

CURRICULUM FIT

With direct reference to the Alberta Learning Program of Studies, this information has been edited and prepared to assist you in connecting your presentation specifically to the grade four curriculum content. The classroom teacher should be able to give you further assistance with curriculum connections if you need additional help.

SOCIAL STUDIES

TOPIC A: ALBERTA: ITS GEOGRAPHY AND PEOPLE

- natural resources (this topic should be discussed)
- importance of soil and water
- diversity of agriculture
- importance of agriculture in people's daily lives
- economic importance
- capital and technology intensive
- production, processing, marketing, and diversity
- natural resource conservation
- independence as related to access to natural resources
- partners in agriculture
- producer, processor, distributor, marketers and consumer/user
- conservation – natural resources
- geographic regions/the environment – the affect on people re: agricultural initiatives

ALBERTA: ITS PEOPLE IN HISTORY

farm life of a pioneer

factors that influenced settlement including natural resources

SCIENCE

TOPIC A: WASTE AND OUR WORLD

Plant and animal waste and how the agricultural industry recycles them

Example:

Identify plant and animal wastes, and describe how they are recycled in nature. For example, plant leaves serve as a source of food for soil insects, worms and other creatures. The wastes of these animals may then be further broken down by molds, fungi and bacteria.

TOPIC B: WHEELS AND LEVERS

basic components of simple machines: how they are assembled, how they operate, how they are used.

using farm equipment as an example, demonstrate pulley systems, gear systems, wheel-to-wheel contact, a belt or elastic, a chain, cogs or gears. This could involve "Farm Safety" concept.

TOPIC C: PLANT GROWTH AND CHANGES

different plants and their uses

importance of plants to us and the natural environment

research leads to changes in lifestyle and industry

adaptation and modification of the environment in food production

intensive nature of agriculture

partners in agriculture

producer, processor, distributor, marketers and consumer/user

HEALTH

WELLNESS CHOICES

Analyze the need for variety and moderation in a balanced diet (e.g. role of proteins, fats, carbohydrates, minerals, water and vitamins)

MATH

Estimating
grids
metric
predicting

tables
rounding off
directions (N.E., etc.)
measurement (length, volume,
height, perimeter, etc.)

numeral writing, e.g. 90
hectares, etc.
money
graphs

LANGUAGE ARTS

chart writing and reading
recordkeeping
story writing, reading and telling
oral and written reports
research (books, internet, etc.)
song and poetry writing
listening to stories and poetry

The following Questions and Issues can lead to a discussion relating to the grade four curriculum. The focus will be on farming, ranching and agriculture.

QUESTIONS:

How do Albertans make use of their natural resources (in agriculture)?

What is the effect of technology on the location, development and use of natural resources?

Do the natural resources in Alberta supply all our needs?

How does our way of using natural resources affect/influence our environment?

Are we conserving our resources for future generations?

ISSUES:

Should people make major changes in their physical environment to meet their needs?

Should resource development be allowed regardless of location or previous designation of land use, e.g., provincial park, agricultural land, historical site, wildlife sanctuary?

How should we use natural resources in ways that best benefit Albertans and others?

Should we use our natural resources without limitations?

CURRENT FOOD AND AGRICULTURE ISSUES

ECOLI

AVIAN FLU

BSE

LISTERIA

At some point during your presentation, the children or teacher may ask some questions regarding current issues of the day, which in some cases may be controversial. At any time please feel free to contact the organizations listed on the Resource Page in this Presentation Manual on page for answers regarding their particular issue. The following information and contact numbers may also assist you.

Escherichia coli (Ecoli) are naturally occurring bacteria that live in the intestines of all animals, including humans. Most types do not cause illness in healthy individuals. However, one strain, Ecoli O157:H7, produces a harmful toxin that can cause cramps, diarrhea and severe illness.

Illness from E. coli O157:H7 can occur from consuming undercooked ground beef, unpasteurized milk, juice or cider, contaminated vegetables and fruit or unchlorinated water. It can also be passed from person to person by unwashed hands, and from contact with contaminated water or manure. Risk of illness is greatest for young children, the elderly, pregnant women and anyone with ill health.

As few as ten E. coli O157:H7 bacteria can cause illness; hence every part of the food and water production, delivery and consumption chain plays an important part in reducing risk of illness. For example, the beef industry is committed to investing in research projects with a goal of reducing or eliminating these bacteria. Projects include a vaccine to prevent E. coli O157:H7 growth in live cattle as well as research on feeds and probiotics (beneficial bacteria) that can reduce shedding of the organism. The Canadian Partnership for Consumer Food Safety Education and the Beef Information Centre have developed resources outlining how the public can safeguard their health through proper hygiene, effective food preparation and thorough cooking of ground meats.

Consumer Tips:

Wash hands and surfaces often with soap and water before handling food – especially after using a washroom, changing diapers and handling animals.

Wash hands before and after handling food and frequently while cooking, especially after handling raw meat, poultry and fish.

Clean and sanitize counter tops, cutting boards and utensils with mild bleach solution before and after food preparation.

Thaw meat in refrigerator and refrigerate leftovers within 2 hours after preparation.

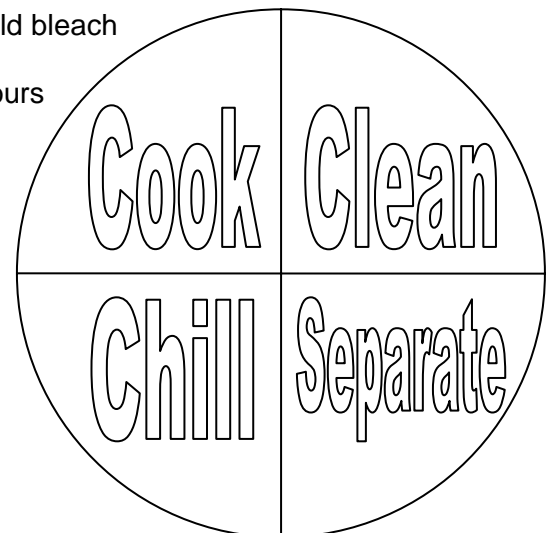
Cook ground meat until the centre reaches 71°C (160°F).

Use a digital meat thermometer to ensure this temperature is reached. The color of the meat or juices is not a reliable indicator. Never eat raw meat.

Drink only pasteurized apple cider and milk.

Wash all fruits and vegetables well before eating.

Drink water that meets Canada's drinking water standards. Do not drink water from open streams and lakes.



Avoid cross contamination of food by washing utensils; plates and cutting boards that have come into contact with raw meat and poultry, in hot, soapy water.

To Learn More:

Food Safety

Visit Canadian Partnership for Consumer Food Safety Education.
www.canfightbac.org/english/indexe.shtml
Canadian Food Inspection Agency.
www.inspection.gc.ca/english/index/fssae.shtml
Food Safety Information Society
1 800-892-8333
www.foodsafetyline.org

Canola/Biotech

Biotech. <http://www.canola-council.org/biotech/biotech.html>
<http://www.isaaa.org/kc/welcome.html> Internationally recognized biotech information site that has been recognized for its effective presentation of both sides of the biotech issues.
Myths and Issues about canola.
<http://www.canola-council.org/about/thetruth.html>

Bovine Spongiform Encephalopathy (BSE)

Contact the BSE information hotline at 1-866-INFO-CCA (1-866-463-6222) or visit www.info-cca.ca. You can also call Alberta Agriculture Food and Rural Development at 1-877-744-7900 or Agriculture Canada at 1-866-367-8506.

Eggs

Contact Alberta Egg Producers as a resource for egg and egg industry-specific questions by using the contact information set out in the back of this Manual.

Alberta Veterinary Medical Association (AVMA)

For any animal health questions at 1-800-404-2862 . Current News Bulletins are also provided on their website at www.avma.ab.ca/. The news bulletins give information on current issues that pertain to animal health and are updated on a regular basis. They are easy to find...just click on "Current News Bulletins" on the home page. Archived bulletins can be accessed there as well.

Animal Welfare

Alberta Farm Animal Care (AFAC)
www.afac.ab.ca
Cambrian PO Box 75028
Calgary, Alberta
T2K 6J8
Phone:(403) 932-8050
Fax: (403) 932-8052
Email: info@afac.ab.ca

SAMPLE VOLUNTEER PRESENTATIONS

by John Portail, Strathmore

1. My approach is to introduce the students to the crops and livestock produced in the Wheatland County.
2. I also explain the responsibilities of Alberta Agriculture, Food and Rural Development specialists and how they strive to help rural clients help themselves in their every day activities.
3. I've collected numerous specimens over my years as a DA and use them to illustrate my talk. This fosters class participation as I encourage questions throughout my talk.
4. **Soils** - Bag a shovel slice of soil from a stubble field, and soil from native range - compare the root development, the organic matter levels. Illustrate impact of erosion by removing the stubble, which leaves bare soil prone to blowing. Also illustrate the thin layer of organic matter on the soil surface. Can also illustrate sandy vs. clay soils by putting them in different jars and pouring water on them to watch different rate of moisture penetration. Irrigation, salinity can be discussed here as well.
5. **Crops** - Bag (1 lb) seed of the major crops - wheat, barley, oats, canola, rye, Triticale, flax, lentils, mustard, etc. Compare them. Match them with their plant form. Plants can easily be dried by inserting a sample in a file folder and placing it under a couple of heavy books. The sample will dry without losing its color and the leaves will show their configuration if care has been taken to flatten a couple of leaves out in file folder. The dried plant specimen is then ready to insert in a labeled plastic bag for showing to your CAP class for years to come. It is helpful to show plants in flower for further student recognition in the field.
6. **Canola and Triticale** - These are two examples of agricultural research achievements. This is a good introduction to the importance of supporting agriculture research. Also illustrates importance of education. I ask the class "Where do scientists come from?" The answer of course is from schools, grade four students will eventually become scientists, lawyers, politicians, environmentalists, consumers, farmers and ranchers. They all affect agriculture; therefore it is important that they are informed about the impact of their actions on the future of the farm, and of the food supply.
7. **Fertilizers** - Examples can illustrate N P K, the three main crop nutrients. Manure can also be mentioned. This is also a place for green manure, and alfalfa as inoculated legumes fix nitrogen in the soil.
8. **Pest Control** - This follows naturally. I have numerous specimens of weeds, insects and diseased plants that raise much interest. Particular "hits" include a tomato hornworm, bertha armyworm, diamond back insects, cutworms, black widow spider, rusty grain beetles, giant water bugs, boxelder bugs, strawberry root weevils, grasshoppers, crickets. Canola taken from a field infested by army worms illustrates their negative impact.

In the weeds, its easy to show the significance of wild oats, green foxtail, Canada thistle, toadflax, quack grass, kochia, to name a few. Among the crop diseases, it is possible to find specimen of cereals affected by root rot, smutty or ergoty seed, crops deficient in nitrogen, canola affected by stem rot. I also discuss the impact of hail destruction, by showing a hailed crop specimen. This is where I also discuss the various pest control methods and it gives the class an opportunity to consider the pros and cons of chemicals. We usually have a short discussion about this.

9. **The Unusual Attracts - Rat Specimen** - I have a specimen of a Norway Rat that I have presented in a jar for many years. I find that it is a hit with my classes and a useful way to end my presentation. It's an opportunity to address this major pest and our good fortune that Alberta is rat free. I also show a preserved salamander, which enables a short discussion about amphibians. Teachers are most cooperative in my presentations. They enable me to encourage the class to form a horseshoe around my work table where they can have a closer look at the samples that I show them.
10. **Farm Machinery** - Pictures of farm equipment can be shown throughout the talk as appropriate. They can be found at machinery dealers, in farm magazines, calendars, etc. I strive to give credit to my suppliers where I show their pictures. Machinery also leads to the numerous skills that a farmer must have to be successful. It can be expanded upon in the livestock sector.
11. **Livestock** - I have poster sized pictures of the various beef breeds, and a poster of a dairy farm, a ewe and her lamb, and a sow in a farrowing crate. Livestock associations were helpful in securing these pictures. Agricultural calendars are another source. Generally agri-businesses are very cooperative in putting together materials for a CAP talk. Materials to illustrate items made from beef and other livestock by products are easy to find around the house.
12. **Feeds** - Feed cost is a major cost of livestock production. Samples of prepared feeds and their ingredient tags can be obtained from feed mills. One can also bag rolled barley, alfalfa hay, grass hay, silage, native range (explain the various plants and their significance in feed value and growth persistence). I have a sample of a large round bale of barley greenfeed which had been baled too wet and heated. There is a striking difference in the parts taken from the outside, the middle and the central core of the bale. While the outside is yellow, the center is chocolate brown and smells like tobacco. One can also talk about the importance of balanced rations and the ingredients which go into them.
13. **Marketing** - This is an important topic, but more difficult to illustrate. One can relate the various occupations involved in the marketing process, i.e. the auctioneer, the trucker, showing related pictures. One can also mention the export destination of various agriculture products. A brief discussion of economics of farming can be done keeping in mind the level of student understanding.

CLASSROOM AGRICULTURE PROGRAM PRESENTATION

by Rich Smith, Environmental Engineer

PARTNERS

To illustrate the partners theme, I wear multiple layers of clothing. On the bottom, I have jeans and a plaid shirt, clothes I often wear at work. The next layer is a suit to represent lawyers, bankers, accountants and producers at meetings. On top of the suit, I wear a lab coat for veterinarians and scientists. The top layer consists of the coveralls and rubber boots worn by people working in livestock facilities or processing plants. The children really enjoy the strip tease aspect of this illustration, especially when I get to the end and tell them not to let me take any more clothes off because I don't have anything underneath.

LAND

For the land segment, I created a Superman-like character called Super Soil. Super Soil is an heroic version of Sam Soil, a person who fights the evil force that would destroy our soils. I tell the children that I spend most of my time as Rich Smith, an agricultural engineer, but when I talk about soils; I slip into the nearest phone booth (or behind a portable blackboard in a classroom) and quickly change into Super Soil. My costume is very simple; a brown turtleneck, a black cape, a piece of paper with SS on it pinned to the shirt and a cap with soil conservation on it. I mention that my costume is in soil colors rather than the flashy red and blue of Superman. I cover most of the land material as Super Soil, talking about Wendy Water as my Lois Lane, pollution as my Lex Luthor and manure as one of my favorite foods. I always get quite a reaction to the last comment. I am fairly bald and can use my own head to show the effects of erosion on soil (nothing grows).

VISUAL AIDS AND PRESENTATION

Since I move around a lot myself, I don't use a large number of visual aids. I have found the Alberta Agriculture Conservation Farming and Water Management posters to be very helpful in explaining farming operations. I have a few pieces of toy farm equipment that I show the children and I also pass around bagged samples of grains and oilseeds. My silage sample sparked a lot of interest because the bag could not contain the smell.

I like to have a portable blackboard so I can put the posters on one side and write down the children's ideas on the other side. Turning the board around adds movement to the presentation. I have a few lame jokes about cows that my son told me when he was in grade two or three - the kids groan, but enjoy the break. Last year, I added a "rap" about agriculture to my presentation. When I got to the end of the clothes removal and the children had all agreed that I looked like someone involved in agriculture, I told them that they were wrong. I was actually a rap star: M. C. Agriculture, the CAP rapper.