speaker come in to speak with the students.

Nebraska Food Project - 2013
Lesson Plan

Author:

Lesson Title: Food Production and Our Economy
Learning Objectives (*As a result of this lesson, students will be able to):* • Trace the line of an item you use as a consumer. • Determine how farmers help our environment.
Required Materials for Lesson: Computer for research.
Lesson Opening *(Designed to prepare students for learning):* Situation – You order a hamburger/sandwich from a fast restaurant, who have you helped make money?
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • From the list students listed from the opening question – look into how that person has produced a needed item or the final product. • When discussing the farmer explain the environmental impact that they have on our world while producing their product.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Now what? What can we, consumer, do? Hopefully get the recycling topic. – Talk about recycling.

Nebraska Food Project - 2013
Lesson Plan

Author:

Lesson Title: Grains – Corn Kernel
Learning Objectives (*As a result of this lesson, students will be able to):* • Have the knowledge for what the corn kernel is used for. • Know the importance of the farmers work.
Required Materials for Lesson: • Computer for research. • Slide of the corn kernel.
Lesson Opening *(Designed to prepare students for learning):* Make a list of "what can you do with a kernel of corn?"
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Go over the parts of the corn kernel. • Tell what each part is used for. • Have students in groups make a list of what can be made from corn.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* How many of these products do you use in your everyday life?

Nebraska Food Project - 2013
Lesson Plan

Author: Erik Wilson

Lesson Title:
Happy Cows and Pigs

Learning Objectives (*As a result of this lesson, students will be able to):*

Examine the nutrient benefits and differences of different feeds and conditions for cows and pigs.

Required Materials for Lesson:

- Internet for research.
- Animal Science Factsheets at www.pork.org/fact-sheets-brochures/factsheets-animal-science

Lesson Opening *(Designed to prepare students for learning):*

Have kids list the foods and amounts of each for a healthy human diet.

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*

- We know that in order to grow a healthy human we need certain foods. So what does livestock need?
- Have kids research the different mixes created by a mill for livestock feed.
- Have them make a poster and pie chart showing the ingredients and % of each for cows and pigs.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*

- Discuss what happens if we don't eat right.
- What will happen if cows and pigs don't eat right?

Nebraska Food Project - 2013
Lesson Plan

Author: Erik Wilson

Lesson Title: Hog Market Examination
Learning Objectives (*As a result of this lesson, students will be able to):* Discover the connection between factors that affect market prices.
Required Materials for Lesson: • Internet. • Newspaper.
Lesson Opening *(Designed to prepare students for learning):* Explain how Blue River farms produces a hog at a cost of $150 - $170 each and the factors involved in that cost.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* Have students examine market prices for hogs over the course of a couple weeks and discuss why the market changes and track if you sold 300 hogs a week how would the money flow? Graph data.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* • Examine the final graph and discuss how a farmer handles the ups and downs in the market condition. • Can also work with accounting teacher and demonstrate cash flows.

Nebraska Food Project - 2013
Lesson Plan

Author: Deanna Karmazin

Lesson Title: Hope for Millions Tarnished
Learning Objectives (*As a result of this lesson, students will be able to):* • Government's role in food supply and hunger. • Understand GMO's.
Required Materials for Lesson: • Research on GMO's. • YouTube video on Golden Rice.
Lesson Opening *(Designed to prepare students for learning):* If you were in charge of a country, would you allow a food source into your country that could save lives even if it is genetically modified?
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • What is a GMO? What regulations are in place for GMO's in food supply? • Discuss Golden Rice issue regarding it being banned from EU and Africa. • Discuss how deaths could have been prevented if Golden Rice could enter countries. • Discuss why countries/ people don't like GMO's.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Have students go around the room and discuss if they were the leader of the country if they would allow GMO's. Yes or no, explain.

Nebraska Food Project - 2013
Lesson Plan

Author: Julie Lokie

Lesson Title:
How Can I Be A Good Employee/Student?

Learning Objectives (*As a result of this lesson, students will be able to):*

Know and practice the skills needed to be a good employee/student.

Required Materials for Lesson:
Paper and pencil.

Lesson Opening *(Designed to prepare students for learning):*

Ask & write answers on board:

- Why is it important to be a good employee? (To keep your job).
- What are the characteristics of a good employee? What do you think employers want someone they hire to be able to do? (Be on time, good math skills, good hand writing, problem solving, honest, good verbal communication skills, able to work with others, etc.).
- You will be working in groups and taking some of these characteristics and using them to create 2 role plays. One role play will show a good employee and the other will show a bad employee.

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*

- Assign groups different characteristics and give them time (10-15 min) to develop the role plays.
- After the role plays, ask "Which employee will keep their job?" "What else will they gain from being a good employee?" (More money, better position, recommendation, etc.).

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*

Ask:

- Why is it important to be a good employee?
- What is similar between being a good employee and a good student?
- How will being a good student make you a good employee?
- What is your biggest challenge as student?
- What is one thing you will do to be a better student?

Nebraska Food Project - 2013
Lesson Plan

Author: Nurita B Lambert

Lesson Title:
How Far Will it Decompose? Biodegradable Packaging

Learning Objectives (*As a result of this lesson, students will be able to):*

- Examine different packaging that says it is "biodegradable".
- Use critical thinking skills on how to get the packaging to decompose and what type of experiments they can conduct to achieve such a result.

Required Materials for Lesson:

- Biodegradable packages.
- Blow dryer.
- Soil.
- Water.
- Household chemicals/ingredients such a vinegar, baking soda.
- Any items that the students brainstorm for their experiment.

Lesson Opening *(Designed to prepare students for learning):*

Have the students sample Stoneyfield yogurt, Activia yogurt, Sun chips, and Simply Balance product from Target.

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*

The students will conduct random experiments on "disposable" packages to test just how disposable they are and experiment with different substances to break down the product.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*

- Students will monitor the product packaging from day one and write down their observations.
- Check on the experiment in a week and observe any changes.

Nebraska Food Project - 2013
Lesson Plan

Author: Deanna Karmazin

Lesson Title: Importance of Agriculture to Nebraska
Learning Objectives (*As a result of this lesson, students will be able to):* • Recognize the importance of agriculture to Nebraska. • Understand the importance of agriculture to themselves.
Required Materials for Lesson: Sticky notes.
Lesson Opening *(Designed to prepare students for learning):* Ask- If farmers and ranchers went on strike tomorrow, how would that affect you? Nebraska? World?
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Have students list everything they used, or ate today that relates back to farming and ranching. • Discuss jobs and how they all relate to agriculture (1 in 3 jobs directly related). • Discuss economic impact to Nebraska's economy. Use scenario of agriculture receipt taxes and how much of their school is paid by agriculture taxes in their county. • Affordable food discussion – local/plentiful.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* • Have each student grab sticky notes. • Have them write 3 things they learned from this lesson. • Write 2 things they still have questions about.

Nebraska Food Project - 2013
Lesson Plan

Author: Jan Smaus

Lesson Title: Keep it Clean!
Learning Objectives (*As a result of this lesson, students will be able to):* Keep food clean from beginning - to middle – and at the finish line.
Required Materials for Lesson: • Video. • Extension Agent – Hand washing – Germ. • Hand washing fur.
Lesson Opening *(Designed to prepare students for learning):* • Introductory video. • UNL Extension Agent. • Student hand wash.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • What safety steps need to be taken in your home so food is safe? • What about before - was your food safe? ▪ At the store? ▪ At the packing plant? ▪ At the finishing? ▪ At the food mill? ▪ At the growing farms? ▪ At the birth? ▪ In the field?
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* • Brainstorm food safety list for your kitchen. • Share information about safe cutting/boards. • Clean counters (bleach/H2O). • Produce. • Bacteria – Define. • Technology – in meat packing can trace back in 1 hour where started.

Nebraska Food Project - 2013
Lesson Plan

Author: Jan Smaus

Lesson Title: Kitchen Safety/ Food Safety
Learning Objectives (*As a result of this lesson, students will be able to):* How to use meat thermometer.
Required Materials for Lesson: • Food ingredient. • Meat thermometer. • Video/or demonstration.
Lesson Opening *(Designed to prepare students for learning):* Food safety.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Discussion of meat (pork). Cooking, how to test or read thermometer. • Lab setting. • Continue with pork changes – how to cook, how to test. • Why inspect.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Lab Preparation. • Pork/beef. • Or add to breakfast unit.

Nebraska Food Project - 2013
Lesson Plan

Author: Jan Smaus

Lesson Title: Label – Must Read – "Read . ll About It"
Learning Objectives (*As a result of this lesson, students will be able to):* • Check information found on label. • What facts can you find?
Required Materials for Lesson: • Video. • Extension Agent. • Students bring in snacks or teacher provided.
Lesson Opening *(Designed to prepare students for learning)* • What is found on the label? • What do you usually look for?
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Students compare snack label – which is better? • Nutrients – review functions & definitions. • Leads into new labels on meat/whole grain products.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* • Students view another label, or fast food, restaurant nutrition information – to make best choice. • Or lead into lab for soy snacks.

Nebraska Food Project - 2013
Lesson Plan

Author:

Lesson Title: Lean & Wholesome Foods
Learning Objectives (*As a result of this lesson, students will be able to):* • Evaluate how raising methods produce lean meat from animals. • Evaluate labels from foods. • Evaluate how treating animals correctly can advance productivity.
Required Materials for Lesson: Meat posters, handouts, research, and videos.
Lesson Opening *(Designed to prepare students for learning):* Vocabulary words dealing with this topic.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • How the raising methods of animals make for leaner meats. • Explain the new labeling for meats and why this is being done. • Watch videos that show how these animals are raised and how that environment can help in producing more product.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Ending with a lab of some sort or a trip to the store to look at the meat counter.

Nebraska Food Project - 2013
Lesson Plan

Author: Nurita B. Lambert

Lesson Title:
Love Me Tender, Love Me Not

Learning Objectives (*As a result of this lesson, students will be able to):*
The students will use their sensory skills to evaluate pork chops cooked to different temperature to detect differences in texture, taste, color, and tenderness.

Required Materials for Lesson:
- Pork chops.
- Heating device and thermometer.
- Paper and pencil.
- Knife for cutting and supplies to sample with.

Lesson Opening *(Designed to prepare students for learning):*
The teacher will explain the lab to the students and then let them conduct the experiment on their own so that they can use critical thinking skills to reach their own conclusions.

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*
- Students will take a four pork chops and heat each one separately to different internal temperatures.
    - Sample 1- 145 degrees.
    - Sample 2- 155 degrees.
    - Sample 3- 165 degrees.
    - Sample 4- 175 degrees.
- Students will then record their results.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*
- Students will give their results verbally to the class.
- Followed by information given by the teacher:
    - 145 degrees is the new temperature recommended by the pork association (www.porkbeinspired.com) for cooking pork chops.
    - Ground pork should be cooked to 160 degrees.

Nebraska Food Project - 2013
Lesson Plan

Author: Hilary Maricle

Lesson Title: Lunch or Rations?
Learning Objectives (*As a result of this lesson, students will be able to):* Better understand the importance of diet in humans and livestock.
Required Materials for Lesson: • Lesson from Ag Ed Communities of Practice on Ration Formulation. • Lesson from State FCS website on healthy eating.
Lesson Opening *(Designed to prepare students for learning):* • First, complete lessons for human and animal. • When students from both classes come together, introductions and announce that they've spent the week doing the same homework.

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*
 	
• Split group randomly into 4 teams that will prepare to do the following:
  ○ Defend that animals receive healthier diet.
  ○ Defend that humans have healthier diet.
  ○ Individuals act Facilitator Room Manager, etc.
  ○ Play the role of concerned citizens.
• Create a debate setting and open it up to ideas and thoughts on health as related to diet.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Have two 10 min speakers – Dietician and Livestock Nutritionist.

**Team Teach – FCS & AG

Nebraska Food Project - 2013
Lesson Plan

Author: Erik Wilson

Lesson Title: Meat Cuts Names
Learning Objectives (*As a result of this lesson, students will be able to):* Identify different meat cuts and new pork meat cut names.
Required Materials for Lesson: • Beef cut diagram: www.beefitswhatsfordinner.com • Pork cut diagram: www.porkbeinspired.com/cuts • Beef and pork meats.
Lesson Opening *(Designed to prepare students for learning):* Have kids share with their partners what their favorite meat cut is.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Explain to kids how meat cuts are becoming more standardized between beef and pork. • Discuss the cuts diagram as a class and where they come from. • Work with FCS teacher and show how to cut some steaks from common beef and pork meats.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* • Have kids practice and identify the different cuts

Nebraska Food Project - 2013
Lesson Plan

Author: Deanna Karmazin

Lesson Title: Meat Market
Learning Objectives (*As a result of this lesson, students will be able to):* • Identify marketing strategies to improve sales of food products. • Create marketing plans.
Required Materials for Lesson:
Lesson Opening *(Designed to prepare students for learning):* • Did you know a specific cut of meat, such as a steak could have several different names such as patio steak, husker steak, griller, etc.? • Why do you think this is? • Should meat cuts have consistent names across the nation?
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Discuss why grocers across the nation give the same meat cut different names. • Give the students a specific meat cut and have them give it a new marketable name. • Have students create marketing campaign to sell their steak to the class.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Using the six hats strategy, have the students discuss their thoughts on having several names for a single meat cut.

Nebraska Food Project - 2013
Lesson Plan

Author:

Lesson Title:
Milk and Dairy

Learning Objectives (*As a result of this lesson, students will be able to):*

- Demonstrate how to select and prepare milk and milk products.
- Identify a standard serving size for milk and milk products.
- Explain terms associated with milk and milk products.
- Practice how to use and care for these dairy foods.

Required Materials for Lesson:

- Handouts found at: www.uen.org/core/displayLessonPlans.do;jsessionid=D1524A11B7AF41B2388A0E7D0764402C?courseNumber=200108&standardId=5791&objectiveId=5794
  - Milk study sheet.
  - Milk comparison.
  - Potato soup recipe.
  - Lab planning sheet.
  - Lab evaluation sheet.
  - Mostly about milk.
- Lecture notes:
  - Milk and Dairy Foods.
- Overhead transparency:
  - Nutrients in Milk.
- Video: www.dairyfarmingtoday.org/Dairy-Interactive/Videos/Pages/VirtualTour.aspx
- Visual display of empty milk containers, cans and cartoons of dairy products in various sizes:
  - ½ pint whole milk.
  - 1 pint whole milk.
  - 1 quart whole milk.
  - ½ gallon whole milk.
  - 1 gallon whole milk.
  - 2% milk (in various sizes and containers).
  - 1% milk (in various sizes and containers).
  - Skim milk (in various sizes and containers).
  - Whipping cream, sour cream, buttermilk.
  - Evaporated milk, sweetened condensed milk, ultra-pasteurization aseptic milk.
  - Chocolate milk.

- Milk comparison . ctivity:
  - 5 oz. paper cups.
  - 1 quart buttermilk
  - 1 quart whole milk, 1 quart 2% milk, 1 quart skim milk.

Lesson Opening *(Designed to prepare students for learning):*

- Hand out Milk Study Sheet. Introduce unit by showing a short video of how milk is produced.
- Select parts of or show the entire virtual tour of a dairy farm.
- After the video, you can ask what other foods come from milk and if we had no milk, think of all of the foods that we would not have. (Chocolate milk, butter, sour cream, buttermilk, cream, ½ and ½, yogurt, eggnog, etc.).

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*

- Have the students complete their study sheet as you talk about milk.
  - What is milk, nutrients, shopping pointers, storage tips, processing milk, forms of milk, etc. You will want to use the milk containers for visuals. Complete as much of the lecture as you can allowing you at least fifteen minutes at the end of class for milk comparison activity.
  - Allow the students to choose whether or not they want to participate in sampling the various milks and completing the information for extra credit.
  - The students will form a single line and pick up a paper cup. I will usually begin with buttermilk (1 quart will probably be enough for three classes as they will not want very much), skim milk, 2% milk and then whole milk. I pour a small amount into the cup for them to sample. Then they rinse out the cup and get back in line for the next and so on.
  - After they have sampled all of the milks, they can use the information on the milk label to complete the paper. Turn in completed paper before they leave. Clean up the milk comparison activity before the end of class. Continue the lecture the next class period if not completed.
- Continue and finish the lecture notes on Milk and Dairy from the previous class so the students can complete their study sheet- grades of milk, uses of milk, principles of milk cookery, milk substitutes, and stretching the milk dollar and ways to reduce the fat content in recipes calling for milk products.
- Hand out the potato soup lab. Plan lab using lab planning sheet. Make sure the students rotate the responsibilities. The students will attach the completed lab sheet to the completed lab recipe.
  - Students will complete lab with assigned lab partners, making sure they complete their assigned duties from the lab planning sheet.
  - If a student is absent for the lab, they will need to complete either a home cooking assignment to replace lab missed or complete a recipe comparison assignment.
  - Give students time to fill out lab evaluation papers after they have done their lab assignment.
  - Be sure they clean up their units and especially the milk slops on the stove. Turn in lab sheets and with what time is left, they can work on their Mostly About Milk.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*

Handout: Mostly About Milk. Have the students find the words in the word search and then use the clues and complete the blanks with the correct term as it relates to milk and dairy products.

Lesson adapted from Utah Education Network.

Nebraska Food Project - 2013
Lesson Plan

Author: Julie Lokie

Lesson Title: Milk Comes From Where?
Learning Objectives (*As a result of this lesson, students will be able to):* • Be more aware of where milk comes from. • Know there things done to keep milk safe.
Required Materials for Lesson: • Computer. • Projector. • Farm to Store-from Midwest Dairy video: www.midwestdairy.com/0p17i307/from-farm-to-store-video/
Lesson Opening *(Designed to prepare students for learning):* Where does milk come from? Today you will be watching a short video that explains just that and the things that are done to make sure milk is safe.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* Have student watch Farm To Store video and watch for three things done to keep milk safe.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* • What did you learn about where milk comes from? (Dairy farm, happy cows). • What kinds of things are done to keep milk safe? (Keep cows healthy, keep cows clean, cool milk quickly, milk is tested for bacteria, if any bacteria in milk the tanker is discarded, 2 days from farm to store).

Nebraska Food Project - 2013
Lesson Plan

Author: Jan Smaus

Lesson Title:
My Plate; The Nebraska Way

Learning Objectives (*As a result of this lesson, students will be able to):*
- Interview family member about food choices related to Nebraska agriculture.
- Discuss family habits.
- Share a recipe/share connection to Nebraska agriculture.

Required Materials for Lesson:
- Websites (will need to get).
- Use some introductory video. /(pork/beef).
- Handout – create and put plate on Google Docs.
    - Family Garden.
    - Family Field.
    - May be frozen.
    - Growth.

Lesson Opening *(Designed to prepare students for learning):*
- Post cookbooks – share.
- Introduce this topic go over steps.

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*
Family activity.
- Start with family interview – (explanation of introductory questions):
    - Where do you get your foods?
    - Do you try to get NE foods?
    - How do you know if your foods are safe?
    - What safety measures do you take when food gets home?
- Select a family favorite, MyPlate recipe.
- Connection to NE Agriculture. Research.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*
- Share recipes and comments in cookbooks – Nebraska flavors.

Nebraska Food Project - 2013
Lesson Plan

Author: Hilary Maricle

Lesson Title: New Names for Old Favorites
Learning Objectives (*As a result of this lesson, students will be able to):* List the new names for peek retail cuts.
Required Materials for Lesson: Beef Council and Pork Producers Marketing Materials. Pork and Beef Retail Cut Posters. www.porkretail.org www.beefretail.org
Lesson Opening *(Designed to prepare students for* *learning):* Watch video promotion of new names.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Lecture with pictures of new cut names for beef/pork. • 20 min Jeopardy identification game.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Hand out- take home materials of new names, ask students to gather data on parent's reactions and be prepared to discuss positives and negatives of new names in terms of marketing and product sales.

Nebraska Food Project - 2013
Lesson Plan

Author: Hilary Maricle

Lesson Title: Oxidizing Meat
Learning Objectives (*As a result of this lesson, students will be able to):* Identify meat color and safety.
Required Materials for Lesson: Beef from a number of different sources and styles of wrap- frozen (white wrap), frozen (vac), cryovac fresh, vac fresh, shrink fresh, bagged fresh.
Lesson Opening *(Designed to prepare students for learning):* • Who likes to eat meat? • Has anyone ever had to throw away bad meat? • How do you know it's bad, what made you throw it?

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*
 	
• View packaged cuts (ideally same species and cut for all).
• Display packages and label.
• Open all packages at once to begin oxidation.
  ○ Time each item to "pink" color.
  ○ Discuss what oxygen is and does and why package differently.
• Compare different times and why it took shorter or longer.
• Leave some meat out to teach "bad", discuss why must be trashed – food safety.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Grill the steaks and perform a taste test to see if packaging matters to taste.

Nebraska Food Project - 2013
Lesson Plan

Author: Erik Wilson

Lesson Title: Plastic Corn?
Learning Objectives (*As a result of this lesson, students will be able to):* • Examine all the products that can be made from corn.
Required Materials for Lesson: • Pictures or samples of different materials made from corn.
Lesson Opening *(Designed to prepare students for learning):* • Have kids examine a plastic material made from corn and explain where it came from. Don't tell them it came from corn.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Show them pictures or pass around items made from corn lactic acid (cups, plastics, fabric, etc.). • For each one, have them discuss with their partners what it's made from. • Explain they all come from corn and explain the processes involved in production (from farm to plastic).
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Review with students the processes used to make new products and how this will better our future**.**

Nebraska Food Project - 2013
Lesson Plan

Author: Cindy Reeves

Lesson Title:
Raising Expectations - Cooking with school-grown produce.

Learning Objectives (*As a result of this lesson, students will be able to):*

Incorporate products in their cooking experiences that were grown on campus by FCS students.

Required Materials for Lesson:

- Internet access.
- Small raised beds or containers for growing herbs and winter vegetables.
- Access to growing medium, fertilizer, water, seeds/plants and any other needed inputs.

Lesson Opening *(Designed to prepare students for learning):*

- Have a tasting lab for students based on spinach in three forms; fresh, frozen, and canned.
- Have students fill out an evaluation on the taste, texture and appearance of the spinach.
- Use this as a springboard to encourage the principle of locally grown produce and herbs.

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*

- Students will gain knowledge in how to grow foods.
- Students will harvest their produce and gain an understanding of how to use fresh produce and how to preserve an abundance of produce for later use.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*

- Students will enjoy sampling their products as they are harvested and also experience preserved forms of their products later in the course.
- Additionally, they will learn about the different stages of the growing season.

Nebraska Food Project - 2013
Lesson Plan

Author: Jan Smaus

Lesson Title:
Reduce/ Reuse/ Recycle

Learning Objectives (*As a result of this lesson, students will be able to):*

- Define Terms.
- Give Reasons to do.
  - Self.
  - Other.
  - Research.
- Find out about change taken place with corn and soybean business.

Required Materials for Lesson:

- Pictures of old jeans or/and shirt.
- Access to website – printers and all recipes.

Lesson Opening *(Designed to prepare students for learning):*

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*
Variety of pictures or actual objects. Lead into definition of terms.

- What can you do with each of these?
- What can you do if you need a birthday gift but no funds?
- Come up with recycle project – research printers and craft or all recipes – food product.
- Lead in all to corn/soybean products and how money is made.
- Show videos from companies.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*
Display.

- Recycle product:
  - Old T-shirt. Sew pillow or quilt.
- Reuse product:
  - New Recipe.
- Reduce product:
  - Use backside of paper.

Nebraska Food Project - 2013
Lesson Plan

Author: Hilary Maricle

Lesson Title: Rural or Urban Agriculture Business Impact
Learning Objectives: *As a result of this lesson, students will be able to:* Synthesize the impact of agriculture on rural revitalization.
Required Materials for Lesson: • Cargill Stats or Con Agra Stats – etc. "Big" Company. • "Medium" AgBus Stats (i.e. Equipment Mfg.). • "Small" AgBus Stats (i.e. 1000 Acre Family Farm).
Lesson Opening *(Designed to prepare students for learning):* • List businesses in your town on whiteboard (student driven). • Identify which businesses are Agriculture (star or categorize).

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*
 	
• Small groups identify business impact.
• Create web of connections:
  ○ How and where money is spent?
  ○ Show how businesses and community leaders are all tied to each other's success.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills)* • Share webs and discuss as a full class. • Select one business (if it closed, trace domino effect). • Can get into 'shop local' messaging.

Nebraska Food Project - 2013
Lesson Plan

Author: Hilary Maricle

Lesson Title: Secure Careers
Learning Objectives (*As a result of this lesson, students will be able to):* • Students will research careers in the food and agriculture industry in Nebraska. • www.nebraskacareerconnections.org
Required Materials for Lesson:
Lesson Opening *(Designed to prepare students for learning):* Who knows what career you'll be in when you're 30? Share what employers say about showing up, being engaged, being passionate, etc.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Hand in your list of 3 possible careers. • Team teach with counselor: log in to CareerConnections, complete 2 of the Kudor tests to identify which careers may be a good fit. • Select a career field using your tests and life experience. • Identify skills and coursework needed for 2 careers in this cluster. • Find 2 schools that could offer the needed education. • Invite a community college and university representative to come in and explain different degree options.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Which career in the "Green" cluster would you pursue if you had to make the decision today?

Nebraska Food Project - 2013
Lesson Plan

Author: Marilynn Schnepf

Lesson Title:
Sensory Quality of Different Types of Fluid Milk

Learning Objectives (*As a result of this lesson, students will be able to):*

- Identify different types of milk – store brand, named brand, local dairy, organic, lactose free, UHT processed (keeping fat content the same).
- Discuss processing differences among the milks.
- Evaluate milk using sensory analysis.
- Relate processing type to shelf-life.

Required Materials for Lesson:

- Milk of different brands.
- Sensory analysis form.
- pH meter or microbiological plates to determining shelf-life.

Lesson Opening *(Designed to prepare students for learning):*

- Discuss different brands of milk available to consumers (keeping fat content the same).
- Discuss processing methods used for pasteurization – batch, HTST, UHT.
- Discuss shelf-life of milk and why pasteurization is necessary.

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*

- Develop a sensory analysis score sheet – could be done with student input.
- Set up a shelf-life experiment to determine how long the different milks will keep under controlled conditions - could use a pH meter to test microbial growth as milk becomes sour.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*

Students should be more aware of sensory characteristics of milk, pasteurizations requirements, and differences of milk available.

Nebraska Food Project - 2013
Lesson Plan

Author:

Lesson Title: Skills for Work
Learning Objectives (*As a result of this lesson, students will be able to):* • Realize what skills employers are looking for when hiring. • Realize what skills must be continued to keep that job.
Required Materials for Lesson: • Computer for research. • Self-evaluation test on skills.
Lesson Opening *(Designed to prepare students for learning):* Ask – What do you think an employer looks for when they hire individuals for a job?
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* Stress to students the skills needed for employment: • Responsibility – show up every day, be on time. • Appearance. • Honesty. • Communication. • Accountability. • Outside the box thinkers. • Problem solver – do things on own or can continue to see work to be done.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* • Ask – Would someone hire you? Why? • Write a summary of your skills for employment.

Nebraska Food Project - 2013
Lesson Plan

Author: Deanna Karmazin

Lesson Title: Soy
Learning Objectives (*As a result of this lesson, students will be able to):* • Identify benefits of soy. • Learn how to incorporate it into their diets.
Required Materials for Lesson: • Ingredients for a soy recipe – such as soy smoothie or soy spinach dip – recipes found on Nebraska Soybean Website. www.nebraskasoybeans.org
Lesson Opening *(Designed to prepare students for learning):* • What is the importance of soy in your diet? • Why do other countries want soy?
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Discuss benefits of soy – information can be obtained from Nebraska Soybean Board. • Discuss why other countries import soy. • Have students try recipes made from soy. • Could invite bean team to present to class.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* • Why is soy good for your diet? • What are ways you could add soy to your diet?

Nebraska Food Project - 2013
Lesson Plan

Author: Erik Wilson

Lesson Title: Soybean Bingo
Learning Objectives (*As a result of this lesson, students will be able to):* Make a connection to the everyday products we use that are made of soybeans.
Required Materials for Lesson: • Soy butter. • Soy milk. • Soy bars. • Soy chips. • Vegetable oil. • Bingo cards.
Lesson Opening *(Designed to prepare students for learning):* Have students taste a bit of soy butter and ask if they know what it is – discuss.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Hand out the bingo cards and explain the directions to soy bingo. • Call out the bingo items sharing the ones you brought when they are called out.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Discuss the possibilities of soy and how it is becoming a big player in the global market.

Nebraska Food Project - 2013
Lesson Plan

Author: ErikWilson

Lesson Title: Soybean Biodiesel
Learning Objectives (*As a result of this lesson, students will be able to):* Explain the process and recreate the process of making biodiesel.
Required Materials for Lesson: • Biodiesel kit. • Used vegetable oil.
Lesson Opening *(Designed to prepare students for learning):* Show kids a soybean, vegetable oil and biodiesel have them explain how they are connected.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Lecture over the chemical processes involved in the process of making biodiesel. • Give them the materials to make biodiesel. • Step-by-step- follow the process and make biodiesel.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Place the biodiesel in a diesel motor and show what they have created.

Nebraska Food Project - 2013
Lesson Plan

Author: Kathleen Kennedy

Lesson Title:
Soy Foods

Learning Objectives (*As a result of this lesson, students will be able to):*

- Summarize the health and nutrition benefits of soy foods.
- Understand the functionality of soy foods in cooking.
- Discuss how soy foods fit into "MyPlate".
- Experience cooking and tasting a variety of soy foods and soy food applications.

Required Materials for Lesson:

- *Soy foods Guide:* www.soyconnection.com/sites/default/files/SoyConnection-Soyfoods-Guide.pdf
- *"Joy of Soy"* PowerPoint.
- Soy products poster, NE Ag in the Classroom: www.ne-aitc.org/ufm/resources.php
- United Soybean Board Resources www.unitedsoybean.org
- Soy food products/labels.
- Soy recipes.
- Recipe ingredients, preparation equipment, tasting lab materials.

Lesson Opening *(Designed to prepare students for learning):*

- Ask students what types of soy products they have eaten.
- Sample plain or flavored soy nuts.

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*

- Review the composition of a soybean (parts and macronutrients).
- Examine packages of soy foods to review the nutrient facts panel for fiber, fat, cholesterol, and protein content.
- Identify health benefits of soy foods.
- Preparation of soy recipes.

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*
Create a visual showing soy food in a healthy diet, following "MyPlate" recommendations.

Nebraska Food Project - 2013
Lesson Plan

Author: Nurita B. Lambert

Lesson Title: "Sugar Baby" - What is the Difference in Sweeteners.
Learning Objectives (*As a result of this lesson, students will be able to):* • Learn where different sweetening products originate. • Identifying the nutritional value, and the sensory difference in taste.
Required Materials for Lesson: Sweetening products that can be found in the market place: sugar, honey, corn syrup, fructose, Truvia, Stevia, Agave, maple syrup, sweet and low, and any other.
Lesson Opening *(Designed to prepare students for learning):* Place several unidentified sweeteners where the students can sample each one.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • The student will rate the sweeteners on a sheet of paper on their level of "sweetness". • The teacher can take this lab further by having them guess what kind of sweetener it is. • The students will each be assigned one of the sweeteners and do a PowerPoint on where the product comes from, nutritional value along with different uses available.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* The students will present their PowerPoint to the class. The following day they will learn how the sweeteners can be used in the kitchen.

Nebraska Food Project - 2013
Lesson Plan

Author: Hilary Maricle

Lesson Title: The Cooperative Systems
Learning Objectives (*As a result of this lesson, students will be able to):* • Summarize the history and value of the cooperative system.
Required Materials for Lesson: Understanding cooperatives curriculum. www.ncfc.org www.nebr.coop
Lesson Opening *(Designed to prepare students for learning):* • 100 Character definition of a co-op. • Watch on "Cooperatives 101" video: www.nebr.coop/co-ops-today/cooperatives101/
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Invite Ed Woeppel from the NE Cooperative Council to class to give a quick co-op history lesson. You could also invite local co-op manager. • Begin semester project with monopoly money to develop your own mini co-op in the classroom.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* • Write thank you notes to speaker(s). • Assign research on by-laws and boards.

Nebraska Food Project - 2013
Lesson Plan

Author: Cindy Reeves

Lesson Title: The Dairy Story: From Teat to Treat
Learning Objectives (*As a result of this lesson, students will be able to):* Trace the path of producing milk, processing milk and how it is used in products.
Required Materials for Lesson: • Internet access. • www.dairyfarmingtoday.org/Pages/Home.aspx • Small reward such as candy or better yet, a dairy-based treat like yogurt.
Lesson Opening *(Designed to prepare students for learning):* • Using Smart Board, brainstorm as many dairy foods as students can in a timed minute- offering a reward if they can get to at least 10. • Then ask them to explain in 10 steps how those foods get the milk they need to get made (for a bigger reward).
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Students will view the working of a dairy farm to see how the milk is processed from start to finish. • Emphasis will be on condition of herds, food safety and special handling concerns due to temperature and bacteria. • Students will work in pairs and be given a term or step in the process to explain to their classmates.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Students will make homemade ice cream.

Nebraska Food Project - 2013
Lesson Plan

Author: Erik Wilson

Lesson Title: The Science of Ethanol
Learning Objectives (*As a result of this lesson, students will be able to):* • Understand the process of ethanol production and its by-products.
Required Materials for Lesson: • Corn. • Ethanol. • Distiller grains.
Lesson Opening *(Designed to prepare students for learning):* Give the students a piece of corn and have them explain to their partner what can be made from it.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Most kids will mention ethanol but don't know the waste, distiller grains, can be used as feed and a very healthy feed for livestock. • Explain process involved and products of ethanol production. • Show the distillers grains and explain nutrient value.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Journal about what they learned and how distiller grains different from corn.

Nebraska Food Project - 2013
Lesson Plan

Author: Julie Lokie

Lesson Title: Three Little Pigs and the Big Bad Wolf - How to be Prepared to Deal with Information About Food that We Don't Understand.
Learning Objectives (*As a result of this lesson, students will be able to):* • Have skills needed to be discerning about food information in the media they don't understand.
Required Materials for Lesson: • Story of the three little pigs. • Paper and pencil.
Lesson Opening *(Designed to prepare students for learning):* Read the story of the three little pigs. • Describe each of the pigs? • Which pig would you want to be? Why? • What about that pig makes him a good role model? (prepared, smart, skilled, knowledge). • Today you are going to be that pig in our discussion of things related to food that you have concerns or questions about.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Have students come up with 3 things related to food that would be like the big bad wolf.   ○ Things that concern them that could harm them. • Come up with 2 ways they can be like the third pig and be prepared and smart and have knowledge to understand and know what they should be concerned about.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* How can we be like the third pig when it comes to information-good or bad about food that concerns us or that we don't understand?

Nebraska Food Project - 2013
Lesson Plan

Author: Erik Wilson

Lesson Title: Water Test of Aquaponics.
Learning Objectives (*As a result of this lesson, students will be able to):* • Examine the water components (minerals/nutrients) of the aquaponics table.
Required Materials for Lesson: • Aquaponics set up. • Cups. • Water test kits.
Lesson Opening *(Designed to prepare students for learning):* • Have 2 cups - one with drinking water & one with water from aquaponics table. • Have students smell each cup and journal their observations.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Discuss what they noticed different about each cup. What could cause the possible different? • Explain where the water came from and hand out lab sheet explaining water test kit. • Test water from fish tank, from table drain, and from sink. • Compare results and draw conclusions from lab.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* • Discuss conclusions as a class and record results so test can be done again at a later date for comparison. • Make sure kids are making the connection that the plants are using the fish waste to grow.

Nebraska Food Project - 2013
Lesson Plan

Author: Cindy Reeves

Lesson Title:
Wearever

Learning Objectives (*As a result of this lesson, students will be able to):*

- Make connections with sources for textiles used in clothing and in the home.
- Emphasis on the new possibilities offered corn and soybean textiles.

Required Materials for Lesson:

- PowerPoint with relevant terms and photos.
- Samples of natural fibers and their original sources.
- Situation cards.
- Internet access: www.cbsnews.com/2100-205_162-1811421.html

Lesson Opening *(Designed to prepare students for learning):*

- Announce to students a mock news story about the newest fashion trend, "corn pants".
- Have a mock illustration that reflects the "corniness" of such an idea – then let them know what textiles from corn are in reality.
- Extend the discussion by having students evaluate the clothing label of an item of their own clothing and try explain where the fabric comes from.

Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):*

- Use PowerPoint to inform students of sources of textiles with an emphasis on use of corn and soy textiles. Students will apply this knowledge to a situational activity.
- Students will select a card where they have to create an appropriate outfit for someone. (Example: toddler pajamas, basketball player, chef in a commercial kitchen, etc.)
- Students will research to determine what kind of clothing will be appropriate for the task/situation. They will include appropriate textiles for the clothing and explain why these were selected (functionality, care, longevity, cost, etc.).

Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):*

They will present their findings to the class with a brief oral presentation.

Nebraska Food Project - 2013
Lesson Plan

Author: Marilynn Schnepf

Lesson Title: What is Corn?
Learning Objectives (*As a result of this lesson, students will be able to):* • Identify major components of corn – protein, CHO, lipid, others. • Identify all the agriculture & industrial uses of corn – feed to plastics to ethanol. • Discuss pros & cons of high fructose corn syrup.
Required Materials for Lesson: • Internet search of major processors of corn. • Materials from corn board: www.nebraskacorn.org
Lesson Opening *(Designed to prepare students for learning):* • Discuss the history of corn – Where it came from. • How it is grown.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Students could search for information about all the products that come from corn. • Could be assigned to go to the grocery store & look for ingredients labels that contain corn. • Debates could be set up on – ethical use of corn for food when people are hungry. • Nutritional implications of high fructose corn syrup compared to sugar.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Student should gain a better understanding of the complexities of agriculture. With advance in technology, new uses for corn have been developed that increase the value of corn & create jobs in NE.

Nebraska Food Project - 2013
Lesson Plan

Author: Cindy Reeves

Lesson Title: "Wheel of Squeal!" a.k.a. $2.00 a Day
Learning Objectives (*As a result of this lesson, students will be able to):* • Gain an understanding of what much of the world's budget is on a daily basis. • Experience planning and executing a meal for $2.00. This meal will include the required food groups and servings based on MyPlate.
Required Materials for Lesson: • Internet access. • Grocery store specials flyer. • MyPlate poster: www.choosemyplate.gov/downloads/mini_poster_English_final.pdf • www.simplefamilyfinance.com/busting-the-cheap-food-myth-eating-healthy-food-for-2-a-day/ • Nebraska Ag Facts brochure: www.nda.nebraska.gov/publications/ne_ag_facts_brochure.pdf
Lesson Opening *(Designed to prepare students for learning):* • With teacher impersonating a game show host for the "Wheel of Squeal," a student will be selected from a group of three to win a shopping bonanza! • Students will answer a food question to select a winner. • Once a winner is selected, they find that their prize is a shopping spree…. of $2.00 so spend on a food budget. • Discussion will include the amount of food produced in Nebraska and how much of it is shipped to other countries.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Students will be given a brief presentation on the amount of money that a large part of the world has to spend on their food budget. • They will compare these numbers with what the average is in industrialized nations. • They will then work in pairs to develop a menu with the above criteria using a budget of $2.00. • The teacher has the choice of allowing them to use items already in the lab's resources.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Students will vote to choose the best menu of those developed during the lesson. They will then prepare and share that menu.

Nebraska Food Project - 2013
Lesson Plan

Author: Erik Wilson

Lesson Title: Where did Your Dinner Come From?
Learning Objectives (*As a result of this lesson, students will be able to):* See the connection of their food from the farm to the table
Required Materials for Lesson: Paper and pen.
Lesson Opening *(Designed to prepare students for learning):* Have students journal about what they ate for dinner last night.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • In groups of 2-3, share what you wrote and as a team. Trace back where each of those food items came from. • Share as a class having a few kids explain what they came up with making sure it is correct.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* • Have kids share with partner what they learned from this discussion. • Pick a few kids to share with the class.

Nebraska Food Project - 2013
Lesson Plan

Author: Deanna Karmazin

Lesson Title: Where's the Milk?
Learning Objectives (*As a result of this lesson, students will be able to):* Understand the principles involved in the production, processing & marketing of fluid milk.
Required Materials for Lesson: • Milk production poster from Midwest Dairy www.midwestdairy.com • Internet connection to track milk location from carton. • Several milk cartons/mugs from different companies and stores (emptied).
Lesson Opening *(Designed to prepare students for learning):* • Ask students what they think the process is of getting milk to the store and how long they think that process takes. • Ask where they think their milk originates from.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* • Review milk production process. • Discuss each stage of production including production, processing and marketing.   ○ Have students type in the milk code on the carton into the website: http://www.whereismymilkfrom.com • Track on a map where "what farm" the milk in each carton originated from.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* • Summarize the process. • Discuss why dairy farms are close to the processing plants.

Nebraska Food Project - 2013
Lesson Plan

Author: Nurita B. Lambert

Lesson Title: Why Be a Farmer or Rancher?
Learning Objectives (*As a result of this lesson, students will be able to):* • Realize the passion, skill, education, finances, dedication that farmers and ranchers have to their career choice.
Required Materials for Lesson: Several speakers from different areas to form a panel for the students to listen to and ask questions.
Lesson Opening *(Designed to prepare students for learning):* Speakers will each talk about themselves and what they do.
Learning Activities *(Designed to provide a structure for learning that actively promotes the comprehension and retention through the use of engaging strategies):* Students will learn from the speakers about the different aspects of farming and/or ranching.
Lesson Closing *(Designed to promote the retention of knowledge through the use of strategies designed to rehearse and practice skills):* Students will be required to write an essay on what they learned that day.