

Finding Alberta Beef



Places, Spaces and Stories
about Beef Cattle Farming
and Ranching in Alberta for
Elementary Classrooms

Kindergarten/Grade 1

TEACHING RESOURCE

Finding Places and Stories



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The **Finding Alberta Beef** teaching resources provide curriculum-based activities and supports for a mini-unit that focuses on the contributions and vitality of agriculture in Alberta. Activities encourage students to explore cattle farming and ranching in Alberta. From family farms and ranches, passed down through generations, to new, state-of-the-art feeding and breeding operations, Alberta's farmers and ranchers are proud of their industry.

The many authentic photos and stories used in these learning resources share the land, resources, experiences and stewardship that are part of Alberta cattle farming and ranching families.

It is our hope that students develop understandings of the ways of life involved in raising cattle and contributing to Alberta's and Canada's food system while respecting the different choices that people make about their food. Alberta Beef Producers is proud to support education and provide the **Finding Alberta Beef** resources for teachers and students in Kindergarten to Grade 5 Social Studies, Science and Health/Wellness programs.

The **Finding Alberta Beef** elementary resources were conceptualized and developed for Alberta Beef Producers by the education experts and design team at **InPraxis Learning**, led by:

Patricia Shields-Ramsay, B.Ed., M.Ed.

Doug Ramsay, B.Ed., M.A.

Alberta Beef thanks our teacher reviewers, who provided valuable suggestions and feedback during the development of the **Finding Alberta Beef** program resources.

Cassidy Gatzke

Kerry Kotyshyn

Kiersten Villadsen

Kirsteen Woods

Alberta Beef also thanks the cattle farmers and ranchers who have shared stories and photos that are used in these resources.

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Readers should be aware that Internet websites offered as citations and/or sources for further information may have changed or disappeared between the time this was written and when it is read. Teachers are cautioned that all websites listed in this resource should be checked for appropriateness and suitability before being provided to, or used with, students.

Every effort has been made to acknowledge sources used in the **Finding Alberta Beef** resources. In the event of questions arising as to the use of any material, we will be pleased to make the necessary corrections in future versions.



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Finding Alberta Beef provides a mini-unit that can be integrated into Alberta Social Studies, Science and Health/Wellness curriculum. This resource is focused on the cattle farming and ranching industry in Alberta.

Those students who do not eat beef or other meats for personal, cultural or religious reasons can be asked to focus on examples of plant-based agriculture as a point of comparison. Students can be asked to consider how all types of agriculture are important human activities. Consider student and family sensitivities when making decisions about using or adapting these activities.

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introduction

Over the course of the school year and across different subject areas, students explore topics and concepts that are connected in one way or another to agriculture. The food production system and its implications for nutritional health and well being, rural communities and ways of life, and the use of resources and industries that produce, move and trade products are all part of daily lives.

For generations, Canadians have had access to a nutritious, safe and affordable food supply and consumer products. These products have their roots on Alberta's farms and ranches and are a result of the vitality and importance of agriculture. Agriculture involves food production, research, transportation infrastructure, government policy and sound environmental practices.

The **Finding Alberta Beef** resources provide integrated mini units that centre on the importance of agriculture, specifically the impact that beef production has on Canadian and Alberta communities, individuals and quality of life. These resources are designed to support the competencies and specific learning outcomes in Alberta's **elementary Social Studies, Science and Health/Wellness** programs of study. Many activities also reinforce **literacy and numeracy** skills. This resource supports learning in **Kindergarten and Grade 1 Social Studies, Science and Health/Wellness**.

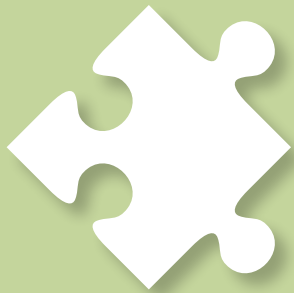


COMPONENTS

Finding Alberta Beef for Kindergarten/Grade 1 includes the following components:

- **Finding Alberta Beef** Kindergarten/Grade 1 Teaching Resource
- **Finding Places and Stories** Kindergarten/Grade 1 Student Learning Pages
- **Finding Alberta Beef** Kindergarten/Grade 1 Infographic





This **Finding Alberta Beef Kindergarten/Grade 1** resource meets **general outcomes and benchmark skills** in Social Studies, Science/Environment and Community Awareness and Health/Wellness programs of study, the competencies and literacy and numeracy. These resources also have been developed to provide support to learning outcomes identified in the Alberta Education Draft K-4 curriculum and will be updated as this curriculum progresses.

Kindergarten	Grade 1
<p>Social Studies K.2: I Belong</p> <p>Students will demonstrate an understanding and appreciation of the characteristics and interests that unite members of communities and groups.</p>	<p>Social Studies 1.1: My World: Home, School and Community</p> <p>Students will demonstrate an understanding and appreciation of how identity and self-esteem are enhanced by their sense of belonging in their world and how active members in a community contribute to the well-being, growth and vitality of their groups and communities.</p>
<p>Environment and Community Awareness</p> <p>The child demonstrates curiosity, interest and a willingness to learn about the environment and community.</p> <p>The child demonstrates awareness of self and similarities and differences between self and others.</p>	<p>Science Topic D: Senses</p> <p>1–9 Use the senses to make general and specific observations, and communicate observations orally and by producing captioned pictures.</p> <p>1–10 Describe the role of the human senses and the senses of other living things, in enabling perception and action</p>
	<p>Science Topic E: Needs of Plants and Animals</p> <p>1–11 Describe some common living things, and identify needs of those living things</p>
<p>Health/Wellness Choices</p> <p>Students will make responsible and informed choices to maintain health and to promote safety for self and others.</p>	

Kindergarten	Grade 1
<p>Kindergarten/Grade 1 Social Studies Benchmark Skills</p>	
<p>Critical thinking and creative thinking</p> <p>Geographic thinking</p> <p>Decision making and problem solving</p> <p>Research and information</p> <p>Oral, written and visual literacy</p> <p>Media literacy</p>	<p>Evaluate ideas and information from different points of view</p> <p>Create and use a simple map to locate communities studied in the world</p> <p>Apply new ideas and strategies to contribute to decision making and problem solving</p> <p>Make connections between cause-and-effect relationships from information gathered from varied sources</p> <p>Organize and present information, such as written and oral reports, taking particular audiences and purposes into consideration</p> <p>Compare information on the same issue or topic from print media, television, photographs and the Internet</p>
<p>Environment and Community Awareness</p> <p>Personal and Social Responsibility</p> <p>The child develops positive attitudes and behaviours toward learning</p> <p>The child accepts and practises responsibility</p>	<p>Science Inquiry</p> <p>1–1 Bring focus to investigative activities, based on their own questions and those of others</p> <p>1–2 Describe materials and objects that have been observed and manipulated, and identify what was done and found out</p>



how to use this resource

This **Finding Alberta Beef** Kindergarten/Grade 1 Teaching Resource encourages students to explore and build understandings around two guiding questions:

- **WHAT CAN WE LEARN ABOUT LAND AND PLACE?**
- **HOW DOES THE ENVIRONMENT MEET THE NEEDS OF LIVING THINGS AND PEOPLE IN COMMUNITIES?**

Teaching and learning activities provide students with the opportunity to learn more about agriculture, and the cattle and beef production industry, in a context that is curriculum-relevant and connected to their daily lives.

Student learning sources are organized around conceptual knowledge and understandings. Each learning source is focused on one of the eleven conceptual learnings, and provides illustrative examples and individual, group or whole class learning activities.

Teaching and learning activities support learning outcomes in Social Studies, Science and Wellness curriculum as well as the competencies, literacy and numeracy. A **curriculum overview** is provided on **pages 11 to 19**.

using the **Finding Alberta Beef** features

The teaching and learning activities in this resource are supported by the **Finding Alberta Beef Learning Pages** and **Infographic**.

Learning Pages provide suggestions and active learning strategies to reinforce, connect, extend and focus learning on cattle and beef production in Alberta communities, beef as a nutritious food choice and the ways that agriculture is part of people's daily lives.

CONCEPTUAL LEARNING

ONE

Communities are alike and different.

TWO

Communities are found on different types of land.

THREE

Communities have different features.

FOUR

Farms and ranches are part of communities in Alberta.

FIVE

Shapes can be seen on farms and ranches.

SIX

Farmers and ranchers care for plants and animals.

SEVEN

Indigenous people were Canada's first farmers.

EIGHT

Stories from cattle farming and ranching communities show concern for the land.

NINE

Cattle are part of Alberta's environment.

TEN

Food comes from farms and ranches.

ELEVEN

Beef gives the body nutrients.

The following features are found throughout the teaching activities in this resource.



BUILD COMPETENCIES sidebars highlight opportunities to reinforce the competencies, literacy and numeracy in the context of subject-centred learning activities.



Suggestions for meeting the different learning needs of students are provided in the **MEET DIVERSE LEARNING NEEDS** feature. These suggestions include approaches that can be used to meet different grade level learning outcomes.



The **ASSESS LEARNING** features provide strategies for formative and summative assessment of student learning. These strategies can be used with the **Finding Alberta Beef Learning Checklists** provided in the **assessing student learning** section on **pages 21 to 23**.



TEACHER NOTES are also provided throughout the teaching and learning activities section of this resource. These include references to additional sources, background notes and teaching tips.

TEACHER BACKGROUND on cattle ranching and beef production is provided on **pages 39 to 47** of this resource. The background information provides additional support for implementing the learning activities throughout this resource.

preparing to integrate this mini unit

Consider the following suggestions for integrating the **Finding Alberta Beef Learning Pages** and **Infographic** into the learning process.

- Display the PDF version of the **Learning Pages** and **Infographic** on an interactive whiteboard or with a document camera.
- Provide small groups of students with a group copy of the **Learning Pages** and **Infographic**.
- Work with the class in circle time using a print copy of the **Learning Pages** and **Infographic**.
- Provide the **Learning Pages** and **Infographic** as a learning centre activity.

Review the teaching and learning activities that follow and select or adapt those that best meet the needs of your students.

FINDING ALBERTA BEEF INFOGRAPHIC

The **Finding Alberta Beef Infographic** provides a series of puzzle pieces with images, words, phrases and sentences. These puzzle pieces connect to the activities in the **Learning Pages**.

USING DIGITAL FORMATS

Some sections in this teaching guide and many student learning pages include fillable fields. These fillable fields allow learning pages to be completed digitally and saved in shared classroom folders. To use fillable PDFs, students will need PDF readers on their computers or devices. **Adobe Reader** is a free download or app. PDF files stored in **Google Drive** folders provide an option to open the PDF and use the fillable fields with **Lumin PDF**. Go to **www.luminpdf.com** for more information.



Select and prepare the **Finding Alberta Beef Learning Pages** for students. The **Learning Pages** can be printed or copied for individual, partner or small group learning. They have been designed for use with both Kindergarten and Grade 1 students. Suggestions for targeting specific grade levels are provided with the teaching activities.

Some of the **Learning Pages** include cards that can be cut out and laminated in advance for students. These cards can be prepared as a permanent class set. Start a picture collection of visuals, photographs and illustrations that represent urban and rural communities, cattle farms and ranches, beef production and food products.

Include different types of illustrations related to healthy activities and food choices from **Canada's Food Guide**, collected from magazines, advertisements or Internet sources, including vegetables and fruits, protein foods and whole grain foods.



SUPPORTING RESOURCES

Additional information and resources on **Canada's Food Guide** can be found on the **Health Canada** website at <https://food-guide.canada.ca/en/>.

Some education websites can provide clip art of different types of foods. For example, **Pics4Learning** provides a section containing free food images at www.pics4learning.com.

A variety of authentic photos from Alberta cattle farms and ranches are provided throughout all **Finding Alberta Beef** resources, including many **photo cards** that can be cut out and shared with and by students. All grade levels can be accessed on the **Alberta Beef** website at www.albertabeef.org/consumers/resources.

preparing the infographic and template



The **Finding Alberta Beef Infographic** is provided in formats that allow you to print it double or single-sided on 8.5 x 11 paper or on 11 x 17 paper.

Please see the **Alberta Beef** website at www.albertabeef.org/consumers/resources to find PDF versions of letter and tabloid sized infographics. You may also choose to shrink and print the tabloid version in landscape format on 8.5 x 11 paper. Both formats can be printed and folded in half to create a mini-booklet for students.



The **Finding Alberta Beef Infographic** template can be used by students to create illustrations or use the fillable fields to write their own text. Blank areas in the template, as well as individual puzzle pieces, include these fillable fields.

Alternatively, students can be encouraged to create infographics with their own illustrations or by cutting and pasting photos they find from various sources.

The template can be printed on 11 x 17 paper or on two 8.5 x 11 pages. Please see the **Alberta Beef** website at www.albertabeef.org/consumers/resources to find a PDF version of the infographic template.



meeting curriculum needs

This section provides an overview of the guiding questions and activity focus supported by this resource. Guiding questions and the activities support specific learning outcomes in **Social Studies**, **Science** and **Health/Wellness** programs of study. Outcomes from **Alberta's Literacy and Numeracy Progressions** are also identified with each guiding question. The checklist format allows you to monitor and identify those learning outcomes you cover with the activities you select.

It is important to note that cattle are raised to provide food for people. They are not pets. Consider ways to address questions that students may have:

- In the activities that students do, ensure that time is provided to discuss the differences between raising animals and plants for human consumption and those kept as pets.
- Discuss ways to respect the different choices that people make about their food sources. For example, people from some cultures consume foods that other cultures may not find appealing.
- Explore the ways that people who raise animals for human consumption ensure that the animals are well cared for and respected for their importance in providing nutritious and safe food sources. Explore ways that farmers also protect the environment.



Please use caution with students who are not ready to make the connection that beef comes from cattle. Be respectful of student's food choices and their dietary preferences, needs, cultural and family traditions.

We encourage you to review and select teaching activities most suitable for your students. We also suggest you integrate sources of information that also reflect alternative dietary choices, such as vegetarian or vegan, or that respect cultural choices and traditions that avoid meat if appropriate for your students.



Specific learning outcomes from **Kindergarten** and **Grade 1** Alberta programs of study are supported by the activities for each of the two guiding questions in this resource.

1 WHAT CAN WE LEARN ABOUT LAND AND PLACE?

COMPETENCIES



In this guiding question, students **manage information** to build understandings of land and places and apply **critical thinking** to make comparisons and determine patterns and relationships. They focus on **personal growth and well-being** by making connections to Alberta farming and ranching communities and develop **collaboration** and **communication** skills by working and sharing in groups.

- Students learn about living and non-living things, how needs are met and rural and urban places through images and examples about agriculture and cattle farming and ranching.
- Students explore how living and nonliving parts of the environment (plants and animals in natural and human-made environments) are cared for.
- Students share ideas and their learning using examples and images from Alberta cattle farmers and ranchers.

CONCEPTUAL KNOWLEDGE	PROCEDURAL KNOWLEDGE	LITERACY AND NUMERACY
<p>KINDERGARTEN Social Studies</p> <p>K.2.2 Values and respects significant people in his or her life: Appreciates the important contributions of individuals at home, at school and in the community (C, CC)</p> <p>K.2.3 Appreciates how their participation in his or her communities affects their sense of belonging (CC, I) Develops an awareness of the importance of sharing the responsibility for caring for the environment (C, LPP)</p> <p>K.2.5 Examines ways in which people create a climate of cooperation by exploring and reflecting upon the following questions for inquiry: What actions show care and concern for the environment? (C, LPP)</p>	<p>KINDERGARTEN Social Studies</p> <p>K.S.1 develop skills of critical thinking and creative thinking: Consider ideas and information from varied sources Compare and contrast information provided</p> <p>K.S.3 develop skills of geographic thinking: Recognize familiar places or points of reference in their surroundings</p> <p>K.S.7 apply the research process: Ask questions to make meaning of a topic Gather information on a particular topic from a variety of sources, e.g., illustrations, photographs, videos, objects, auditory cues</p> <p>K.S.8 demonstrate skills of oral, written and visual literacy: Respond appropriately to comments and questions, using language respectful of human diversity</p> <p>K.S.9 develop skills of media literacy: Determine the main points or ideas in a media presentation</p>	<p>KINDERGARTEN</p> <p>Develop Questions Children share personal questions or a purpose to collectively explore topics and search for information.</p> <p>Background Knowledge Children share personal experiences and, with guidance, connect them to relevant ideas or topics.</p> <p>Vocabulary Children use familiar, high frequency vocabulary and begin to acquire new vocabulary related to learning experiences (e.g., school-related words).</p> <p>Purpose Children express meaning in various ways.</p> <p>Magnitude Children describe the quantity of objects within a group(s) as being more, less, enough, too many or too few for a variety of purposes (e.g., to share cookies, make teams).</p>

CONCEPTUAL KNOWLEDGE	PROCEDURAL KNOWLEDGE	LITERACY AND NUMERACY
<p>KINDERGARTEN Environmental & Community Awareness</p> <p>The child demonstrates curiosity, interest and a willingness to learn about the environment and community.</p> <p>Becomes aware of the five senses and how they are used to explore, investigate and describe the world</p> <p>Explores and investigates objects and events in the environment</p> <p>Shows awareness of similarities and differences in living things, objects and materials</p> <p>The child explores familiar places and things in the environment and community.</p> <p>Recognizes familiar animals and their characteristics and surroundings; e.g., farm and zoo</p> <p>Identifies familiar sounds in the environment and community; e.g., school, home, weather, animals and machines</p>	<p>KINDERGARTEN Environmental & Community Awareness</p> <p>Demonstrates awareness of the properties of objects and events in the environment, by:</p> <p>Describing some properties sorting objects according to common properties; e.g., colour, size, shape and texture</p> <p>Arranging objects or events in logical order</p> <p>Matching objects or events as being the same as or going together</p> <p>Distinguishing between similar objects, based on one or more characteristics</p> <p>Generates ideas to make personal sense of objects, events and relationships</p>	<p>KINDERGARTEN</p> <p>Using Numbers</p> <p>Children use numbers to count and label in their environment (e.g., board games, phone number, counting rhymes).</p> <p>Organization of Data</p> <p>Children organize familiar items by sorting according to shared characteristics.</p> <p>Spatial Visualization</p> <p>Children participate in activities that develop spatial thinking (e.g., puzzles, building with blocks, drawing).</p> <p>Measurement</p> <p>Children compare two familiar objects according to measurement attributes to complete a task (e.g., taller, shorter, heavier, smaller)</p>

1 WHAT CAN WE LEARN ABOUT LAND AND PLACE? COMPETENCIES



In this guiding question, students **manage information** to build understandings of land and places and apply **critical thinking** to make comparisons and determine patterns and relationships. They focus on **personal growth and well-being** by making connections to Alberta farming and ranching communities and develop **collaboration** and **communication** skills by working and sharing in groups.

- Students learn about living and non-living things, how needs are met and rural and urban places through images and examples about agriculture and cattle farming and ranching.
- Students explore how living and nonliving parts of the environment (plants and animals in natural and human-made environments) are cared for.
- Students share ideas and their learning using examples and images from Alberta cattle farmers and ranchers.

CONCEPTUAL KNOWLEDGE	PROCEDURAL KNOWLEDGE	LITERACY AND NUMERACY
<p style="text-align: center;">GRADE 1 Social Studies</p> <p>1.1.3 Examine how they belong and are connected to their world by exploring and reflecting upon the following questions for inquiry:</p> <p style="padding-left: 20px;">What helps us to recognize different groups or communities (e.g., landmarks, symbols, colours, logos, clothing)? (CC)</p> <p>1.1.4 Determine what makes their communities thrive by exploring and reflecting upon the following question for inquiry:</p> <p style="padding-left: 20px;">How does caring for the natural environment contribute to the well being of our community? (C, LPP)</p> <p>1.1.5 Distinguish geographic features in their own community from other communities by exploring and reflecting upon the following questions for inquiry:</p> <p style="padding-left: 20px;">What are some differences between rural and urban communities? (CC, LPP)</p>	<p style="text-align: center;">GRADE 1 Social Studies</p> <p>1.S.1 develop skills of critical thinking and creative thinking:</p> <p style="padding-left: 20px;">Examine ideas and information from varied sources</p> <p>1.S.3 develop skills of geographic thinking:</p> <p style="padding-left: 20px;">Use a simple map to locate specific areas within the school and community</p> <p>1.S.7 apply the research process:</p> <p style="padding-left: 20px;">Ask questions to make meaning of a topic</p> <p style="padding-left: 20px;">Compare and contrast information gathered</p> <p style="padding-left: 20px;">Process information from more than one source to retell what has been discovered</p> <p style="padding-left: 20px;">Draw conclusions from organized information</p>	<p style="text-align: center;">DIVISION 1 LITERACY</p> <p>Develop Questions</p> <p style="padding-left: 20px;">Through guided activities, students determine a purpose and develop questions to explore topics and search for useful sources of information.</p> <p>Background Knowledge</p> <p style="padding-left: 20px;">Students make connections to their background knowledge to support understanding of a new idea or topic.</p> <p>Vocabulary</p> <p style="padding-left: 20px;">Students use an increasing amount of high-frequency vocabulary and acquire new vocabulary related to learning experiences (e.g., describe, compare, life cycle, province).</p> <p>Purpose</p> <p style="padding-left: 20px;">Students organize texts for different purposes (e.g., to inform, persuade or entertain).</p>

CONCEPTUAL KNOWLEDGE	PROCEDURAL KNOWLEDGE	LITERACY AND NUMERACY
<p style="text-align: center;">GRADE 1 Science</p> <p style="text-align: center;">Topic D: Senses</p> <ol style="list-style-type: none"> 1. Identify each of the senses, and explain how we use our senses in interpreting the world. 2. Identify ways that our senses contribute to our safety and quality of life. 3. Apply particular senses to identify and describe objects or materials provided and to describe living things and environments. Students meeting this expectation will be able to describe characteristics, such as colour, shape, size, texture, smell and sound. 5. Recognize that other living things have senses, and identify ways that various animals use their senses; e.g., sensing danger, finding food, recognizing their own young, recognizing a potential mate. 	<p style="text-align: center;">GRADE 1 Science</p> <p style="text-align: center;">Topic D: Senses</p> <p>Focus</p> <p>Ask questions that lead to exploration and investigation</p> <p>Explore and Investigate</p> <p>Manipulate materials and make observations that are relevant to questions asked</p> <p>Recognize and describe steps followed, based on independent activity, on directed activity and on observing the activity of others</p> <p>Reflect and Interpret</p> <p>Describe what was observed, using pictures and oral language</p> <p>Identify questions being investigated and identify what was learned about each question</p>	<p style="text-align: center;">DIVISION 1 NUMERACY</p> <p>Magnitude</p> <p>Students interpret and compare quantities expressed as whole numbers in their environment.</p> <p>Using Numbers</p> <p>Students use numbers to indicate position or value in their environment (e.g., first, second, third, currency, music notes).</p> <p>Patterns and Relationships</p> <p>Students recognize patterns in their environment and daily routines (e.g., calendar, seasons).</p> <p>Measurement</p> <p>Students select and use basic measuring instruments to complete a task (e.g., ruler, calendar, stopwatch, thermometer).</p>

2 HOW DOES THE ENVIRONMENT MEET THE NEEDS OF LIVING THINGS? COMPETENCIES



In this guiding question, students **manage information** to investigate how needs are met in natural and human made environments, apply **critical thinking** to make comparisons and determine relationships and **problem solve** to share ideas about their and others' responsibilities. They focus on **personal growth and well-being** by making connections between agriculture, the environment and the food system and develop **collaboration** and **communication** skills by working and sharing in groups.

- Students learn about farming and ranching from stories about land and place.
- Students explore how beef ranchers/farmers meet the needs of the animals they raise.
- Students learn how needs can be met through nutritional choices.

CONCEPTUAL KNOWLEDGE	PROCEDURAL KNOWLEDGE	LITERACY AND NUMERACY
<p>KINDERGARTEN Environmental & Community Awareness</p> <p>The child demonstrates curiosity, interest and a willingness to learn about the environment and community.</p> <ul style="list-style-type: none"> Explores and investigates objects and events in the environment Shows awareness of similarities and differences in living things, objects and materials Becomes aware of the relationship between cause and effect <p>The child demonstrates awareness of self and similarities and differences between self and others.</p> <ul style="list-style-type: none"> Describes a variety of homes; e.g., for people, animals, birds Recognizes familiar animals and their characteristics and surroundings; e.g., farm and zoo 	<p>KINDERGARTEN Environmental & Community Awareness</p> <p>Demonstrates awareness of the properties of objects and events in the environment, by:</p> <ul style="list-style-type: none"> Arranging objects or events in logical order Matching objects or events as being the same as or going together Distinguishing between similar objects, based on one or more characteristics Generates ideas to make personal sense of objects, events and relationships 	<p>KINDERGARTEN</p> <p>Develop Questions</p> <p>Children share personal questions or a purpose to collectively explore topics and search for information.</p> <p>Access</p> <p>Children recognize that information comes from more than one source.</p> <p>Background Knowledge</p> <p>Children share personal experiences and, with guidance, connect them to relevant ideas or topics.</p> <p>Vocabulary</p> <p>Children use familiar, high frequency vocabulary and begin to acquire new vocabulary related to learning experiences (e.g., school-related words).</p>
<p>Kindergarten Health/Wellness</p> <p>The child develops attitudes and behaviours that promote a healthy lifestyle, wellness and safety for self and others.</p> <ul style="list-style-type: none"> Recognizes appropriate nutritional habits Recognizes that nutritious foods are needed for growth and to feel good/have energy, e.g., nutritious snacks 		<p>Comprehension Strategies</p> <p>Children participate in guided activities that model the use of strategies when viewing, listening to and interacting with texts.</p> <p>Purpose</p> <p>Children express meaning in various ways.</p>

CONCEPTUAL KNOWLEDGE	PROCEDURAL KNOWLEDGE	LITERACY AND NUMERACY
<p>KINDERGARTEN Social Studies</p> <p>K.2.3 Appreciates how their participation in his or her communities affects their sense of belonging (CC, I)</p> <p>Develops an awareness of the importance of sharing the responsibility for caring for the environment (C, LPP)</p> <p>Demonstrate respect for the diverse ways individuals cooperate, work and play together (C, PADM)</p> <p>K.2.5 Examines ways in which people create a climate of cooperation by exploring and reflecting upon the following questions for inquiry:</p> <p>In what ways can people contribute to a group or community? (CC)</p> <p>What actions show care and concern for the environment? (C, LPP)</p>	<p>KINDERGARTEN Social Studies</p> <p>K.S.1 develop skills of critical thinking and creative thinking:</p> <p>Consider ideas and information from varied sources</p> <p>Compare and contrast information provided</p> <p>K.S.4 demonstrate the skills of decision making and problem solving:</p> <p>Provide ideas and strategies to contribute to decision making and problem solving</p> <p>K.S.7 apply the research process:</p> <p>Ask questions to make meaning of a topic</p> <p>Gather information on a particular topic from a variety of sources, e.g., illustrations, photographs, videos, objects, auditory cues</p> <p>K.S.8 demonstrate skills of oral, written and visual literacy:</p> <p>Respond appropriately to comments and questions, using language respectful of human diversity</p>	<p>KINDERGARTEN</p> <p>Using Numbers</p> <p>Children use numbers to count and label in their environment (e.g., board games, phone number, counting rhymes).</p> <p>Organization of Data</p> <p>Children organize familiar items by sorting according to shared characteristics.</p> <p>Spatial Visualization</p> <p>Children participate in activities that develop spatial thinking (e.g., puzzles, building with blocks, drawing).</p> <p>Measurement</p> <p>Children compare two familiar objects according to measurement attributes to complete a task (e.g., taller, shorter, heavier, smaller)</p>

2 HOW DOES THE ENVIRONMENT MEET THE NEEDS OF LIVING THINGS? COMPETENCIES



In this guiding question, students **manage information** to investigate how needs are met in natural and human made environments, apply **critical thinking** to make comparisons and determine relationships and **problem solve** to share ideas about their and others' responsibilities. They focus on **personal growth and well-being** by making connections between agriculture, the environment and the food system and develop **collaboration** and **communication** skills by working and sharing in groups.

- Students learn about farming and ranching from stories about land and place.
- Students explore how beef ranchers/farmers meet the needs of the animals they raise.
- Students learn how needs can be met through nutritional choices.

CONCEPTUAL KNOWLEDGE	PROCEDURAL KNOWLEDGE	LITERACY AND NUMERACY
<p>GRADE 1 Science</p> <p>Topic E: Needs of Animals and Plants</p> <ol style="list-style-type: none"> 1. Observe, describe and compare living things. 2. Contrast living and nonliving things. 3. Identify ways in which living things are valued; e.g., as part of a community of living things; as sources of food, clothing or shelter. 4. Classify some common local plants and animals into groups on the basis of visible characteristics; e.g., adaptations for survival, such as claws, beaks, prickles. 5. Identify examples of plants and animals that are normally under human care (domesticated) and those that are normally independent of human care (wild). 6. Identify the requirements of animals to maintain life; i.e., air, food, water, shelter, space; and recognize that we must provide these for animals in our care. 	<p>GRADE 1 Science</p> <p>Topic E: Needs of Animals and Plants</p> <p>Focus</p> <p>Ask questions that lead to exploration and investigation</p> <p>Explore and Investigate</p> <p>Manipulate materials and make observations that are relevant to questions asked</p> <p>Recognize and describe steps followed, based on independent activity, on directed activity and on observing the activity of others</p> <p>Reflect and Interpret</p> <p>Describe what was observed, using pictures and oral language</p> <p>Identify questions being investigated and identify what was learned about each question</p>	<p>DIVISION 1 LITERACY</p> <p>Develop Questions</p> <p>Through guided activities, students determine a purpose and develop questions to explore topics and search for useful sources of information.</p> <p>Access</p> <p>Students gather information from a limited number of source to respond to a problem, question or topic</p> <p>Background Knowledge</p> <p>Students make connections to their background knowledge to support understanding of a new idea or topic.</p> <p>Vocabulary</p> <p>Students use an increasing amount of high-frequency vocabulary and acquire new vocabulary related to learning experiences (e.g., describe, compare, life cycle, province).</p> <p>Comprehension Strategies</p> <p>Students develop and use strategies when viewing, listening to and interacting with texts.</p> <p>Purpose</p> <p>Students organize texts for different purposes (e.g., to inform, persuade or entertain).</p>

CONCEPTUAL KNOWLEDGE	PROCEDURAL KNOWLEDGE	LITERACY AND NUMERACY
<p>GRADE 1 Health/Wellness</p> <p>Recognize the importance of basic, healthy, nutritional choices to well-being of self; e.g., variety of food, drinking water, eating a nutritious breakfast</p>		<p>DIVISION 1 NUMERACY</p> <p>Magnitude</p> <p>Students interpret and compare quantities expressed as whole numbers in their environment.</p>
<p>GRADE 1 Social Studies</p> <p>1.1.2 Value the groups and communities to which they belong:</p> <p>Assume responsibility for their individual choices and actions (CC, I)</p> <p>1.1.3 Examine how they belong and are connected to their world by exploring and reflecting upon the following questions for inquiry:</p> <p>What are our responsibilities and rights at home, at school, in groups and in communities? (C, CC, I)</p> <p>1.1.4 Determine what makes their communities thrive by exploring and reflecting upon the following question for inquiry:</p> <p>How do our actions and decisions contribute to the well-being of groups and communities? (C, I, PADM)</p> <p>How does caring for the natural environment contribute to the well being of our community? (C, LPP)</p>	<p>GRADE 1 Social Studies</p> <p>1.S.1 develop skills of critical thinking and creative thinking:</p> <p>Examine ideas and information from varied sources</p> <p>1.S.4 demonstrate skills of decision making and problem solving:</p> <p>Collaborate with others to devise strategies for decision making and problem solving</p> <p>Apply ideas and strategies to contribute to decision making and problem solving</p> <p>1.S.7 apply the research process:</p> <p>Ask questions to make meaning of a topic</p> <p>Compare and contrast information gathered</p> <p>Process information from more than one source to retell what has been discovered</p> <p>Draw conclusions from organized information</p> <p>1.S.9 develop skills of media literacy:</p> <p>Identify key words in a media presentation to determine the main idea</p>	<p>Using Numbers</p> <p>Students use numbers to indicate position or value in their environment (e.g., first, second, third, currency, music notes).</p> <p>Patterns and Relationships</p> <p>Students recognize patterns in their environment and daily routines (e.g., calendar, seasons).</p> <p>Measurement</p> <p>Students select and use basic measuring instruments to complete a task (e.g., ruler, calendar, stopwatch, thermometer).</p>

assessing student learning

The assessment checklists that follow can be used to assess students' understandings and skill development as they engage in the learning activities in each inquiry. The criteria statements can provide a basis for diagnostic, formative and summative assessment of students. These checklists can be applied in a number of different contexts.

- All specific learning outcomes from Alberta programs of study identified in the **meeting curriculum needs** section on **pages 11 to 19** correlate to the checklists provided in this resource.
- Criteria statements can be recombined and reorganized to create focused checklists or rubrics to evaluate student attainment of specific outcomes.
- Criteria statements can be used as a starting point or guideline for student self-assessment, can support students in creating their own checklists or rubrics and can be used to provide feedback to students. Criteria statements can be developed as "I can" statements.
- The statements can be used to communicate student learning to parents.
- The checklists can be photocopied for each student, and their learning progress tracked as they complete each inquiry. Alternatively, checklists can be selected as an area of assessment focus and used specifically to monitor and record student growth.



Finding Alberta Beef

checklists reflect learning outcomes from the Alberta Social Studies, Environmental & Community Awareness/ Science and Wellness/Health programs of study. Four checklists are included:

- **Building Understandings**
- **Researching and Creating**
- **Expressing and Sharing**
- **Working Together**

Criteria statements reinforce the Alberta competencies as well as literacy and numeracy progressions.



checklist 1: Building Understandings



CRITICAL THINKING

PROBLEM SOLVING

CULTURAL AND GLOBAL CITIZENSHIP

LEARNING CRITERIA	Yes	Often	Sometimes	Not yet
Identifies characteristics of a rural community, including the role of farms and ranches				
Describes differences between urban and rural communities				
Describes responsibilities that people have to work together and care for the environment				
Identifies living things in rural communities and environments				
Uses senses to identify and describe similarities and differences between objects and living things				
Describes the importance of nutritious foods to self				

checklist 2: Researching and Creating



MANAGING INFORMATION

CREATIVITY AND INNOVATION

LEARNING CRITERIA	Yes	Often	Sometimes	Not yet
Examines information and examples from more than one source				
Sorts ideas into groups to make comparisons				
Categorizes and groups similar objects by criteria such as senses				
Uses graphic organizers to compare ideas and information				
Chooses examples to support ideas and information				
Identifies a conclusion from information provided				

checklist 3: Expressing and Sharing



CREATIVITY AND INNOVATION

COMMUNICATION

PERSONAL GROWTH AND WELLBEING

LEARNING CRITERIA	Yes	Often	Sometimes	Not yet
Shares ideas and learning about rural communities with others				
Creates visual images to support ideas and share with others				
Communicates through discussion and images				

checklist 4: Working Together



COMMUNICATION

COLLABORATION

LEARNING CRITERIA	Yes	Often	Sometimes	Not yet
Contributes ideas to group activities and encourages contributions from others				
Works effectively in groups by fulfilling responsibilities and completing tasks				

teaching and learning activities

The activities that follow are organized around two guiding questions and include suggestions for exploring communities, land, place, needs, environment and nutrition with individual, small group and whole class learning.

- WHAT CAN WE LEARN ABOUT LAND AND PLACE?
- HOW DOES THE ENVIRONMENT MEET THE NEEDS OF LIVING THINGS AND PEOPLE IN COMMUNITIES?



Watch for suggestions for using the **Student Learning Pages** and integrating the **Finding Alberta Beef Infographic** into teaching and learning activities.

Additional sources and weblinks are included in the activities as well as in the **Teacher Background Notes** on pages 39 to 47.

Plan to highlight the photos of Alberta cattle farmers and ranchers, land and environments found throughout the learning pages. Additional photos, including photo cards, are included in other grade level resources, all provided on the Alberta Beef website at www.albertabeef.org/consumers/resources.



WHAT CAN WE LEARN ABOUT LAND AND PLACE?

THIS GUIDING QUESTION ENCOURAGES STUDENTS TO EXPLORE THE CONNECTIONS BETWEEN LAND AND PLACE THROUGH EXAMPLES AND IMAGES FROM ALBERTA FARMERS AND RANCHERS.

land and places

SOCIAL STUDIES

Work with students to complete the first activity in **Learning Page 1: Communities are alike and different**. Ask them to illustrate four examples of what the land and places in their community look like. Share these examples with classmates and encourage students to talk about how the land and/or places on which they live have similar and different features.



Kindergarten students can be encouraged to identify different and similar characteristics of the land and its features. **Grade 1** students can be asked where they would look to find examples that make different places unique. For example, students might talk about how the plants or animals, types of buildings or stores may be similar and different in different places.

Introduce the guiding question with students by using **Learning Page 2: Communities are found on different types of land**. This learning page can be used as a whole class activity, discussing the puzzle piece images and two questions as a class:

- What do you see? (*Reinforce the natural and human features that are shown in the four images. These images represent different areas in Alberta, including grasslands, foothills, mountains and forest.*)
- How is the land shown in these pictures alike or different from where you live?



FINDING ALBERTA BEEF INFOGRAPHIC

Challenge students to find the matching image from **Learning Page 2** in the **Finding Alberta Beef Infographic**. Talk about reasons that most Alberta beef ranching communities are found in grassland areas. Guide students in making connections between the natural features of the land and the food that cattle eat.



MEET DIVERSE LEARNING NEEDS

Students who have no familiarity or frame of reference with the variety of land and places in Alberta can be encouraged to talk about features they might see and find in places different from their own.

The photo cards in **Learning Page 2** can help introduce this discussion with students.

Reinforce skills by having students use the photo cards to create their own groups. Model the process of sorting cards into a group with students by using an example such as “all living things” or “things that people build or make.”



finding features

SOCIAL STUDIES, SCIENCE

Organize a **circle discussion** with students to trigger their thinking about natural and built features of land and places. Ask students to share experiences that they have had on farms or ranches as well as those in cities or towns.

Share the **photo cards** in **Learning Page 3: Communities have different features** with students in the circle discussion. These cards can be cut out and laminated to create a permanent classroom set. Alternatively, provide the pages to students and have them cut out the photo cards.

As you share, encourage students to identify and compare examples of places and features they would find in farms or ranches and cities or towns – including examples such as houses and apartments, stores, fields, parks, landmarks, streets, roads, community centres, machines, plants, animals.

Work with students to first sort through and discuss the items in environments that are living, non-living and human-made. Ask students to share examples of living, non-living and human-made things in their own environments and make comparisons to the photos on the cards.



BUILD COMPETENCIES

NUMERACY

Reinforce and practice counting and sorting skills by using the photo cards in a **card sort**. Have students work with a partner to sort the cards into groups. Provide students with group labels or ask them to create groups on their own. The cards can be sorted into groups such as:

- Human-made places
- Natural places
- Animals
- Plants
- Machines
- Foods

Alternatively, the card sort could be done as a class, pinning examples in groups on a class bulletin board.



ASSESS

Ask students to respond verbally to sentence stems such as those below:

- An urban community can be a good place to live because...
- A rural community can be a good place to live because...
- Urban communities can be similar to rural communities when...
- Rural communities can be different from urban communities when...

Ask questions to help students visualize and develop an understanding of the range of features in rural, compared to urban, settings. Adjust the questions according to the settings that students are most familiar with.

- What do you see? What can you touch? What does this place look like? What is around it? (*Encourage students to think of such ideas as parks, open fields, farm machinery, tall buildings, stores, streets and sidewalks.*)
- What might you hear? What are the sounds? (*Students can be asked to think about sounds they hear in different types of places, such as traffic noise, the sound of farm machinery or water sources and the sounds that pets or farm animals make.*)
- What are the smells you remember when you think about different places? (*Prompt students to talk about the smells of different foods cooking, the smell of different products such as crayons, leather and oil, as well as smells from different environmental factors – smells on a farm, grass and other plants or the smell outside after it rains.*)
- What can you taste? What types of foods might you find in this place?



Have **Grade 1** students focus on similarities and differences between urban and rural communities. Continue the discussion with questions such as:

- What might you find in both rural and urban communities? How do you know this?
- What are some differences between urban and rural areas?
- Create a discussion poster using a graphic organizer, such as a **Venn**, to help students record and analyze the comparisons they make.



FINDING ALBERTA BEEF INFOGRAPHIC

Challenge students to find examples of features in ranching communities that they can see, hear, touch, smell and taste in the **Finding Alberta Beef Infographic**.



BUILD COMPETENCIES

LITERACY

Use **picture books** such as the examples below to introduce concepts and/or reinforce conceptual understandings and provide students with visual contexts of land and place in farm and ranch settings.

Country Kid, City Kid by Julie Cummins tells the story of two children, one who lives on a farm with cows, horses and a dog, and the other who lives in a busy city surrounded by skyscrapers.

City Dog by Karla Kuskin takes children along in a poem about a city dog's first trip to the country.

Why Do Cows Moo? And Other Farm Animal Questions by Catherine Ripley tells a story about a child's trip to a farm and the animals she encounters there.

Farmer Joe's Hot Day by Nancy Wilcox Richards introduces children to the work that a farmer does.

Tiger's New Cowboy Boots by Irene Morck and illustrated by Georgia Graham is an Alberta book that tells a story about a cattle drive.

mapping connections

SOCIAL STUDIES

Invite students to take a closer look at what they might find on cattle ranches or farms. **Learning Page 4: Farms and ranches are part of communities in Alberta** introduces students to features and activities they may see or find on a cattle ranch or farm.

Use the **bubble map** and the **photo cards** in **Learning Page 4** to illustrate the sentences below. The bubble map includes the following concepts:

- Cattle farms and ranches
- Natural features
- Built features
- Activities
- Food



Most of the photo cards are from Alberta cattle farms and ranches. These cards could also be combined with the cards from **Learning Page 3** and integrated with other activities in your own existing units.



MEET DIVERSE LEARNING NEEDS

As the stories are read out loud to students, ask them to draw a picture of what comes to their mind as they listen.

Encourage students to compare pictures they draw or those from different stories. Discuss what the stories and pictures help us learn about ways of life in rural communities. Share stories with the class on an interactive whiteboard, using a document camera or in a small group setting using reading buddies.

Note that stories should be previewed and selected according to appropriateness for your students.

Students can also be asked to create their own **illustrated maps** to explore and show the features in different types of communities.

Students can be provided with or create their own paper shapes to construct their maps. Have students work with a group and focus on either an urban or a rural area.

Organize students into small groups. Prepare a set of photo cards from the learning pages for each small groups of students. Preview the photo cards with students by telling them that these photos are from cattle farms and ranches in Alberta, one type of agriculture that is an important part of Alberta communities and activities.

Place the photo cards on a table or learning centre surface for each small group to work with.

Discuss the concepts in the bubble map with students. Then, have them select photo cards that illustrate concepts in each sentence.



Reinforce literacy skills and extend this activity with picture books to encourage students to identify features of land and places in farm and ranch communities.

A variety of photos from Alberta cattle farms and ranches are included in the **Finding the Beef** resources at all grade levels. These resources can be accessed on the **Alberta Beef** website at www.albertabeef.org/consumers/resources.

Use **Learning Page 5: Shapes can be seen on farms and ranches** to reinforce numeracy skills by having students find and match shapes that are found on Alberta cattle farms and ranches. Students can draw each matching feature inside the appropriate shape box on the learning page.



FINDING ALBERTA BEEF INFOGRAPHIC

The **Finding Alberta Beef Infographic** provides sentences about cattle farms and ranches. Challenge students to match or find similarities in the photo card images from **Learning Page 4** to the sentences and photos in the infographic. Encourage them to make connections between the sentences and photos in the infographic.

HOW DOES THE ENVIRONMENT MEET THE NEEDS OF LIVING THINGS?

THIS GUIDING QUESTION ASKS STUDENTS TO INVESTIGATE HOW NEEDS ARE MET IN NATURAL AND HUMAN MADE ENVIRONMENTS. STUDENTS MAKE CONNECTIONS BETWEEN CARE FOR ENVIRONMENT, CARE FOR ANIMALS AND NUTRITIONAL CARE OF THEMSELVES.

meeting needs

SCIENCE, SOCIAL STUDIES

Ask students to review what they know and have learned about what happens on farms. Guide students through a whole class **brainstorm** to create a list of words and phrases that describe their learning. Then, encourage students to add questions that they still have about farm activities and farmers.

Share the story provided on **Learning Page 6: Farmers and ranchers care for plants and animals** with students. Encourage them to describe what they see in the photos and talk about each sentence in the story.

Focus on the ways in which farmers and ranchers meet the needs of living things with questions such as the following:

- What needs do the animals that live on a farm have? What needs do the plants grown on a farm have?
- How are these needs alike or different? (*Encourage students to compare the need for air, water, food, shelter, space, and light for both plants and animals.*)
- What do farm environments provide to plants and animals to meet their needs?
- How do farm and ranch environments meet needs in ways that are similar or different to how we meet our own needs?
- How is the land shown in these pictures alike or different from where you live?



FINDING ALBERTA BEEF INFOGRAPHIC

Use the photos and sentences on the **Finding Alberta Beef Infographic** to identify examples that illustrate the needs of beef cattle, including feed, water, fresh air and shelter.



MEET DIVERSE LEARNING NEEDS

Some students may be more familiar than others with farm activities. Encourage these students to share their experiences and expertise with other students.

Students can be asked extend their learning by matching images in the photo cards from **Learning Page 4** to the sentences and information in the story.



ASSESS

Have students point out or circle words in the story that describe needs that plants and animals have.

Create a **t-chart** (a double-column chart) on the board to reinforce and compare these needs. Have students cut out each sentence card in the story and place the cards in the appropriate column.

Use **Learning Page 7: Indigenous people were Canada’s first farmers** to encourage students to consider how Indigenous people depended on the land and environment to meet their needs. The story in this learning page is meant to be read out loud to the class.

Students can be asked to listen and select one example of early Indigenous farming practices for which to create an **illustrated example**. Ask students how they think the activities of the Indigenous people in this story are similar to the activities of farmers and ranchers in Alberta.



This story in **Learning Page 7** is based on a **Canadian Geographic** article, **Red River: First Farmers**, found at www.cangeoeducation.ca/resources/rivers_of_canada/red_river/first_farmers.asp.

For a more recent perspective on Indigenous peoples and agriculture, visit the **Statistics Canada** website to find **Aboriginal peoples and agriculture in 2016: A portrait** at <https://www150.statcan.gc.ca/n1/pub/96-325-x/2019001/article/00001-eng.htm>.

Share additional stories that provide both past and contemporary perspectives on the ways in which Indigenous people use the plants and animals in their environments. Ask students to point out examples of the ways that Indigenous people meet their needs and the connection that Indigenous people have to their environment.



The **Learning Circle** guides are produced by the **Government of Canada** to support learning about First Nations in Canada. The guide for student ages 4 to 7 includes stories that could be explored together with the story in **Learning Page 7**.

Suggestions for using storytelling, including some examples of stories and a discussion of activities, including hunting and food gathering, during the seasons, can be accessed at www.rcaanc-cirnac.gc.ca/eng/1316530132377/1535460393645#chpm2. Audio downloads for the included stories are also provided. Find a PDF version of the guide on the **Empowering the Spirit** website at <http://empoweringthespirit.ca/wp-content/uploads/2017/02/Learning-Circle-Ages-4-7.pdf>.



stories of place

SCIENCE, SOCIAL STUDIES

Use a **whole class sharing strategy** or organize students into small groups to explore the story in **Learning Page 8: Stories from cattle farming and ranching communities show concern for the land.**

Students will also be asked to use the story and photos to be introduced to simple inquiry skills. Introduce these skills to students by having them verbally identify words, phrases or sentences that respond to – and provide evidence for – exploratory questions such as the examples that follow.

Use a whole class or small group strategies to explore the story.

- Read the entire story out loud to the class. Display the stories on an interactive whiteboard or document camera, modeling and guiding students through a simple inquiry using the exploratory questions.
- Have each small group focus on one page of the story, reading the selected page aloud. Ask the group to identify what they see in the photos and what they learned from the descriptive sentences on the page. Encourage groups to share what they learned with other groups.

Use and/or adapt the following exploratory questions as appropriate for your students.

- Start by asking students to share what they know now about cattle and what they can learn from the story. What do cattle look like? What are their needs? How do they meet these needs?
- What types of activities do farmers and ranchers do in this story?



MEET DIVERSE LEARNING NEEDS

Provide students with a structured support by using the **bubble map** at the end of **Learning Page 8.**

As they listen to the stories, they can be guided to draw ideas or write words and phrases around the labelled circles in the bubble map.



BUILD COMPETENCIES LITERACY

As the story is read out loud, students can be asked to draw a picture of one thing that comes to their mind as they listen.

Encourage students to compare pictures they draw with the photos in the story. Discuss what the stories and images can help us learn about ways of life in farming or ranching communities.



BUILD COMPETENCIES

MANAGE INFORMATION CRITICAL THINKING

Focus on managing information and critical thinking. Do a think aloud that models the process of looking for information from a source. Ask students to identify and/or describe different places or things they could look for to find answers to questions. Students may share examples such as books, the Internet, pictures or photos, people, their home or places in their communities. Encourage students to talk about how the natural world can also be a place that we look at to learn and find information.

- What does this story tell you about the ways that cattle farmers and ranchers take care of the land, plants and animals?
- What does this story tell you about the ways that cattle farmers and ranchers depend on the land, plants and animals?

If appropriate for your students, record the questions – or key words from the questions – on the board. As students respond, they can match the examples they identify with the questions or key words.



Have **Kindergarten** students orally identify words and phrases in response to each question. Support their learning by having an adult or older student reinforce the words they identify. **Grade 1** students can identify examples of words or elements in the photos to respond to the questions. Model each process with students.

Provide students with **Learning Page 9: Cattle are part of Alberta’s environment**. Revisit and review what students learned from the stories of Alberta cattle farmers and ranchers by matching the sentences by writing its number beside the appropriate photo on the wheel. This learning page has fillable fields and can be completed electronically. Students can then create their own cycle diagram to illustrate the connections between cattle ranching and the environment. Have them use the sentences below the cycle diagram and either write them in the boxes or draw pictures to represent them.



ASSESS

Ask students to reflect on their learning with questions such as the following:

- How are the activities of cattle farmers and ranchers connected to you? (*Encourage students to think about what cattle ranches contribute. Rural students may have personal experiences or comparisons to share and urban students can be encouraged to consider how the jobs that cattle ranchers do may be similar to jobs they and their families do. These ranchers also make products that they depend upon. Urban students can also be encouraged to make comparisons to their own activities.*)
- What can we share with others about what we do in the places in which we live?

responsibility wall mural

SCIENCE, SOCIAL STUDIES

Ask students to think about the responsibilities they have in the classroom. Students may contribute ideas such as:

- Being responsible for their learning
- Completing tasks they are asked to do
- Looking after the classroom
- Respecting classmates

Talk to students about what they have learned about the types of responsibilities that people who live and work on cattle farms and ranches have. Encourage students to share ideas about how responsibilities at home, at school and where people work can be alike and different.

Work with students to start a **word list** of responsibilities. Have students use the word list to create drawings or **illustrated word art** that identifies and describes responsible activities.

Display the word art on a **class responsibility wall mural**. Organize this “responsibility wall” into sections such as those shown in the example chart below.

Home	Community	Environment	Animals

Encourage students to consider words and phrases such as:

- Helping at home (*Students may identify helping at home as a responsibility. Encourage them to identify specific examples, such as helping to set the table or clean their rooms.*)
- Participating with the community (*Students may find the concept of responsibility to community challenging. Discuss ideas such as producing beef or other food products that are healthy and safe for everyone and giving back to the community by doing things like sharing what they know and do with other ranchers.*)



BUILD COMPETENCIES COLLABORATION

Provide students with the opportunity to work with a partner or group to create their illustrated word art drawings.

Focus on collaborative skills, by asking students to talk about how their group worked together. How can we practice good group work skills? Encourage students to also discuss how they think farming families have to work together and have good group work skills.



MEET DIVERSE LEARNING NEEDS

Guide students to extend their learning by making connections between different ideas on their responsibility wall. For example, taking responsibility for the environment can be connected to responsible decisions about what to feed cattle. Taking responsibility for helping family members can be similar to making sure cattle have food and water to meet their needs.

Consider student needs by choosing alternative grouping arrangements, such as:

- Having students who have understandings of concepts related to responsibility work in independent small groups to brainstorm ideas and create their illustrations or word art.
- Organizing student learning buddies or parent help to support students as they are creating their illustrations or word art.

- Looking after the animals (*Encourage students to discuss needs that must be met, such as providing animals with water, food and a safe place to grow.*)
- Protecting the environment (*Ask students to think about ways that ranchers can look after the land, air and water as well as what they know about recycling. Discuss and explain practices such as moving cattle to new fields to help grass grow back in grazed fields, protecting natural water sources by building buffers between these areas and grazing fields and ensuring that cattle do not contaminate water sources. When fields and plants are kept healthy, the air quality is also protected as healthy plants absorb carbon dioxide and produce oxygen.*)



Ask **Grade 1** students to use the responsibility wall murals to discuss what is alike and different about responsibilities that they and children who live in other communities might have.



FINDING ALBERTA BEEF INFOGRAPHIC

Photos that show some of the work and activities found on cattle farms and ranches are included on the **Finding Alberta Beef Infographic**. Have students identify and describe work and activities from the photos. Draw out comparisons between these activities and the responsibilities that students previously identified. (*Photos on the infographic include those that represent the provision of water and feed – hay bales – for cattle; the use of fences; ranchers on horseback; managing cattle on pastureland.*)

healthy plate challenges

HEALTH/WELLNESS

Tell students that you will be challenging them to create a **plate of healthy food choices**. Provide each student with **Learning Page 10: Food comes from farms and ranches**. Have students match the photo of each food dish with the plants and animals that each food comes from.

Challenge students to work with a partner or in a small group to use the foods from the learning page as a starting point to create their own plate of healthy food choices. A **dinner plate graphic** is provided in the learning page. Encourage students to find and add other types of foods to their dinner plates.



Share the **Canada Food Guide** dinner plate illustration on an interactive whiteboard. The illustration can be accessed on the Government of Canada's website at <https://food-guide.canada.ca/en/>. Ask students to talk about the food choices they see and compare these choices to their own healthy food preferences.

Provide time for students to share and explain their healthy food choices, using questions such as the following.

- How do you know these food choices are healthy?
- What do healthy foods provide for our bodies?
- Why is it important to choose healthy foods?

Use student responses to the discussion questions to introduce them to the statements on **Learning Page 11: Beef gives the body nutrients**. Use the statements on this learning page to introduce students to the idea of nutrients – the part of food that helps us grow, gives us energy and helps us stay healthy. Foods that do these jobs best are called nutritious foods.

Encourage students to compare other types of food to the beef examples. Revisit and reinforce examples of nutritious foods from students' dinner plates and the **Canada Food Guide** dinner plate illustration.

Ask students to propose their own supporting sentences similar to those on **Learning Page 11** about other food types, guiding them with examples such as those that follow. The learning page provides fillable fields that can be used to record their sentences and displayed on an interactive whiteboard or with a document camera.

- Vegetables and fruits give the body nutrients (*Vegetables and fruits have nutrients such as fibre, vitamins and minerals. They make quick and healthy snacks. Vegetables and fruits come from farms.*)



BUILD COMPETENCIES PROBLEM SOLVING

Invite student pairs or groups to divide food illustrations, photos or images that have been collected in the classroom into two categories – those that show nutritious food choices for meals and snacks and those that are less nutritious. Students can also be asked to do their own search for these illustrations.

Display the two **sorting circles** at the end of **Learning Page 11** on an interactive whiteboard or with a document camera. Invite students to sort and drag pictures of nutritious and less nutritious foods into the two sorting circles. This activity can be used to introduce students to a Venn.

LITERACY

Reinforce the idea that information can come from different places, or sources, as students make decisions about healthy food choices and consider **Canada's Food Guide** recommendations.



ASSESS

Ask students to respond verbally to sentence stems such as those below:

- Nutrition can come from many different foods like . . .
- I can make healthy food choices because . . .
- Urban communities can be similar to rural communities when . . .
- Rural communities can be different from urban communities when . . .

- Whole grain foods give the body nutrients (*Whole grain foods have nutrients such as fibre, vitamins and minerals. Grains come from crops that farmers grow. Whole grain foods use the whole seed from the plant.*)
- Other protein foods give the body nutrients (*Proteins include other foods like beans, nuts, seeds, chicken, fish, eggs and dairy foods. Protein from plant foods come from crops that farmers grow. Protein from animal foods also come from farmers.*)

Extend learning by having students finding photos or illustrations – or by drawing food examples – that support the sentences.



Some additional beef food choice photos are provided throughout all **Finding Alberta Beef Learning Pages** resources. Find these resources on the **Alberta Beef** website at www.albertabeef.org/consumers/resources.



FINDING ALBERTA BEEF INFOGRAPHIC

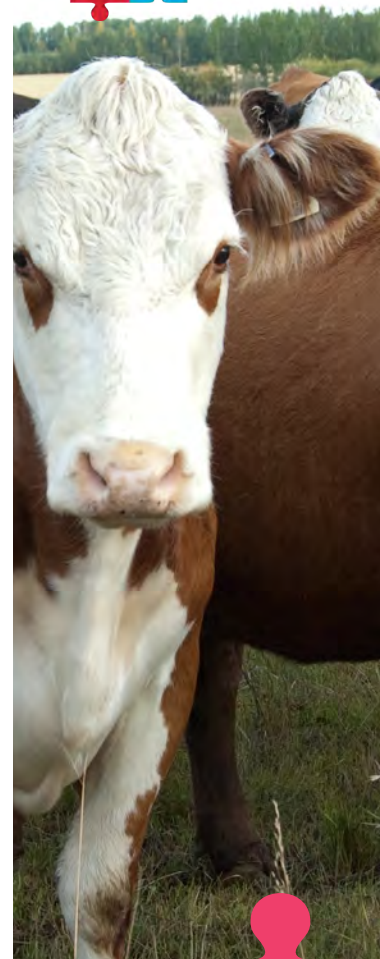
The **Finding Alberta Beef Infographic** can provide a starting point for the creation of a student project. Ask students how they can “put the puzzle pieces together” to share their learning. Provide the blank puzzle template at the end of the **Student Learning Pages** to students. Challenge them to create their own infographic with pictures, words or phrases that illustrate their learning.



teacher background notes

Beef animals are ruminants and like all ruminants they have four compartments to their “stomach.” When ruminants swallow grass or other vegetation the feed goes into the first section of the “stomach,” called the rumen. Here it is broken down by billions of micro-organisms.

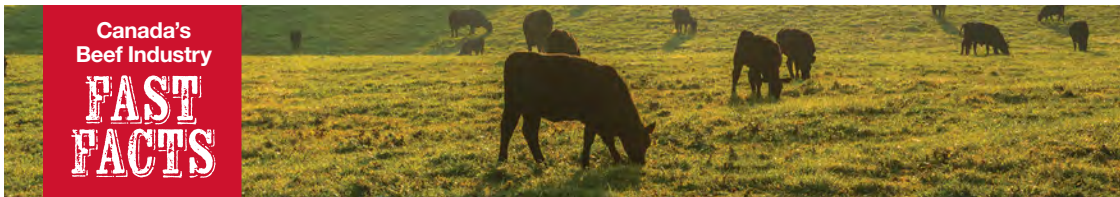
It is this feature that allows ruminants to digest tough cellulose and convert it to usable food. When the rumen is full, the animal will lie down to rest. During this time it will burp up portions of food from the rumen. These portions, called “cud,” are brought back up into the mouth, chewed into a pulp and swallowed again. The chewed food goes on through the other three “stomachs” where it is digested. Other ruminant animals are dairy cattle, sheep, goats and bison.



the cattle industry in Alberta

The Alberta cattle industry began in the late 1800s with English and American settlers discovering the many advantages that make Alberta an ideal location to raise cattle. These frontier producers found ways to prosper in the Canadian climate by using progressive management practices and by being early adapters of technology.

With more than five million head of cattle, Alberta is the largest cattle producing province in Canada and has the fourth largest cattle herd of all provinces or states in North America, just behind Texas, Kansas, and Nebraska.



PRODUCTION

Canada's Beef Industry
FAST FACTS
June 2019

59,784

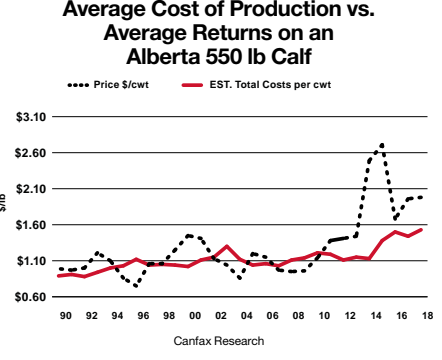
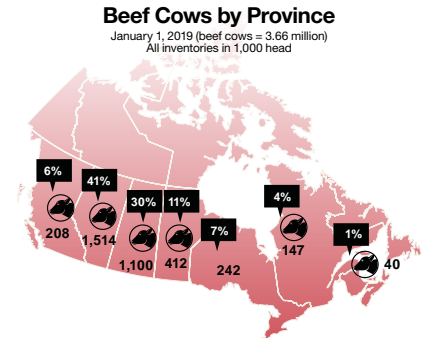
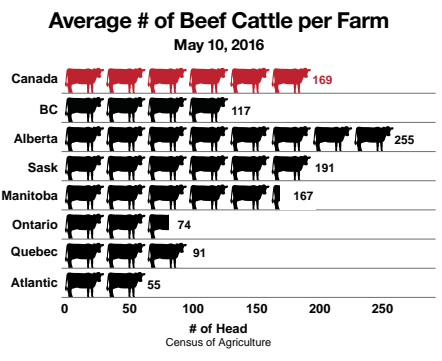
Farms and Ranches with Beef Cattle
2016 Agriculture Census

11.45 million

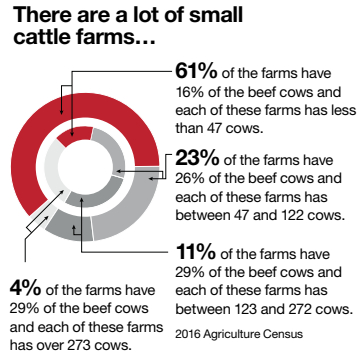
Total Cattle and Calves Down 1% from 2018
(includes 1.4 million dairy cattle)
Statistics Canada

3.66 million

Beef Cows Down 1% from 2018
Statistics Canada



Did you know...
The average beef cow herd size in Canada is 69.
2016 Agriculture Census



Canada fed 2.9 million cattle in 2018 (finished to market weight) up 1% from 2017.
Canfax, Statistics Canada, AAFC

Western Canada finishes 76% of all fed cattle in Canada. Canfax

In 2018, Canada produced 3.08 billion pounds of beef, up 2.7% from 2017.

3 Billion Pounds

Canfax, Statistics Canada

Cattle and calf cash receipts in 2018 totaled \$9.07 billion, steady with 2017. Statistics Canada

Beef production contributed \$18 billion to Canada's GDP (2014-2018 average).
Canfax, Statistics Canada

Alberta is one of the world's most successful beef exporters, shipping a yearly average of \$1.5 billion of beef all over the globe. Of Alberta's 2018 beef exports, 73 percent was sold to the United States, 7 percent to Hong Kong, 7 percent to Japan and 13 percent to other countries. These countries or regions included Mexico, Mainland China and South Korea.

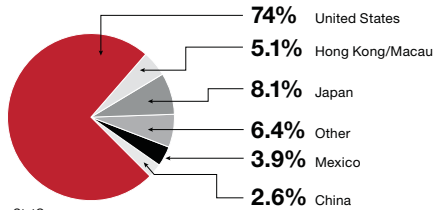


Alberta Beef provides information and infographics on beef production at www.albertabeef.org/consumers/industry-info.

WHERE CANADA TRADES

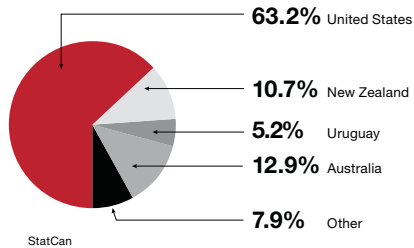
Beef Exports – 2018

879 million pounds (399 million kg)



Beef Imports – 2018

391 million pounds (177 million kg)



In 2018, Canada exported **44.6%** of total beef and cattle produced in Canada.

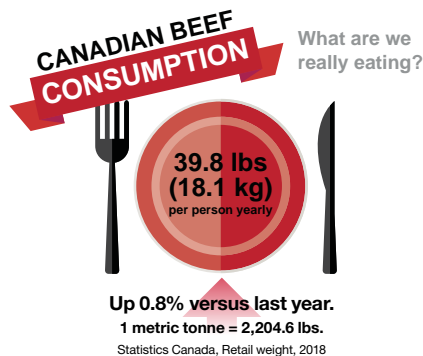
Statistics Canada, Canfax, AAFC

On a net basis (subtracting out imports), **Canada exported 30%** of its beef and cattle production in 2018.

Statistics Canada, Canfax, AAFC

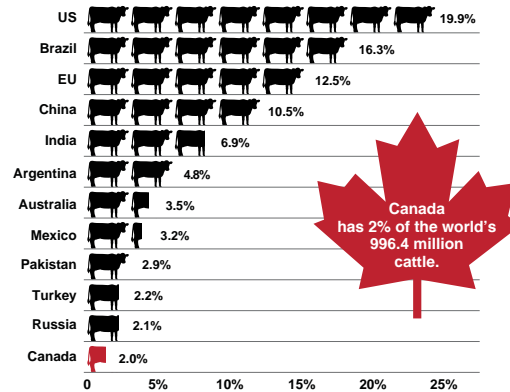
Canadian beef exports were valued at **\$2.75 billion** in 2018, up 14% from \$2.41 billion in 2017.

Statistics Canada



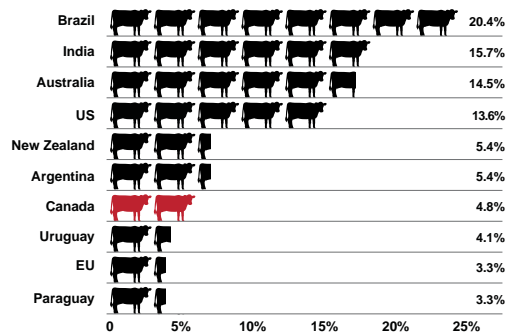
WHERE CANADA FITS

Top 12 Beef Producing Nations – 2019f



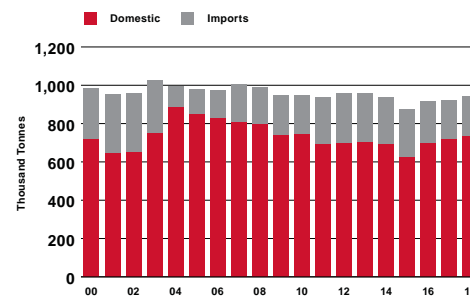
Canada produces 2% of the world's beef supply. Worldwide Beef Production is projected at 63 million metric tonnes in 2019. USDA

Top 10 Beef Exporting Nations 2019f (excludes live slaughter exports)



Total world exports in 2019 are projected at 10.8 million metric tonne and Canada is projected to be the 7th largest beef exporter in the world (excluding live cattle exports). USDA

Canadian Beef Consumption



Canadian's consumed 941,280 tonnes of beef in 2018

Statistics Canada

Infographics provided by Canada Beef: www.canadabeef.ca

producing beef

Beef cattle production is Alberta's largest agricultural sector, providing \$4.9 billion in farm cash receipts annually or 36 percent of Alberta's farm production income.

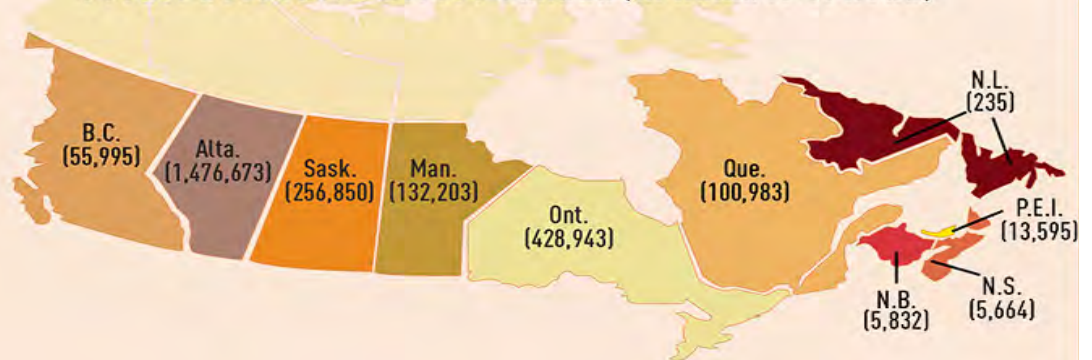
- 46 percent (18638) of Alberta farms have beef cattle
- Alberta cattle and calf numbers – 5 207 000 head (42 percent of Canadian total)
- Canada cattle and calves – 12 531 000
- Alberta has 1 866 000 breeding beef cows and heifers (42 percent of Canadian total)
- Alberta feeds nearly 2 000 000 cattle each year with total annual beef production of over 900 000 tonnes
- Alberta averages 93 beef cows per cattle farm
- Alberta has 21 127 243 hectares of farmland
- 30 percent of all Alberta farmland is natural land for pasture
- 10 percent of all Alberta farmland is tame or seeded pasture land
- Alberta federal and provincial inspected plants processed 2 365 000 head of cattle or roughly 74 percent of Canadian total in 2018

Infographic excerpt from Statistics Canada: *Livestock in Canada*. <https://www150.statcan.gc.ca/n1/pub/11-627-m/11-627-m2017011-eng.htm>

Alberta had more feeder beef cattle than all other provinces combined in 2016, with almost 1.5 million head.

Alberta leads in beef

Feeder beef cattle across Canada (in number of head)



For every milk-producing cow in Canada there were 4 beef cows.



=



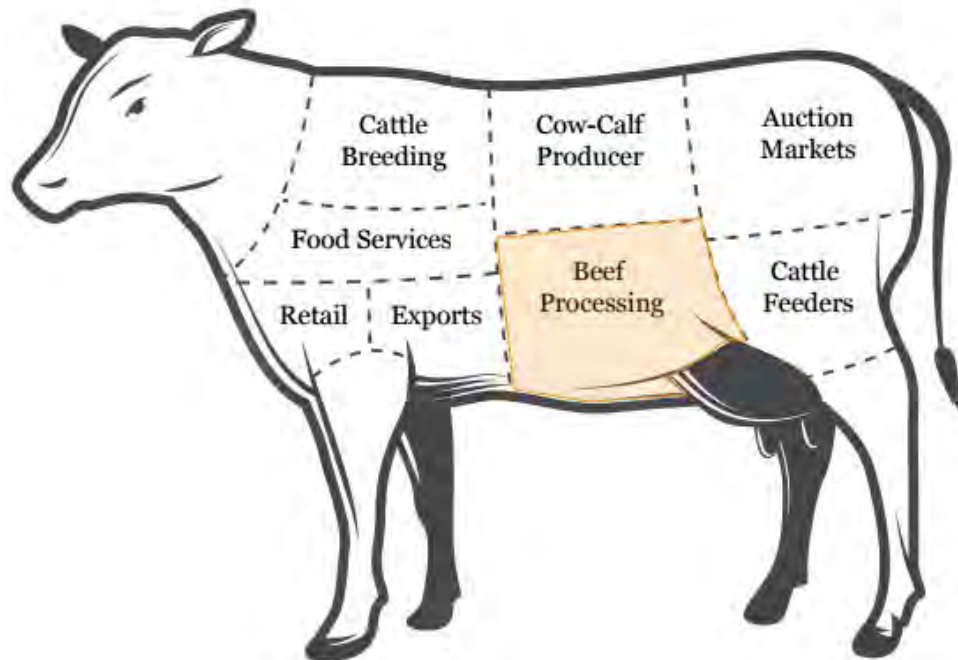
There are many different people and jobs involved in beef production. Some examples include:

- Ranchers (cow/calf operators)
- Backgrounding operators
- Feedlot operators
- Veterinarians
- Machinery dealers
- Feed and fertilizer sales persons
- Auctioneers
- Truckers
- Packing plant workers
- Meat graders, inspectors and butchers



The **Alberta Cattle Feeders Association** provides background information on the seven stages of beef cattle production at <https://cattlefeeders.ca/the-7-stages-of-beef-cattle-production/>, including descriptions of the different roles involved in each stage.

Image from Alberta Cattle Feeders Association.



sustainability and environment

The beef production industry has a strong commitment to protection and sustainability of the environment. The beef industry uses practices for forage, grazing and beef production that can benefit the environment including maintaining plant and wildlife habitats, reducing soil erosion and protecting watersheds.

Every living organism produces greenhouse gases (GHG), but cattle produce more than some other livestock because rumen bacteria produce methane as they digest feed. Additional greenhouse gases come from manure and fossil fuel use. However, beef production in Canada accounts for only .04 percent of global greenhouse gas emissions.

Pastureland removes greenhouse gases from the air and stores them in the soil. Removing cattle from these lands would put the land at risk for conversion to other land uses that could release more GHGs.

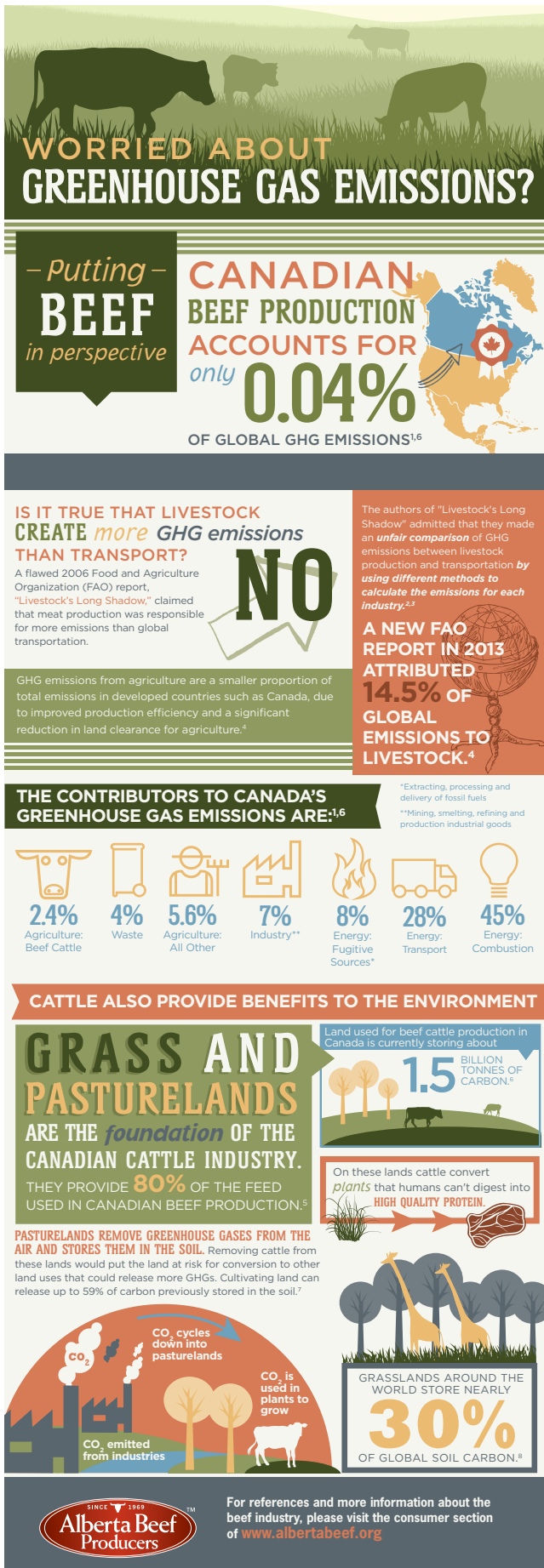
Cultivating land can release up to 59 percent of carbon previously stored in the soil. Grasslands and pastures also store carbon, protect marginal lands from tillage and erosion, provide habitat for wildlife and promote biodiversity.

Alberta beef farmers and ranchers are committed to producing beef in an environmentally sustainable manner. Alberta Beef supports policies, programs and educational efforts that uphold this vision. They also formally recognize beef producers who have incorporated environmental protection into their management strategies.

Find the full infographic on the **Alberta Beef** website at www.albertabeef.org/consumers/resources.

Canada Beef provides information and resources, including videos, about cattle and the environment at <https://canadabeef.ca/whycanadianbeef/>. This source is suitable for teacher background. **Canada Beef** also provides an infographic that provides environmental and nutritional information about beef at https://canadabeef.ca/wp-content/uploads/2019/10/RS9895_CB_Environment_Nutrition-Infographic-Sheet_REV.pdf.

Canadian Cattlemen's Association provides a number of resources on environmental issues and nutrition, suitable for teacher background, at www.cattle.ca/cca-resources/.



nutrition

Meat products contain nutrients that are essential for health. Lean meats, including beef, help you meet your needs for protein, vitamins, and minerals. **Canada's Food Guide** includes leaner meats as a protein choice in a healthy diet. Other healthy choices include grains, vegetables and fruits and milk products.

Beef is a complete protein. This means that the all essential protein building blocks, called amino acids, are found in beef.

Beef also provides a healthy source of dietary fats. Fat is an important nutrient for normal body functions and energy. Fat helps our body absorb fat-soluble vitamins such as A, D, E and K. Some fats are essential, because our body cannot make these fats. It is recommended that an adult's diet have 20 to 35 percent of total calories from fat.

Beef provides nutrients important to the body. One serving of cooked lean beef provides:

- About half of the protein requirements for a teen
- Enough vitamin B¹² to exceed requirements
- An excellent source of zinc and niacin
- A source of iron, thiamine and riboflavin

Nutritional values of foods can be affected by different factors, including geographic location, season and the soil used to grow plants and feed to raise animals. For example, cows fed mostly on pasture in the summer produce butterfat higher in Vitamin A than in the winter.

Nutritional values can also be affected by the ways in which foods are manufactured or processed, including the use of heat, light, oxygen, enzymes or microorganisms.



Find the full infographic on the **Alberta Beef** website at www.albertabeef.org/consumers/resources.

The **Think Beef** website provides a series of resources, including nutritional information, infographics and recipe booklets suitable for children at <https://thinkbeef.ca/resources/>.



cattle byproducts



If appropriate for your students, you may want to share some examples of the byproducts that come from beef cattle. When discussing byproducts with students, it is also important to note that, in some cases, technology has been developed that also allows for synthetic substitutes to be used in products that traditionally contained animal byproducts.

Edible beef byproducts are products that can be consumed. The majority of edible beef byproducts contain gelatin. Gelatin is made from cartilage, tendons and bones and can be found in products like:

- Hard cheese
- Jello
- Canned meats
- Ice cream
- Gummi bears
- Marshmallows
- Mayonnaise
- Gum
- Yogurt

Variety meats are edible organs and glands of a beef animal, and can include heart, tongue, liver, kidney, tripe (stomach walls), and testicles (Rocky Mountain or Prairie Oysters). Variety meats are edible byproducts.

Inedible beef byproducts are made from the hide, fat, bones and entrails. Products from the hide can include leather boots, luggage and shoes.

Products made from fat include:

- Deodorants
- Fabric softeners
- Plastics
- Shaving cream
- Detergent
- Floor wax
- Shampoo
- Candles
- Crayons

Byproducts made from the bones include toothpaste and bone china.

Byproducts made from entrails include violin strings.

Additionally, beef byproducts can be made from leftover meat portions, including pet foods.

The medical world also relies on the byproducts from cattle to produce a number of medications and treatments. Prior to the 1980s, people with diabetes relied totally on insulin supplies extracted from beef and pork pancreases.

Byproducts from cattle also assist in the treatment of anemia, allergies, parathyroid deficiencies, respiratory diseases, jaundice, rheumatoid arthritis and leukemia.



www.albertabeef.org/consumers/resources