

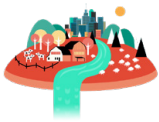
# FEEDING CANADA

*Exploring Our Food System*

— A VIDEO SERIES —

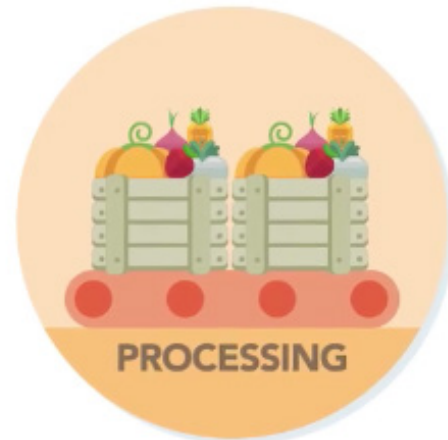


## FARM ANIMAL CARE



## TABLE OF CONTENTS

<b>Acknowledgements</b> .....	3
<b>Introduction</b> .....	4
<b>Feeding Canada Video Series</b> .....	5
<b>Using Credible Information in Discussions and Activities</b> ...	6
<b>Food Cycle Introduction</b> .....	7
<b>Farm Animal Care</b> .....	8
<b>Discussion Questions</b> .....	10
<b>Activities</b> .....	12
<b>Extended Learning</b> .....	13
<b>References</b> .....	14
<b>Curriculum Connections</b> .....	15
<b>Glossary</b> .....	18





## ACKNOWLEDGEMENTS

The Registered Dietitians at Dairy Farmers of Canada would like to thank the many people who were involved with the development of this video series and discussion guide, including the farmers, content experts, and researchers we interviewed as well as the knowledgeable reviewers, including Agriculture in the Classroom.

We would like to offer a special thanks to the advisory group, curriculum consultants, teacher consultants, and students that worked with the team of Registered Dietitians in Ontario when these videos were first created.

We would also like to acknowledge the excellent contributions of the team of creative designers, videographers, film crew, and editors who helped create a dynamic video series.

## A SPECIAL THANK YOU TO OUR TOPIC SPECIALIST INTERVIEWEES

Bob Wilson  
Gilbrea Farm  
Hillsburgh, Ontario

Dan Ferguson  
Centre Oak Farm  
Warkworth, Ontario

E. Blake Vince  
Regenerative Farmer  
Merlin, Ontario

Jan VanderHout  
Beverly Greenhouses  
Dundas, Ontario

Katie Wilson  
Gilbrea Farm  
Hillsburgh, Ontario

Dr. Kelly Barratt  
Large Animal Veterinarian  
Southwestern Ontario

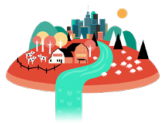
Korb Whale  
Clovermead Dairy Farm  
Drayton, Ontario

Lori Nikkel  
Chief Executive Officer  
Second Harvest Food Rescue

Dr. Michelle Hunniford  
Animal Behaviour and Welfare Researcher

Dr. Ralph C. Martin  
Professor (retired), Department of Plant  
Agriculture, University of Guelph

Dr. Tina Widowski  
Professor of Applied Animal Behaviour and  
Welfare, Department of Animal Biosciences,  
University of Guelph



## INTRODUCTION

### Rationale for the Development of the Food System Education Project

Several programs of study in Alberta's grades 7–12 curricula include learning outcomes that link to food systems, including Science, Biology, and Career and Technology Studies. These outcomes include exploration of food production, food safety, food security, sustainable farming practices, preservation of farmland, local foods, factors influencing personal food purchases, and overall environmental responsibility. Current curricula and interest in food systems from both students and teachers present an opportunity to provide accurate, evidence-based representation of farming practices in Canada. The Curriculum Connections chart on page 15 highlights specific learning outcomes associated with each video.

### Goal of Feeding Canada Video Series

The goal of this series is to provide a well-researched, engaging, and balanced exploration of the Canadian food system.

### Purpose of Teacher Discussion Guide

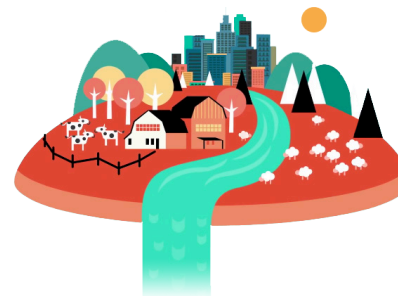
This discussion guide provides you with thought-provoking questions and answers to help facilitate a robust discussion around each topic in the video series. Specific learning objectives are addressed for each video. Questions will help students think critically about the issues that will be discussed during the video, help enhance the discussion after viewing, and help to meet all learning objectives for each video.

This guide provides additional in-depth information on each topic along with credible references for further exploration. Extension ideas have also been included to enrich the student learning experience.

# FEEDING CANADA

*Exploring Our Food System*

— A VIDEO SERIES —



### Using the Feeding Canada Videos

The Feeding Canada series comprises six short videos that range from 2 to 10 minutes in length. Each video explores issues relevant to the food cycle that may broadly or specifically affect farmers, the food industry, the public, and/or the environment. For a comprehensive examination of the issues relevant to Canada's food system, we recommend that all videos be viewed throughout the semester.

### Required Materials

- Internet access
- Access to video link
- Computer, screen, and projector
- Chart paper and markers



## FEEDING CANADA VIDEO SERIES

### Video 1: Sustainable Farming

- Introduces the concept of a food cycle
- Defines and discusses sustainable farming practices and provides examples of how Canadian farmers use sustainable farming practices

### Video 2: Farm Animal Care

- Introduces the concept of animal welfare and the regulations and best practices used to ensure animal well-being

### Video 3: Food Safety

- Discusses the extensive regulations and safety measures in place at various stages of the Canadian food system to maintain food safety and human health

### Video 4: Antibiotics and Growth Hormones

- Identifies regulations and safeguards in place in Canada to protect human and animal health
- Examines the use and regulation of antibiotics and hormones in food production

### Video 5: Biotechnology

- Introduces the concept of biotechnology and its impact on food production

### Video 6: Wasted Food and Food Recovery

- Explores the impact of wasted food and examines Canadian-based initiatives at various stages of the food cycle that are helping to reduce and manage food waste



## USING CREDIBLE INFORMATION IN DISCUSSIONS AND ACTIVITIES

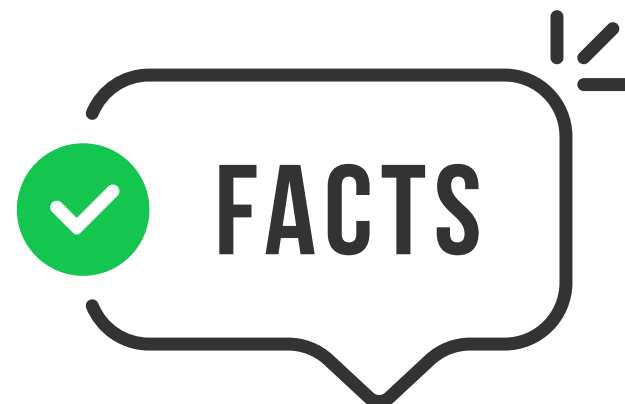
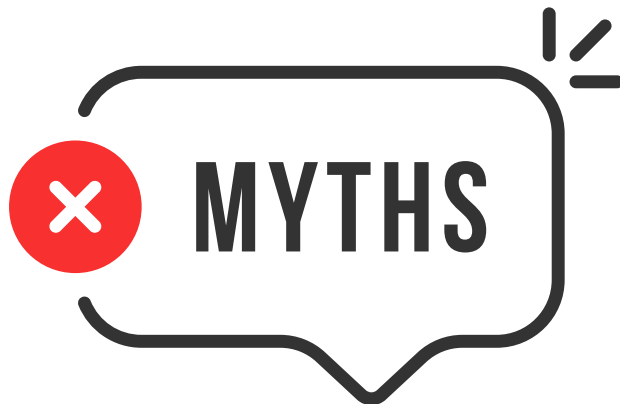
While agriculture has been prominent in Canada for more than a century, over time, our connection and relationship with food has changed. The decrease of firsthand knowledge and experience related to farming and food production increases the importance of using credible sources of information to learn about agriculture and food systems.

Food documentaries and farming exposés may be popular; however, they are often controversial and fraught with misinformation. Additionally, they commonly

- discuss international farming practices, which may not apply to the Canadian context;
- provide anecdotal rather than evidence-based arguments; and
- show content that is gratuitous in nature using rare examples that misrepresent what is common practice.

If students cite these types of sources, we suggest directing them to evidence-based resources that are current and Canadian-focused and that emphasize the perspectives of those working in the agricultural sector, including farmers, veterinarians, and researchers. Examples of these types of resources are found in the Additional Resources and Extended Learning sections of this guide.

We recognize that you or your students may have questions beyond the scope of what we have provided. Fortunately, there are many people and groups in Alberta that would be happy to help find answers to your questions. Reach out to people working in the agricultural sector in your community (e.g., farmers, veterinarians, agronomists), approach organizations with in-depth knowledge such as [Agriculture for Life](#) or [Alberta Milk](#), or use reputable websites such as [Agriculture and Agri-Food Canada](#). You can also connect with our team of Registered Dietitians at [albertanutrition@dfc-plc.ca](mailto:albertanutrition@dfc-plc.ca) with the subject line “Feeding Canada Video”.





## FOOD CYCLE INTRODUCTION

Each video in the series begins with an introduction to the food cycle. This message is reiterated throughout the series because it is important for students to have a strong understanding of the food cycle and how each component shapes the food system. Each video highlights specific issues relevant to key stages of the food cycle.



### The Food Cycle

The agricultural food cycle is the journey food travels to reach the consumer. This cycle moves from the farm to food processing, distribution, access and consumption by consumers, to food waste, and back again to production. Each step of the food cycle is vital to the cycle's success and cannot work without the other steps. The food cycle includes local, household, and individual food systems and functions as part of the larger national and global food system, which has a significant impact on our health, the economy, and the environment.

**Production:** Farming practices that cultivate raw ingredients.

**Processing:** Preparation of food products from raw ingredients (e.g., the picking and packaging of fruit).

**Distribution:** Transportation – how food products reach the market system and the end user – the consumer.

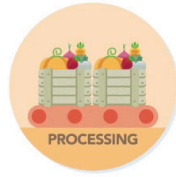
**Access:** Market and retail accessibility connected to consumers through purchasing.

**Consumption:** Intake of food by consumers, whether at home or away from home.

**Waste management:** Treatment of waste from its creation to its disposal and/or recycling.



## FARM ANIMAL CARE



### FARM ANIMAL CARE

*Estimated Time: 30 minutes for video viewing and pre- and post-video discussion*

#### Learning Objectives

Students will

- Explain what a code of practice is
- Identify at least three ways farmers demonstrate positive animal care
- Explain why the welfare of farm animals is important to farmers

#### Background

Throughout the food cycle, both farmers and consumers are concerned about many issues relating to the **production** and **processing** of adequate amounts of healthy food on less land while ensuring the proper care and treatment of animals.

#### The Issues

- Proper feeding and nutrition – for animal well-being and better-quality food
- Care of animals that are unwell
- Ensuring comfortable bedding and shelter from the elements – sun, rain, snow – and predators
- Humane treatment of animals

#### Why Should We Care?

- Anyone caring for animals is responsible for ensuring they are treated properly. Ensuring animal welfare is part of the belief that humans have a right to use animals, but also have a responsibility to treat them humanely.<sup>1</sup>
- It's the law – regulations are in place to protect animals from cruelty.
- Consumers expect high animal care standards.
- Well cared for animals are more content, healthier, and more productive.

Farmers have a vested interest in the well-being of their animals. The majority of farmers with livestock go into farming because they like being with and caring for animals. They believe that animal welfare is just as important as food safety. However, farming is also a business, and keeping animals well cared for is key to animals' health and productivity.





## Codes of Practice

The **National Farm Animal Care Council (NFACC)** is a Canadian national organization that leads farm animal care and welfare.<sup>2</sup> The organization is a partnership of diverse stakeholders, including animal welfare groups, enforcement officials, government representatives, researchers, and farmers.<sup>3</sup> The NFACC develops **codes of practice** for the care and handling of farm animals and aims to advance animal welfare in Canada.<sup>3,4</sup>

Codes of practice are standards of care (guidelines) and recommendations on animal care requirements.<sup>3</sup> Codes are developed by committees and as part of the process there is an opportunity for public comment.<sup>4</sup> As a result, codes are science based and practical, and they reflect societal expectations for responsible farm animal care.<sup>3</sup>

Codes of practice include recommendations and requirements for housing, care, transportation, processing, and other **animal husbandry procedures** (daily care and management of livestock), and they are tailored to specific farm animals.<sup>3</sup> Farmers who fail to meet the codes of practice are required to undertake corrective measures, or risk penalties and interruptions to production.<sup>3</sup>

Farmers work hard to care for their animals. They use advances in animal care practices, housing, nutrition, and breeding that contribute to healthier and more productive farm animals. These advancements often go beyond what the general consumer might think. For example, dairy farmers not only consider where their cows are housed, but also stall design, type of flooring, feeding system design, cattle traffic patterns, location of water bowls or troughs, and handling systems.<sup>5</sup> All of these considerations not only protect their animals, but also help protect the environment and maintain a sustainable food system.

This video explores the codes of practice in place in Canada and how Canadian farmers are striving to ensure their animals' quality of life.



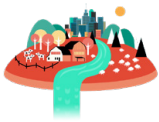
VIDEO 2 – Screen Sample A



VIDEO 2 – Screen Sample B



VIDEO 2 – Screen Sample C



## DISCUSSION QUESTIONS

### Pre-video

**Q1:** What comes to mind when I mention the terms *animal welfare* and *well-being*?

**Q2:** Where have you got your information about animal welfare and well-being?

Consider moving students through a few think-pair-share cycles and concluding with a large-group discussion.

**A1 & A2:** The aim of these questions is to get students thinking about potential concerns they might have, but have (or have not) had the opportunity to express. Explain to students that ensuring animal welfare supports the belief that humans have a right to use animals, but also have a responsibility to treat them humanely.<sup>1</sup> Also, this helps students to frame the issues in the video from their perspective as consumers within the food cycle.

### Post-video

**Q3:** What is the National Farm Animal Care Council? What is the purpose of a code of practice?

**A3:** The **National Farm Animal Care Council (NFACC)** is a Canadian national organization that leads farm animal care and welfare.<sup>2</sup> The organization is a partnership of diverse stakeholders, including animal welfare groups, enforcement officials, government representatives, researchers, and farmers.<sup>3</sup> The NFACC develops codes of practice for the care and handling of farm animals and aims to advance animal welfare in Canada.<sup>2</sup>

**Codes of practice** outline procedures for the appropriate care and handling of farm animals. They are science-informed and

practical, and reflect societal expectations for responsible farm animal care.<sup>3</sup> Codes of practice promote sound management and welfare recommendations and requirements for housing, care, transportation, processing, and other animal husbandry procedures.<sup>3</sup> Codes are specific to particular industries and species and serve numerous purposes. They provide information, education, and reference materials for regulations. Many farming sectors, such as dairy, have used the codes as the foundation for the creation of animal care assessment programs and on-farm assurance programs.<sup>6</sup>

**Q4:** Codes of practice are based on scientific evidence. What are four topics the NFACC commonly addresses in a code of practice?

**A4:** The NFACC codes of practice commonly focus on housing, feed and water requirements, health and welfare management (care for sick and injured animals), animal husbandry practices, handling, and transportation.<sup>3</sup> Students may have many different answers as to why these elements are important. Essentially, these aspects contribute to the well-being of farm animals. Proper attention to these animal care areas leads to healthier, more content, and more productive farm animals. Additionally, these requirements and recommendations can reassure consumers that the food they are purchasing has been produced ethically.

Sometimes consumers may apply human standards to animals, when in fact an animal's natural inclination might be different. A case in point is laying hens, which naturally prefer to live close together rather than spread out. Research is showing how to enhance caging systems to make them as safe and comfortable as possible for the hens, and this research is reflected in the codes of practices.<sup>3</sup> As well, Canadian egg farmers have committed to abandoning conventional barns for enriched housing.<sup>7</sup> Since 2014, any new barn that is built or existing barns being renovated must follow the new housing standards.<sup>7</sup>



**Q5: What examples did the video show of farmers demonstrating positive animal care?**

**A5:** Some highlighted examples from the video are enriched housing systems for chickens, lighting programs, back-scratching stations, automatic milking (which allows the cow to determine when she wants to be milked), IDs, and pedometers. These examples showcase just a few of the steps Canadian farmers have taken to support animal welfare.

Additional research is being conducted to find science-based answers to housing and animal care questions, which leads to continuous improvements in animal welfare across industries. Many industries have also introduced on-farm assessment programs to ensure that animal care and biosecurity are top priorities and that code requirements are being met.

For example, Canadian dairy farmers have adopted an extensive initiative called **proAction®**, which focuses on six areas of responsibility: milk quality, food safety, animal care, traceability, biosecurity, and the environment.<sup>8</sup> Other farm animal sectors, such as chicken, egg, and beef farming, have adopted similar comprehensive on-farm assurance programs, such as the **Verified Beef Production Plus Program** (beef); **Start Clean–Stay Clean** (egg); and **Animal Care and On-Farm Food Safety** (chicken).<sup>9-11</sup>

**Q6: What are the benefits of maintaining animal welfare?**

**A6:** Maintaining the highest-quality animal welfare is beneficial for animals, farmers, and consumers. When farmers follow codes of practice, animals will not only have their fundamental needs met (e.g., food and water), but their quality of life is also improved.<sup>3</sup> This leads to content, safe, and healthy farm animals. In turn, farmers will have productive farms that generate business. Farmers enjoy working with and caring for animals, and when they employ best practices in animal welfare standards, they have the satisfaction that they have fulfilled their responsibility to their animals.<sup>1</sup> In Canada, the NFACC and the codes of practice also enable consumers to be confident that the food products they purchase come from farms with ethical animal care practices.<sup>3,4</sup>



## ACTIVITIES

### My Food Cycle

Have students summarize their learning by creating a visual representation of the food cycle as they currently understand it, including what is involved at each stage. Encourage students to add to their visual representation as they progress through the video series. Options may include creating a sketch or drawing, or making a mind map or chart.

### Free Writing and Reflection

After viewing the video series (or as many of the videos as deemed appropriate for a specific course), have students complete the following reflection activity:

Give students 5–10 minutes to free write about their key learnings from the video series as well as any lingering questions. The aim is for them to recognize their learning and any changes in their knowledge or perceptions. Then encourage students to share highlights from either their visual representation or free writing with the class.

### One-Minute Papers

Students will complete a series of one-minute papers that reflect their interest in, attitudes about, and analysis of concepts from Video 2. Ask students to take out a piece of paper and pen. Share prompt 1 with them. Set a timer for one minute and have students write a response to the prompt. Repeat with prompts 2 and 3.

- **Prompt 1:** What was the most surprising or unexpected idea expressed in the video?
- **Prompt 2:** What idea expressed in the video strongly affected or influenced your personal opinions, viewpoints, or values?
- **Prompt 3:** What do you think was the most important point or central concept communicated in the video?

**Option 1:** Use the One-Minute Paper as the basis for a write-pair-share activity. Students write, then talk in pairs or trios about their ideas, then share highlights with the class.

**Option 2:** After class, review students' responses and note any themes that stand out. During the next class, facilitate a discussion based on the themes that arose.

### Additional Resources

- [Animal Welfare or Rights snapAg](#)
- [Chicken Housing snapAg](#)
- [Dairy Cows snapAg](#)
- [Farm Food 360](#)



## EXTENDED LEARNING

If you would like to continue exploring food systems in Canada and Alberta, check out the following. Each includes free teacher and student resources for junior high and high school with links to the Alberta curriculum.

### project AGRICULTURE

<https://www.projectagriculture.ca>

A project-based learning resource that provides opportunities for students to explore the impact and importance of agriculture in Alberta and Canada.

### Ag for Life

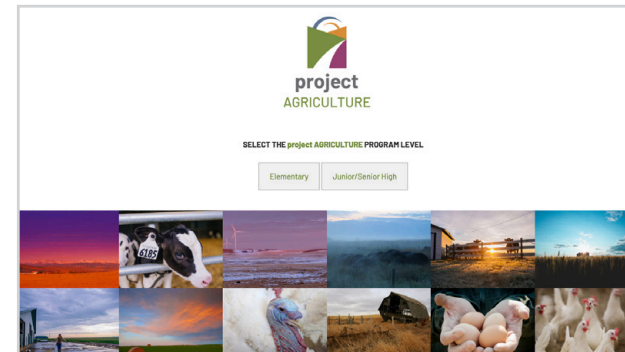
<https://www.agricultureforlife.ca>

A variety of programs designed to empower audiences to think both critically and creatively and to give students a real awareness of agriculture and food production.

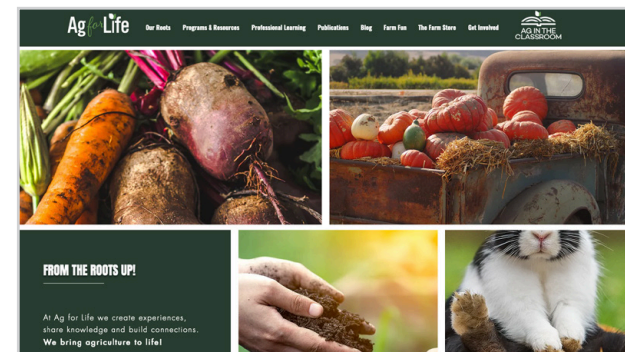
### The Real Dirt on Farming

<https://www.realdirtontfarming.ca>

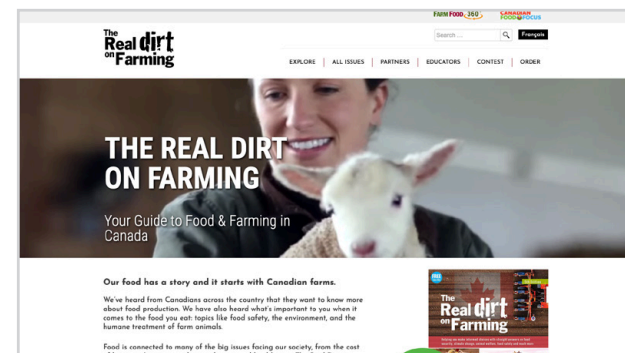
A digital magazine about food and farming in Canada that covers topics such as food safety, the environment, and the humane treatment of farm animals.



<https://www.projectagriculture.ca>



<https://www.agricultureforlife.ca>



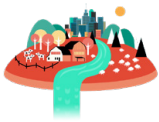
<https://www.realdirtontfarming.ca>





## REFERENCES

1. Alberta Farm Animal Care. N.D. The barn door. <https://www.afac.ab.ca/wp-content/uploads/2019/05/Barn-Door-Feb-2019-compressed.pdf>. Accessed March 12, 2021.
2. National Farm Animal Care Council. 2021. About NFACC. <https://www.nfacc.ca/about-nfacc>. Accessed March 12, 2021.
3. National Farm Animal Care Council. 2021. Codes of practice for the care and handling of farm animals. <https://www.nfacc.ca/codes-of-practice>. Accessed March 12, 2021.
4. National Farm Animal Care. 2016. Raising the bar: the codes of practice development process. [https://www.youtube.com/watch?v=k2cvixnA\\_MQ](https://www.youtube.com/watch?v=k2cvixnA_MQ). Accessed March 12, 2021.
5. Dairy Farmers of Canada. 2019. Dairy queens: cow comfort on Canadian dairy farms. <https://dairyfarmersofcanada.ca/en/who-we-are/our-commitments/animal-care/dairy-queens-cow-comfort>. Accessed March 12, 2021.
6. Dairy Farmers of Canada. 2020. proAction: animal care. <https://www.dairyfarmers.ca/proaction/our-progress/animal-care>. Accessed March 12, 2021.
7. Farm & Food Care. 2021. The real dirt on farming. <https://www.realdirtonfarming.ca>. Accessed March 12, 2021.
8. Dairy Farmers of Canada. N.D. proAction: on-farm excellence. <https://www.dairyfarmers.ca/proaction>. Accessed March 12, 2021.
9. Canadian Cattlemen's Association. 2021. Verified Beef Production Plus program. <http://www.verifiedbeef.ca>. Accessed March 12, 2021.
10. Egg Farmers of Canada. 2021. Start Clean-Stay Clean: how we make sure eggs are safe and healthy. <https://www.eggfarmers.ca/2016/11/start-clean-stay-clean-how-we-make-sure-eggs-are-safe-and-healthy/>. Accessed March 12, 2021.
11. Chicken Farmers of Canada. 2021. Food safety and animal care. <https://www.chickenfarmers.ca/sections/food-safety-and-animal-care/page/2/>. Accessed March 12, 2021.



## CURRICULUM CONNECTIONS

Video 1		Video 2	Video 3	Video 4	Video 5	Video 6
<b>Grade 7 Science</b>						
Unit A 1	X					
Unit A 2	X					
Unit A 3	X					
Unit B 1	X					
Unit B 3	X					
Unit B 4	X	X			X	
<b>Grade 8 Science</b>						
Unit B 3				X		
Unit B 4				X		
<b>Grade 9 Science</b>						
Unit A		X				
Unit A 3					X	
Unit A 4	X				X	
Unit C 1				X		
Unit C 2	X					
<b>Grade 10 Science</b>						
SCI14 Unit A	X					
SCI14 Unit C 4				X		
SCI14 Unit D 1	X					
SCI14 Unit D 2	X					

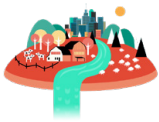


Video 1		Video 2	Video 3	Video 4	Video 5	Video 6
Grade 11 Science						
SCI20-A2.2	X					
SCI20-A3.2	X					
SCI20-D1.1	X					
SCI20-D3.5	X					
SCI24 Unit C					X	
SCI24 Unit C 5				X		
BIO20-A2.1sts	X					
CHEM20-D2.2	X					
Grade 12 Science						
SCI30-A3.1s					X	
SCI30-A3.1sts					X	
SCI30-A3.2sts					X	
SCI30-B2.5	X					
SCI30-D1.5	X					
BIO30-A2.2				X		
BIO30-B2.1				X		
BIO30-D1.1				X		
Grade 9 Social Studies						
9.2.5						X
Grade 10 Social Studies						
SS10-1 3.7						X
Grade 11 Social Studies						
SS20-1 3.3						X





Video 1		Video 2	Video 3	Video 4	Video 5	Video 6
Grade 10 Health						
CALM P6			X			
CALM R6						X
Grade 11 Health						
CALM R6						X
Grade 12 Health						
CALM R6			X			X
Grades 7–9 CTF						
All Foods Courses			X			
Grade 10–12 CTS						
All Foods Courses			X			
FOD1010						
1.1			X			
1.2			X			
1.3			X			
FOD2150						
1.1			X			
1.5			X			
2.1			X			
2.2			X			
3.2			X			
3.3			X			
FOD3900						
2.2						X
3.1			X			
4.1			X			
5.1			X			



## GLOSSARY

**Access:** Market and retail accessibility connected to consumers through purchasing.

**Codes of practice:** Standards of care (guidelines) and recommendations on animal care requirements that are science-informed and practical and that reflect societal expectations for responsible farm animal care.

**Consumption:** Intake of food by consumers, whether at home or away from home.

**Distribution:** Transportation – how the food products reach the market system and the end user – the consumer.

**Husbandry:** Daily management and care of livestock.


**National Farm Animal Care Council (NFACC):** A national organization composed of animal welfare groups, enforcement officials, government representatives, and farmers who aim to develop codes of practice for the care and handling of farm animals and to advance animal welfare in Canada. The NFACC is the lead for animal care and welfare in Canada, representing a commitment to the highest-quality animal welfare.

**Processing:** Preparation of food products from raw ingredients (e.g., the picking and packaging of fruit).

**Production:** Farming practices that cultivate raw ingredients.

**Waste management:** Treatment of waste from its creation to its disposal and/or recycling.

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on the right side, suggesting it's resting on a surface.



Tell us how you used this resource with your class and let us know if you have any suggestions for improving it by emailing [albertanutrition@dfc-plc.ca](mailto:albertanutrition@dfc-plc.ca).

***We appreciate your feedback!***

**TeachNutrition.ca<sup>TM</sup>**

By Dairy Farmers of Canada's Registered Dietitians