



Project Guide



PROJECT Agriculture
Project-Based Learning and
Teaching Series

The Amazing Race

How does agriculture make regions unique?

PROJECT Agriculture

The Canadian dairy industry is diverse, ranging from family farms to partnerships, and includes regular and organic dairy farms. Dairy cattle are an important feature of many Canadian and Alberta landscapes, and provide a range of products that many people use daily. The dairy industry also provides a range of jobs and occupations. Dairy farmers take their responsibilities seriously, including those for the animals in their care, as well as the impact their industry has on the environment. Milk and dairy products play an important role in a healthy and balanced diet.

The **PROJECT Agriculture** project-based learning resources encourage students to build understandings of the importance of agriculture to their daily lives, whether they live in rural or urban communities. These resources connect students to farmers across Alberta, through Alberta Milk's **Ask a Dairy Farmer** program.

Acknowledgements

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Every effort has been made to acknowledge sources used in the **PROJECT Agriculture** 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 printings. Please contact Patricia Shields-Ramsay at InPraxis Learning at 780.421.7163.



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The Amazing Race

How does agriculture make regions unique?

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The Amazing Race can be accessed on the Alberta Milk website in the **Programs and Resources for Teachers** section at <https://albertamilk.com/teacher-resources/>.

Project components include:

- This Project Guide
- Student Learning Sources
- Developing Competencies for Students
- Assessment Support
- Teacher Fast Facts and Student Vocabulary Support
- Project Tools

Project activities are provided in four sections:

- Spark Curiosity and Inquiry
- Search and Investigate
- Design and Create
- Publish and Share

Each section provides a suggested sequence of activities. These activities should be selected and modified to best meet the needs of your students.

The Amazing Race

How does agriculture make regions unique?

Project Summary

Agriculture is a human activity. Agricultural activities are found in the natural regions that have the resources that farmers need, as well as a solid population base to provide their markets. Dairy farmers today, as in the past, depend on Canada's natural resources. However, they are increasingly using their resources to respond to consumer interest in natural, local and organic products.

The Amazing Race encourages students to explore the scope of agriculture as a human activity and its strong connection to, and dependence on, the land, natural resources and population centres of diverse regions across Canada and Alberta. Students consider why different types of agricultural activities and products have developed in these natural regions.

The Amazing Race supports learning in **Grades 4 and 5 Social Studies, Language Arts and Math** curricular areas, with connections to **Health and Life Skills and Information and Communication Technology** and support for competencies, literacy and numeracy.

Highlights

In this project, students create detours and roadblocks for an Amazing Race Canada episode, focusing on the ways that people use and depend on natural resources in different regions of Canada.

- 1 Students identify a variety of locations across Canada and the regions in which they are located, using Amazing Race Canada clips or photos as a starting point. They brainstorm features, characteristics and resources.
- 2 Students research the relationship between the geographic features and human activities in different regions of Canada and Alberta. They assess why agricultural activities are diverse and how these activities reflect unique features of a region.
Students can be provided with the option to explore different regions across Alberta or Canada, depending on the grade level focus.

The Amazing Race Canada is a reality television show in which teams compete to race across Canada and other places in the world. Along the way, teams receive clues and complete challenges that are usually connected to ways of life, human activities and the geography of the locations they are in.



Competency-focused student resources focus on managing information, critical thinking, creativity and innovation as well as literacy and numeracy strategies.

- 3 Students develop proposals for an Amazing Race Canada route centred in an area of Alberta or Canada, including a detour or roadblock that highlights a physical characteristic and agricultural activity of the region. They share their proposals with others.
- 4 Students explore conclusions and perspectives through questions. How and why do agricultural activities reflect the natural resources and land of a geographic region? What is the connection between natural resources and the location of communities? How did your roadblocks or detours highlight the challenges and benefits of the agricultural products that Canada produces? Which agricultural products do you think are part of Canadian identities? Why do you think this?



Project Stages and Timing

The Amazing Race provides a series of activities for the development of a project-based inquiry. Timeline options are suggestions only, as choices about activities will influence the time required for the project.

Project Stage	Activity Focus	Timing Options
Spark Curiosity and Inquiry	Activities in this stage ask students to explore the core question, what it means to them and how they want to focus their project. They select an inquiry question around which to develop their project.	4 to 5 class periods
Search and Investigate	Activities in this stage provide opportunities to search for and critically assess sources, organize information, consider perspectives and consult with experts to build understandings. They use Learning Sources handouts as trusted sources and Developing Competencies activity handouts to develop skills and understandings related to their projects.	7 to 10 class periods
Design and Create	Activities in this stage ask students to apply ideas and information to the creation of a project that shares their insights and learning.	5 to 7 class periods
Publish and Share	Activities in this stage suggest options to display and share completed projects.	3 to 5 class periods



Technology Integration

Digital creation tools can support learning in a project-based inquiry, including exploration, research, project creation and sharing. The following apps and online programs are referenced as options throughout the **PROJECT Agriculture** project-based series of learning and teaching resources.

Note that some online programs may require sign-in information, but do offer free versions. Some of these programs may also require varying degrees of support when used with students, while others may be more suitable for teacher use. Check for privacy settings in these apps and online programs if you do not want to make students' work public.

Google Classroom is a set of productivity tools that includes email, documents, and storage. Classroom was designed to save time, keep classes organized and improve communication. Classroom can be used to manage and share project work and sources.

Google Keep is a note-taking app that integrates with **Google Docs**. Notes, links, images, screenshots and videos can be shared. Plan and manage project tasks and keep research notes, vocabulary lists and trusted sources.

Google Drive provides online storage and creation of **Google Docs, Slides, Sheets and Forms**. It can be used to hold and share project work.

HyperDoc, found at <http://hyperdocs.co/>, uses interactive Google Docs or Slides that can be created as an instructional activity or lesson. Links to videos, trusted sources, class Padlet boards, Google Maps or other programs and apps can be embedded in a HyperDoc.

Padlet, found at www.padlet.com, is a virtual wall that allows sharing of any content (images, videos, documents, text) on a common topic.

Canva, found at www.canva.com, is a web-based graphic design tool and app that can be used to design posters, infographics, presentations, social media and photo collages. Students can sign up with a Google account or through an email address and password.

Pinterest, found at www.pinterest.com, is a social network that allows you to visually share, and discover, images or videos to your own or others' boards. **Padlet** and **Pinterest** boards can be set up to share project ideas and products with other teachers and classrooms.

Glogster, at <http://edu.glogster.com>, is an online platform that allows you or your students to create interactive online posters, with text, images, graphics, audio and videos, and share them with others electronically. Glogster can be used to create profiles and timelines. Templates are provided on the website.

Apps such as **Evernote** and **OneNote** can be used to collect, organize and share sources of information and research, while online software such as **Skype** can enable conversations, face-to-face interviews and collaboration with other classrooms and community members.

Prezi, found at www.prezi.com, is a presentation tool that can be used as an alternative to traditional slide making programs such as **PowerPoint**. Instead of slides, Prezi makes use of one large canvas with pan and zoom capabilities. Students can use this tool to create and share projects and learning products.

MyHistro, found at www.myhistro.com, is an app that allows you to combine maps and timelines into one presentation, convert any public timeline into a personal pdf file or export into **Google Earth** format for offline storage.

Tiki-Toki, found at www.tiki-toki.com, is web-based software for creating interactive timelines that can be shared on the internet. The free account can be used to create a fully-functional timeline that can be shared. Tiki-Toki also provides desktop timeline software for Windows, Mac and Chromebooks that can be used to create timelines on local computers.

Read Write Think provides a simple timeline, found at www.readwritethink.org/files/resources/interactives/timeline_2/, that allows students to organize and create a timeline by date, time or event. Timelines can be saved as a file.

Wordle, accessed at www.wordle.net, and **Tagxedo**, accessed at www.tagxedo.com, provide online platforms that students can use to create word clouds.

Kahoot, at www.getkahoot.com, is a platform that allows students to create learning games from a series of multiple choice questions, with videos, images and diagrams. Students can create kahoots based on what they are learning about Canadian and Alberta history, geography, agriculture, natural resources and ways of life.

Snapchat, at www.snapchat.com offers a feature called **My Story**, created from video clips and pictures taken over time and made into a movie. Stories can be downloaded to students' camera rolls and shared via email with a class.

Sway, accessed at www.sway.com, is a digital storytelling app for the creation of interactive presentations, newsletters and personal stories. Sways can be shared with others through email and privacy settings can be customized.



Learning and Competencies

The Amazing Race provides opportunities for student to think critically about the interrelationships between the land, natural resources and ways of life.

Students work collaboratively to develop ideas, explore sources, consult with community members and experts and communicate their findings and insights. Technology-based skills are also developed as students use digital tools to research, create and publicly share their projects.

The chart that follows focuses on competencies that integrate and apply across curricular areas.

Specific learning outcomes from Alberta programs of study promote these competencies and the learning experiences in **The Amazing Race** project.

Assessment tools can be used to reinforce competency development and assess student growth around Alberta curriculum-specific learning outcomes. These assessment tools include a:

- **Learning Checklist** that support assessment of specific learning outcomes and development of competencies
- **Project Check-In** chart that provides criteria statements that students can use to self-assess or monitor their learning
- **Rubric** that can be customized for student use as they develop their projects



Consult Assessment Support for **The Amazing Race** to find strategies and templates for assessment of learning and growth in student competencies.

The assessment checklists and templates include fillable text fields and checkboxes. These PDF documents can be saved and completed electronically.

<h2>Competency Focus</h2>	<h2>Curriculum Focus</h2> <p>These project activities integrate across Alberta Social Studies, Language Arts and Math programs of study. Click the @grade level subject area on which you want to focus to go to a specific learning outcomes checklist.</p>	<h2>Literacy and/or Numeracy Focus</h2>
 Creativity and Innovation <p>Students explore ideas, materials and processes to apply ideas that highlight the relationship between natural regions and human activities.</p>	<p>Outcomes in the following curricular areas are supported by project activities that ask students to explore new ideas, generate creative solutions and create original products to investigate the ways that people use the land and resources.</p> <p>@Grade 4 Social Studies @Grade 5 Social Studies @Grade 4 Language Arts @Grade 5 Language Arts</p>	<p>Students focus on the ways that diverse modes and media can be used to represent and share new ideas and innovative approaches to challenges and issues. They use diverse modes and media to share and present.</p> <p>Students create and interpret different representations of quantitative information.</p>
 Critical Thinking <p>Students experience and assess a variety of sources and perspectives and use their and other Canadian communities as a source of information.</p>	<p>Outcomes in the following curricular areas are supported by project activities that ask students to interact with sources to generate questions, draw comparisons, identify similarities and differences, make inferences and assess decisions made about the use of land and resources.</p> <p>@Grade 4 Social Studies @Grade 5 Social Studies @Grade 4 Language Arts @Grade 5 Language Arts</p>	<p>Students evaluate information from several sources to determine relevant and irrelevant information and consider the intent of a message or point of view.</p> <p>Students interpret, compare and use quantities commonly used in real-life situations. They interpret data from a graph or chart to make inferences and draw conclusions.</p>
 Manage Information <p>Students use multiple literacies to access, share and create knowledge and build understandings.</p>	<p>Outcomes in the following curricular areas are supported by project activities that ask students to organize and synthesize information gathered from a variety of sources, including data and statistics.</p> <p>@Grade 4 Social Studies @Grade 5 Social Studies @Grade 4 Language Arts @Grade 5 Language Arts @Grade 4 Math @Grade 5 Math</p>	<p>Students determine a purpose and develop questions to focus an information search. They select, sort and analyze information from a variety of sources and identify gaps. They organize texts according to their purpose or intent.</p> <p>Students organize objects, ideas or information using a classification system.</p>
 Problem Solving <p>Students select strategies and resources to apply the research process to a problem or question and evaluate the relationship between natural resources and human activities.</p>	<p>Outcomes in the following curricular areas are supported by project activities that ask students to apply a research process and activate background knowledge, information or resources to build and apply understandings.</p> <p>@Grade 4 Social Studies @Grade 5 Social Studies @Grade 4 Language Arts @Grade 5 Language Arts</p>	<p>Students make connections to background knowledge.</p> <p>Students navigate through maps, using traditional, non-digital or digital techniques.</p>

Competency Focus	Curriculum Focus These project activities integrate across Alberta Social Studies, Language Arts and Math programs of study. Click the @grade level subject area on which you want to focus to go to a specific learning outcomes checklist.	Literacy and/or Numeracy Focus
 Communication Students share ideas through oral, written and non-verbal media. They participate in formal and informal exchanges with others, while considering their and others' context and experiences.	Outcomes in the following curricular areas are supported by project activities that ask students to use a variety of oral, written or visual modes of expression when exchanging ideas, considering perspectives and points of view and working with others to construct understandings. @Grade 4 Social Studies @Grade 5 Social Studies @Grade 4 Language Arts @Grade 5 Language Arts	Students acquire subject and task-specific vocabulary related to their learning. Students present ideas or information in a logical and clear manner and begin to use effects to enhance communication.
 Collaboration Students participate, exchange ideas and share responsibilities to complete their learning tasks.	Outcomes in the following curricular areas are supported by project activities that ask students to use language and text to build upon ideas or expand understandings with others, listen to and consider different perspectives and share roles and responsibilities to accomplish group tasks. @Grade 4 Social Studies @Grade 5 Social Studies @Grade 4 Language Arts @Grade 5 Language Arts	Students apply oral and written language, tone and formality, as appropriate, when communicating with peers and adults.
 Global and Cultural Citizenship Students explore diverse people and ways of living as they investigate geography and human activities in different areas of Canada and Alberta.	Outcomes in the following curricular areas are supported by project activities that ask students to consider a range of needs, perspectives or approaches and demonstrate respect for and commitment to the vitality of land, people and resources within local communities. @Grade 4 Social Studies @Grade 5 Social Studies	Students are encouraged to apply literacy-related skills as part of participation as a citizen in communities.
 Personal Growth and Well-being Students draw on their strengths and interests to identify a research focus. They reflect on their own learning.	Outcomes in the following curricular areas are supported by project activities that ask students to expand their interests and develop their own thinking and learning processes as they speak, listen, read, write, view and represent. @Grade 4 Language Arts @Grade 5 Language Arts	Students reflect on their own learning and are encouraged to develop a sense of their strengths and challenges.



Project Activities

The **Amazing Race** provides opportunities for students to focus on the ways that people use and depend on natural resources in different regions of Canada. **How does agriculture make regions unique?**

Spark Curiosity and Inquiry

An Amazing Race

Initiate **The Amazing Race** project by sharing an episode, clip or a photo board of Amazing Race Canada images and experiences. A photo board can be created by placing images on a Padlet board and display with an interactive whiteboard. Episodes, video clips and photos can be found on the **Amazing Race Canada** website at www.theamazingracecanada.ctv.ca.

Ask students to identify the area or region of Canada that is featured in the video, clip or photo. Watch for examples of features and resources of the region in which the episode or clip is located or that the photos represent. Ask students to consider how the features and resources they see are part of the identities of Canadians who live in a region.

Connect to Prior Learning

Revisit the concept of regions with students. **Regions** are areas that share common physical, cultural or social characteristics. Encourage students to share what they know about a region as they view and discuss clips or images.

Connect to Experiences

Share stories about travel adventures that students, their family members or their friends may have had across different areas of Canada. Consider how travel or viewing experiences help build understandings of the unique features or differences between different areas or regions across Alberta and the rest of Canada.

Challenge students to bring in and share photos, illustrations or artifacts that represent features and resources of an area to which they have travelled or would like to travel.

Customize this project by creating your own **Hyperdocs**, using the links from this guide and selecting those activities you think are most appropriate for your students.

Consider creating a class version of a **KWHL Chart**, collecting information on what students know, what they want to know, how they think they will find out, and then, completing the what they learned after sharing their projects.

The **Huffington Post** ran a series of articles called *What the Amazing Race Taught Us About Canada This Week*. These articles can be accessed at www.huffingtonpost.ca/news/amazing-race-canada-destinations/ and feature the locations used in a couple of seasons of the race.

Scaffold

This project-based inquiry focuses on the human activity of agriculture. It can be expanded by having students explore and compare other human activities that depend on the land and natural resources of Alberta and Canada.

Build on this initial activity by identifying locations that the Amazing Race Canada has featured. Some of these locations can be researched online. For example, Wikipedia provides charts and maps that identify the provinces and territories visited by the Amazing Race Canada. Ask students to use an app such as Google Map to find these locations.

Build and/or reinforce geographic skills by using maps to discuss what a route is, and how a route can be identified and marked on a map. Structure a whole class activity that challenges students to identify and plot previous Amazing Race Canada locations on a map of Canada.

Region to Region

These questions and activities can be applied to the Grade 4 Social Studies curriculum and learning outcomes through a focus on the natural regions of Alberta.

Involve students in a class discussion about the defining characteristics of the interior plains region. Use a **board share** strategy with small groups to have students to respond to questions such as those that follow. In a board share, groups brainstorm ideas in response to the question; they then send a group member to the board to record them. Work with students to make connections between the ideas that each group contributes to the board.

- What is a region? What do you think the most important defining characteristics of our region are? What makes our region unique or different from other regions in Canada?

Ask students which of their ideas include or identify natural resources. Discuss what natural resources are and ask students to ponder whether the natural resources in the interior plains region are part of what makes it unique.

- How can a natural resource also be a human activity? Challenge students to discuss how natural resources such as land, water, minerals, soil and forests are closely connected to industries or types of human activity. For example, agriculture is connected to the land and water. The oil industry is closely connected to natural resources that include natural gas and oil sands.

Project Context and "Wonder" Questions

Students should be encouraged to develop and/or select their own project "wonder" question as well as the final product they create.

Challenge students to build a deeper understanding of similarities and differences between regions of Canada, sharing insights about the relationship between the land, natural resources and human activities, focusing on agriculture. Tell students they will focus on a project "wonder" question that explores these connections.

Student will become "producers" and plan a segment for an Amazing Race Canada episode. They will centre their segment in a location in Canada that involves agricultural activities, and include a **route card**, a **roadblock** and a **detour**.

The segment that students create should be focused on a project "wonder" question that they select or create. Their segment will include a route card, roadblock and detour that provides background information drawn from their research. The segment and tasks that students create for their roadblocks and detours can be planned in one of two ways:

- The segment can be designed to take place at a destination in Canada that has connections to agriculture. Tasks can reflect roadblocks and detours that an Amazing Race team would complete if they were at that destination.
- The segment can take place in actual locations in the classroom or school, but use artifacts (photos, stories, information, songs, etc.) that reflect the land, resources, human activities or ways of life from a destination in Canada that has connections to agriculture. Students could be challenged to work in teams to complete the tasks they create.

Students can also be asked to share their segment proposals on a **Padlet**, **Glogster** or **Prezi** board, or through a poster or photo essay display.

Remind students that the core question for their project-based inquiry is: **How does agriculture make regions unique?**

Encourage students to start by posing and recording questions they "wonder" about when they are asked to think about why and how places and resources in Canada contribute to ways of life for all Canadians. Students can record their questions on a digital bulletin board or poster paper.

Provide support by suggesting and exploring potential "wonder" questions that help students respond to the core question. **Draw ideas from the following sample questions and the background sources that may support initial exploration of each question. Note that some background sources are suitable for students, while others are provided as sources of professional knowledge.**

- **Sample Wonder Questions:** What are the connections between agriculture and natural resources in a region? Why do these connections exist?
- **Sample Wonder Questions:** What makes a natural resource important to a community or area in Canada or Alberta? Which natural resources are most important within a region? Why are they so important?

Consult Teacher or Student Background Sources

Help students consider why communities depend on natural resources, including those that are important to agricultural activities. Find examples of products that come from agricultural activities on **Agriculture and Agri-Food Canada's Discover Agriculture** website at www.agr.gc.ca/eng/about-us/publications/discover-agriculture/?id=1411999466585. Students can use this

Route cards, roadblocks and detours provide different types of information and present different tasks:

- A **route card** provides information about where to go next.
- A **roadblock** is a task that only one team member can perform. A clue provides a hint of what the task will involve.
- A **detour** provides a choice between two different tasks. The team chooses and completes the task together.

Graphic organizers, including a T-Chart, are provided in *Change with the Times* Project Tools.

source to create a **T-Chart** that lists products in one column and the natural resources used to make them in the other column.

- **Sample Wonder Questions:** Which natural resources are most important to our community? Why are these resources so important?
- **Sample Wonder Questions:** Why are Canada's agricultural activities diverse? Why is the diversity of Canada's natural resources important to Canadian's quality of life?

Consult Teacher or Student Background Sources

Students can be encouraged to start with **Agriculture and Agri-Food Canada's** article, *We Grow a Lot More than You Think*, found at www.agr.gc.ca/eng/about-us/publications/we-grow-a-lot-more-than-you-may-think/?id=1251899760841. Use this article with students to consider the range of products produced in Canada and the resources that are used to produce them.

- **Sample Wonder Questions:** What "journey" does a natural resource of a region follow as it moves from the land to people's homes? Why do the commodities or products that come from natural resources end up in different regions than they originate?
- **Sample Wonder Question:** Why do Canadians exchange resources and the products that come from them?

Consult Teacher or Student Background Sources

This question can require students to first investigate the land and resources in a region. Students can then use what they find out to compare abundant and scarce resources.

Summary reports of provincial trends from the *2011 Census of Agriculture* can be found on the **Statistics Canada** website at www.statcan.gc.ca/pub/95-640-x/2011001/ha-fsa-eng.htm. Students may need some support in interpreting this data, but can use it to identify types of agricultural activities in each province as well as challenges experienced in different industries.

- **Sample Wonder Question:** How do the ways that First Nation, Métis and Inuit peoples use the land and resources make a region unique?

Consult Teacher or Student Background Sources

Consult the digital resource *Walking Together: First Nations, Métis and Inuit Perspectives in Curriculum: Traditional Life on the Land* at www.learnalberta.ca/content/aswt/documents/connection_to_land/traditional_life_on_the_land.pdf.

All land in Alberta is Treaty land. As students investigate the geography and human activities across regions, it is important that they be provided with some background information regarding Treaty 6, 7 and 8. The **Empowering the Spirit** website, at www.empoweringthespirit.ca/treaty-education, provides professional learning resources that can support your own learning and discussions with students.

Additional information is available in the *Walking Together* digital resource at www.learnalberta.ca/content/aswt/. Consult this digital resource for information and insights into Traditional Environmental Knowledge (TEK).

Explore TEK practices and perspectives and wisdom from Elders who are knowledgeable in this area at www.learnalberta.ca/content/aswt/#/traditional_environmental_knowledge/beginning_together.

Community-supported agriculture provides a perspective through which the influence of First Nations, Métis and Inuit values and beliefs about the interconnectedness of land and human activities can be explored. An introductory summary of this approach to farming is provided in *Fresh, Local, and Financially Sound: Community Supported Agriculture in Canada* on the [ActiveHistory.ca](http://activehistory.ca/2012/07/fresh-local-and-financially-sound-community-supported-agriculture-in-canada/) website at <http://activehistory.ca/2012/07/fresh-local-and-financially-sound-community-supported-agriculture-in-canada/>.

The **MacDonald-Laurier Institute** has published a report titled, *Sharing the Wealth: How resource revenue agreements can honour treaties, improve communities and facilitate Canadian development*, found at www.macdonaldlaurier.ca/files/pdf/MLIresourcevenuesharingweb.pdf. This resource is not appropriate for student research, but can provide you with some background understandings in issues involved in the use of resources on traditional lands.

Provide students with the option to identify and investigate the "wonder" question that interests or intrigues them most.

Scaffold

Organize students to work collaboratively in small groups to investigate a project question that they select together. Alternatively, provide students with the choice to work individually or with a partner. Provide additional support to groups or individual students as they define their project questions. Provide more or less structure for the project questions that students select.

Organize student projects and their questions in the classroom or in a digital environment. For example, student-selected questions can be posted on poster paper around the classroom. As students find sources and information, "sticky-note" descriptions can be added to the posters.

Alternatively, a **Padlet**, **Google Drive** or **OneNote** board can be established for clusters of student-selected questions. Students can add their websites, articles, images and information to each board. Start and support students by selecting and adding initial resources and trusted sources to the posters or digital boards.

Share the **Rubric** with students before they begin their project so students keep the criteria in mind and set their own project goals. Discuss and adjust the criteria as appropriate with their students. Find the **Rubric** in **Assessment Support for The Amazing Race**.

Need to Know

A **Need to Know** list can be used as an exit ticket or a support for what will be learned next. For example, “How did what you learned today help you answer a Need to Know question?” or “My goal today is to answer the Need to Know question....”

This list can be part of a **Know, Need to Know, Next Steps** Triple T-chart that students create to plan their project. Find these graphic organizers in **The Amazing Race Project Tools**.

Once students select their project questions, have them create a **Need to Know** paper, poster or digital list that identifies what they think they need to know. Their lists may include bulleted and brainstormed points, questions with more specificity, and/or community places or people that they want to find out more about. A **Need to Know** list makes learning visible to students. It includes both knowledge- and process-based questions, such as:

- What skills and knowledge do we need to start the project?
- What does agriculture mean?
- What do we need to know to be able to make comparisons between different regions of Canada or Alberta?
- Why are some agricultural activities found in a region while others are not?



Search and Investigate

Trusted Sources

Students can be provided with a number of options to identify, select, investigate and explore information that will support predictions they make or answers they develop to respond to their project "wonder" questions.

Discuss the use of sources from the classroom, library or approved websites. Encourage students to consider the credibility and reliability of the sources they use.

A digital bulletin board, such as **Padlet**, **Google Drive**, **Google Classroom** or **HyperDoc**, or a classroom poster can be used to establish a "trusted sources" repository. Select websites, print or online books or other information sources that best support the learning needs of your students. List website urls, book or information source titles on the digital bulletin board, shared document or classroom poster.

Use the student **Learning Sources** provided with this project as trusted sources that students can start with. These student resources can be used to spark student discussion and inquiry and support initial research, depending on the project question that students have selected. **Developing Competencies** student resources provide opportunities for students to focus on skills and develop or strengthen competencies. They are meant to be used with the **Learning Sources**. **Select and use those Learning Sources and Developing Competencies resources that are most relevant to you and your students' interests and project focus. Both provide fillable text fields and can be downloaded and completed electronically.**

As students start their research, structure opportunities to develop skills and make decisions to ensure they maintain the focus of their project.

Manage Collaboration

Review and revisit group work protocols to ensure that all students contribute to and participate in their projects. Timeline apps or software, such as the simple timeline provided on **ReadWriteThink**, is an ideal tool for creating a project timeline.

Connect to Prior Learning

Have students revisit sources they may have used in other projects or learning experiences. Use the **Learning Sources and Developing Competencies** student resources as starting points for brainstorming connections and making inferences that support students' project questions.

Consider maintaining posters in the classroom as a means of recording, displaying and sharing information. As students conduct their research and complete learning tasks with the **Learning Sources, Developing Competencies** handouts and other sources, have them add information to these posters. For example, posters can list and illustrate types of agricultural activities, farms, natural resources and agricultural products. Posters can support ELL learners and those students who have difficulty recalling, spelling and identifying vocabulary.

Students can be asked to use the **Thinking about Sources (Reading and Analyzing Non-Fiction: RAN)** graphic organizer to select and analyze sources and determine their information needs. Students identify what they think they know, what was confirmed, new information and wonderings.

Emphasize the skill of making inferences with the **Making Inferences** graphic organizer. Students identify facts they find in their research, what they think and why. Find these graphic organizers in **The Amazing Race Project Tools**.

Scaffold

Students can also be asked to use **Read & Write for Google** to highlight words in the PDF **Learning Sources**. The highlighted words are sorted into students' Google Drives and can be shared.

Organize and select the **Learning Sources** and **Developing Competencies** student resources that are most relevant to the project questions that students have selected.

Encourage students to keep track of "insightful observations" as they research, by recording key words and phrases as well as sketches, doodles or drawings.

Use a reading support app, such as **Read&Write for Google Chrome**, with **Learning Sources** for those students who require additional support with vocabulary and reading skills.

Integrate

As students use these and other sources, remind them to consider:

- What is my project question?
- How will I locate information?
- What sources will I use?
- How will I know my source is reliable? How will I know it can be trusted?

Integrate with **Language Arts** curriculum by creating a classroom word bank. Collect vocabulary words, creating a word bank for students to use during later writing activities. Vocabulary from the **Learning Sources** and **Developing Competencies** student resources is provided in **Teacher Fast Facts and Vocabulary Support**.

Ask students to further categorize key words in their word banks into categories such as descriptive words, items, places and people. Use the word banks and categories to construct descriptive paragraphs about topics such as natural resources, regions, interdependence, agriculture, movement, settlement, urban and rural. Encourage students to add imagery to their paragraphs by using descriptive language.

Create digital word banks by using **Google Slides** for each category. Have students add words to each slide from their investigations, research and discussions.

As students select their sources, remind them to consider:

- How do the sources I use influence my project plans?
- How do I choose which information I use?
- What connections do I see between my research sources and what I already know and can do?
- How will I organize my information?
- How will I keep track of the sources I have used?

The **Learning Sources** and **Developing Competencies** handouts included with this project are listed on the following pages. **Developing Competencies** handouts have been designed to support one or more of the **Learning Sources**.

- Select those handouts that best fit the project questions that students select.
- Some students may benefit from selecting handouts independently to support their project questions.
- Select handouts to introduce or reinforce research information that is most relevant to students' project choices.
- Use **Developing Competencies** handouts to focus on competencies and develop skills that students are expected to apply to their project work.

Scaffold

Provide options for student research and inquiry that accommodate different levels of complexity.

- Realign or simplify the core project question to focus on the different types of agricultural activities found in regions of Canada. Encourage students to explore the core question with a series of examples that they identify from their research.
- Provide students who need additional support with opportunities to use information provided in the **Learning Sources** as the basis of their research. Work with students who require support to identify facts and agricultural activities in a region that can be used to create their route card, and roadblock and detour tasks.
- Use a think-aloud strategy to model a thinking process as you work through **Learning Sources** with students who need support. Focus on identification of interesting facts and examples of human activities.
- Pre-teach the vocabulary that students will encounter in the **Learning Sources**.
- Use the questions in **Developing Competencies** for class discussions.
- Provide students with a list of specific sources that can help them narrow and focus their research. **Cross Country Canada** can be used to help students review regions of Canada and focus on one region.

Use these descriptions of student **Learning Sources** and **Developing Competencies** handouts to help you make decisions about how students can use them to support their project work.

Learning Source: *Cross Country Canada*

This **Learning Source** revisits the definition of regions and uses photos and maps to explore some of the characteristics of Canada's and Alberta's natural regions.

The following additional website sources can be added to classroom trusted sources boards.

The *Canadian Geographic Atlas* online website at www.canadiangeographic.com/atlas/themes.aspx?id=shield&sub=shield_basics_regions&lang=En provides an overview, as well as detailed information about each of Canada's natural regions and ecozones. Information specific to natural resources is also provided; a focus on farming can be found at www.canadiangeographic.com/atlas/themes.aspx?id=farming&lang=En.

A set of *Ecozone Cards*, produced by **Natural Resources Canada** and accessed on the Canadian Geographic website at www.canadiangeographic.com/educational_products/activities/canada_nrcan_floormap/6-Ecozone_Map_Cards.pdf, provides an overview of the features and human activities in each of Canada's ecozones. The teacher's *Ecozone Card* is accessed at www.canadiangeographic.com/educational_products/activities/canada_nrcan_floormap/6-Teacher_Ecozone_Map_Card.pdf.

The **Learning Sources** and **Developing Competencies** handouts include fillable text fields. Students can download and save the PDF files to electronically complete the activities.

Note that some students may require additional accommodations and support to complete the **Developing Competencies** activities.

An overview of Alberta's natural regions is found on the **Learn Alberta** flash app, *Zooming In... Alberta's Regions*, accessed at www.learnalberta.ca/content/sszi/en/.

Natural Regions and Subregions of Alberta: A Framework for Alberta's Parks, found at www.albertaparks.ca/media/6256258/natural-regions-subregions-of-alberta-a-framework-for-albertas-parks-booklet.pdf, also provides detailed information and photos focused on Alberta's six regions.



Developing Competencies: Organize and Use Information to Compare and Analyze Maps focuses on managing information and asks students to use maps to organize, compare and synthesize geographic information. Students can be asked to use this student resource as a starting point to revisit prior knowledge and experiences with Canada's natural regions. It is designed to be used with **Cross Country Canada**.

Use the **Grid Graph** graphic organizer to have students focus on numeracy and math skills, using student rankings from **The Farm and Land Connection**. Tally students' choices for the most important three natural resources. Use the Grid Graph to graph and display the statistical results for each resource. Find this graphic organizer in **The Amazing Race Project Tools**.

Learning Source: The Farm and Land Connection

This **Learning Source** focuses on the characteristics of the land and the types of human activities that are found in each of Canada's six natural regions. Information summaries focus on agricultural activities.

The following additional website source can be added to classroom trusted sources boards.

The **Canadian Encyclopedia** provides an online article on *Natural Resources*, found at www.thecanadianencyclopedia.ca/en/article/resources/. If you choose to use this source with students, they may require support to work through this article's text. Summaries are provided for each province and territory.

Learning Source: Finding Farms

This **Learning Source** explores the relationship of agriculture to centres of population and the location of different types of farms in provinces and territories.

The following additional website sources can be added to classroom trusted sources boards.

A set of *Community Cards*, produced by **Natural Resources Canada** and accessed on the **Canadian Geographic** website at www.canadiangeographic.com/educational_products/activities/canada_nrcan_floormap/5-Community_Cards.pdf, provides community examples with population and land area statistics.

Students are asked to use the statistics to identify the community. Note that these cards are meant to be used with a floor map available by request at www.canadiangeographic.com/educational_products/canada_floor_map.asp. However, the cards could be adapted as a search and identify activity, using online sources such as the *Atlas of Canada* at www.nrcan.gc.ca/earth-sciences/geography/atlas-canada.

The teacher's *Community Information Card* is accessed at www.canadiangeographic.com/educational_products/activities/canada_nrcan_floormap/5-Teacher_Info_Card.pdf.



Developing Competencies: Use Geographic Information to Make Connections asks students to analyze the connections between agricultural activities, the resulting commodities and products, and population centres. It is designed to be used with both **The Farm and Land Connection** and **Finding Farms**.

Learning Source: Which Came First?

This **Learning Source** discusses the beginnings of early dairy farming and the impact of urbanization on the location of farms and production of their products.

Learning Source: Resource Cycles

This **Learning Source** focuses on the dairy production cycle as an example of the interrelatedness of natural resources, farming, people, communities and government.



Developing Competencies: Explore a Cycle asks students to identify and sequence a farm production cycle for an agricultural activity of their choice. Students think critically to respond to different "what if" situations. It is designed to be used with both **Which Came First?** and **Resource Cycles**.

Emphasize communication and collaborative competencies by organizing sharing of ideas from the **Cause and Effect Chart** activity in **Explore a Cycle**. Have students share with a partner, in a small group or as part of a class discussion.

Learning Source: Adding Value to Natural Resources

This **Learning Source** describes the differences between primary and secondary industries and some commodities and products that result from each.

The following additional website sources can be added to classroom trusted sources boards.

Canadian Geographic provides a feature called *Travel & Places*, found at <https://www.canadiangeographic.ca/topic/travel>. This feature is meant to provide inspiration for exploring Canadian places and cultures. Students may find inspiration for their project tasks by exploring the examples on this webpage.

The **Agriculture More than Ever** website provides a photo and *infographics* toolbox, centred on different types of agriculture, that students can download and use. Some are featured in the **Learning Sources**. The toolbox can be accessed at www.agriculturemorethanever.ca/resources/.



Developing Competencies: Talk About Agriculture asks students to identify an agricultural activity that adds value to Canada's natural resources and represents the unique characteristics or features of a natural region. It is designed to be used with **Adding Value to Natural Resources**.



Expert Options

If appropriate, plan to invite any relevant and available experts from the community that you or students may be able to identify and contact.

Students can also submit questions to Alberta Milk's Ask a Dairy Farmer website feature, at <https://albertamilk.com/ask-dairy-farmer/>. Prepare the questions so that they are meaningful and relevant. Have students search this webpage in advance to find existing questions and answers that are relevant to their project-based inquiries.

Work with students and provide information about how to gather information, artifacts, images or additional sources from these experts. If you have contacts and resources, organize and provide trusted interview sources that students can access.

Consider ideas such as the following:

- What adults in our school and broader community are available for interviews?
- How can I provide opportunities for students to take or collect photographs and/or artifacts?
- How can parents or grandparents support students' project-based inquiries as interview subjects?
- How can community Elders or Knowledge Keepers provide support for students' project-based inquiries?
- How can I manage student groups to ensure that individual students have opportunities to participate in groups?
- What interview skills should be taught and reinforced with students?

Information Management

Plan class time to debrief students on the research they have collected. What have they found to be the most surprising, interesting, impressive or important? How do they think their research shows evidence of the connections between the land, natural resources and human activities?

- Work with students to develop an organizational structure that supports them as they create their proposal for an Amazing Race Canada episode segment, including a destination, route, roadblock and detour.
- Ask students to start by creating a map that identifies the specific location of their Amazing Race Canada destination. This destination should be connected to an agricultural activity and may be located in a population centre, a natural feature or a place such as a farm, processing plant or market.
- Suggest that students use index cards, handmade cards or digital cards to identify artifacts and information that are relevant to their region, agricultural activities and possible Amazing Race Canada roadblock and detour tasks. These cards can then inform the tasks that they create. Artifacts can include tools, technology, a process, photos of places, songs, stories or other visuals. These artifacts can be used as part of the roadblock or detour tasks.
- Organize cards to identify the focus of the roadblock and detour. Include background information for each roadblock and detour. Remind students to use the data they collected in response to their research question as well as the core project question: **How does agriculture make regions unique?**

Assess



Consult with individual students to review how they assessed themselves in the **Target Learning** features that are provided in some of the **Developing Competencies** student resources.

Have students use the **Project Check-In** chart to self-assess competency development – combinations of knowledge, skills and attitudes that students apply through curricular learning outcomes.

Observe students' research skills as they work together in groups. Ask students to individually reflect on the types of sources they used in their research, source credibility and the information they gained from each.

Have students maintain and use a reflective journal to keep notes as they progress through their projects. Pose questions such as the following as students start their inquiries, complete their research and start to design their projects:

- What is going well?
- What are we having trouble with?
- What questions do we have?
- What do we need to do next?

Reinforce self- and group-assessment skills with the **Making Connections** graphic organizer. Students identify facts they connected with, puzzles and feelings. Find this graphic organizer in **The Amazing Race Project Tools**.

Find the **Project Check-In** in **Assessment Support for The Amazing Race**.

Suggest that students also use these reflective questions to complete a check-in on their group work and collaborative skills.



Design and Create

Project Creation

Revisit Amazing Race Canada segments with students. Explore options for creation of an episode segment proposal, including digital boards and presentation apps or posters and brochures. Provide some time for students to review the features and functions of any digital options.

If the Amazing Race Canada project is planned as a challenge activity, ensure that students identify both a school or classroom location that teams go to, as well as the location in Canada or Alberta that the detour and roadblock tasks are centred on.

Remind students that their Amazing Race Canada episode segment proposals should focus on relationships between the land, natural resources and agriculture. The episode segment proposal should encourage students' creativity and ideas, but can be organized to include the following elements:

- A **Route Card**, with accompanying background information on the location to which contestants will travel. The route card can start with "Make your way to...." It should include a map that shows the destination's location within the natural region.
- A **Detour Card**, that presents two alternative tasks that take place in the same general location. The Detour Card should provide background information on each of these alternative tasks. Students should provide any artifacts or information that can be used to complete the tasks.
- A **Roadblock Card**, that poses the task through a question. The Roadblock Card should also include background information on the task and any artifacts or information that is necessary to complete it.

Scaffold

Provide options that provide support and accommodate different strengths, interests and abilities in the creation of the Amazing Race segment proposal, such as:

- Model the process of using a **Learning Source** to identify examples of information that students could use to base a roadblock or detour task on. Guide students who need additional support in finding two or three other examples they can use to create Amazing Race Canada tasks.
- Provide various group structures within which students who require support can work. For example, ask each student in a project group to focus on one **Learning Source** to identify examples of information that can be a starting point for the creation of an Amazing Race Canada task.
- Provide a sequenced criteria list that students must meet at a minimum with their projects. Negotiate where students should be on the criteria list. Customize the project **Rubric** to address the criteria negotiated with students.

Graphic organizers are provided in **The Amazing Race Project Tools**.

- Focus on information provided in the **Learning Sources** and work with students who require support to identify information about the features of the land, the ways natural resources are used for human activities such as agriculture and the impact that agricultural products can have on ways of life.
- Provide opportunities for students to give each other feedback and suggestions. Use **modeling, think-pair-share, think-aloud** and **stand and share** sessions with students so they can benefit from the ideas and progress of their classmates.

In a stand and share session, students all stand. When they volunteer an idea, response or information, they sit down. If a student volunteers an idea that another student was thinking of, that student can also sit down. This strategy can create a sharing context with minimal pressure and promote a collaborative environment.

- Use a **Think Sheet** graphic organizer to have students self-check their progress as they create their projects with the following questions:
 - What would be helpful to know more about?
 - What does this have to do with the core project question?
 - Where are we stuck?
 - Where do we need more information?
 - How would we summarize where we are right now?

Assess

Help students understand that their timelines will be assessed according to the criteria on the **Rubric**. Share the rubric with students and make connections between the criteria on the **Project Check-In** chart and the **Rubric**. Discuss how their completed timelines involve the competencies they have developed through their work on their projects.

Find the **Rubric** in **Assessment Support for The Amazing Race**. Find the **Think Sheet** graphic organizer in **The Amazing Race Project Tools**.

The **Project Check-In** chart can be found in **Assessment Support for The Amazing Race**.



Publish and Share

Peer Share

Students can be asked to make a **Sway** to share their learning with classmates as well as with parents and other family members at Demonstration of Learning opportunities. **Google Classroom** and **Google+ Community** can also be used to share ongoing project work and completed projects.

Sharing with peers in the classroom can create and reinforce a sense of community. Use a carousel strategy to have students share their research and learning with other students or groups in the class. Ask each group to organize a display of their research results on a table. Place a comment sheet on each group table. Have groups rotate through the displays at timed intervals. One group member can remain with his or her display to present group research. Encourage visiting groups to record their feedback, in the form of questions or comments. Alternatively, groups can stay together and be asked to record feedback on the comment sheet on each table.

If students create Amazing Race Canada episode segments with classroom or school locations, challenge students to pair up to complete each other's episode tasks. Organize an "Amazing Race Canada" week, in which student pairs have the opportunity to select and complete a segment of the race.

Be aware of FOIP issues and jurisdiction policies when structuring and implementing sharing opportunities.

Public Share

If appropriate, provide students with an opportunity to share and communicate their findings and conclusions with parents, family members and community members.

Publicly sharing student projects can range from posting Amazing Race Canada episode segment proposals to school or community **Padlet** boards to sharing them with other schools or classrooms in your jurisdiction. Mural or brochure-formatted proposals can be photographed to share online.

Students can also create a multimedia presentation, using an app such as **Sway**, to produce and share their Amazing Race Canada segments.



Reflection

Provide students with options to reflect on their projects and learning, using questions such as the following:

- How and why do agricultural activities reflect the natural resources and land of a geographic region?
- What is the connection between natural resources and the location of communities?
- How did your roadblocks or detours highlight the challenges and benefits of the agricultural products that Canada produces?
- Are there any agricultural products that are part of your identity? What are they? Why are they important to you?
- Which agricultural products do you think are part of Canadian identities? Why do you think this?

Challenge students to pose their own reflection questions as well.

Students can be asked to reflect on these questions by selecting from activities such as:

- Adding reflection cards (index or digital note cards) to their project timelines
- Creating a written response (blog, paragraph, media article)
- Making a mind map or bubble map
- Creating a poster

Questions such as these can also be used on exit slips.



Curriculum Support

The **Amazing Race** supports specific learning outcomes in **Grades 4 and 5 Social Studies, Language Arts and Math** curriculum. The learning outcomes in the charts that follow are developed and/or reinforced with the activities of this project. Use the check boxes to keep track of the learning outcomes that are appropriate for your grade and subject area context.



The activities in this project may also be used to support learning outcomes in the **Health and Life Skills** program of studies related to group roles and processes, respectful communication and learning processes.

Project activities also support learning outcomes in the **Information and Communication Technology (ICT)** program of studies. ICT outcomes are also addressed in the Social Studies and Language Arts programs of studies.

Social Studies Grade 4

<p>4.1.1 Value Alberta's physical geography and natural environment:</p> <p>(1) appreciate the diversity of elements pertaining to geography, climate, geology and paleontology in Alberta (LPP)</p> <p>(3) appreciate the variety and abundance of natural resources in Alberta (ER, LPP)</p> <p>(5) appreciate how land sustains communities and quality of life (ER, LPP)</p> <p>4.1.2 Examine, critically, the physical geography of Alberta by exploring and reflecting upon the following:</p> <p>(1) Where is Alberta located in relation to the other provinces and territories of Canada? (LPP)</p> <p>(2) What are the major geographical and natural vegetation regions, landforms and bodies of water in Alberta (e.g., prairie region, forests, rivers, hoodoos, Rocky Mountains, oil sands)? (LPP)</p> <p>(4) What are the significant natural resources in Alberta, and where are they located (e.g., mineral deposits, coal, natural gas and oil, forests)? (ER, LPP)</p> <p>4.1.4 Analyze how Albertans interact with their environment by exploring and reflecting upon the following:</p> <p>(2) How are natural resources used by Albertans (i.e., agriculture, oil and natural gas, forests, coal)? (ER, LPP)</p> <p>(3) How do Albertans deal with competing demands on land use (e.g., conservation, solar and wind power, recreation, agriculture, oil exploration, forestry)? (ER, LPP)</p>	<p>4.S.1 Develop skills of critical thinking and creative thinking:</p> <p>(2) evaluate, critically, ideas, information and positions from multiple perspectives</p> <p>(4) generate original ideas and strategies in individual and group activities</p> <p>4.S.3 Develop skills of geographic thinking:</p> <p>(1) use the scale on maps of Alberta to determine the distance between places</p> <p>(2) construct graphs, tables, charts and maps to interpret information</p> <p>(4) use cardinal and intermediate directions to locate places on maps and globes</p> <p>(5) identify the location of sources of nonrenewable resources (e.g., fossil fuels, minerals)</p> <p>4.S.4 Demonstrate skills of decision making and problem solving:</p> <p>(1) contribute and apply new ideas and strategies, supported with facts and reasons, to decision making and problem solving</p> <p>(6) use graphic organizers, such as mind mapping/webbing, flowcharting and outlining, to present connections among ideas and information in a problem-solving environment</p> <p>4.S.5 Demonstrate skills of cooperation, conflict resolution and consensus building:</p> <p>(4) work collaboratively with others to complete a group task</p> <p>(5) share information collected from electronic sources to add to a group task</p> <p>4.S.7 Apply the research process:</p> <p>(2) organize and synthesize information gathered from a variety of sources</p> <p>(3) use graphic organizers, such as webbing or Venn diagrams, to make meaning of information</p> <p>(4) draw and support conclusions, based on information gathered, to answer a research question</p> <p>(5) formulate new questions as research progresses</p> <p>(7) access and retrieve appropriate information from the Internet by using a specific search path or from given uniform resource locations (URLs)</p> <p>(8) navigate within a document, compact disc or software application that contains links</p> <p>(9) organize information gathered from the Internet or an electronic source by selecting and recording the data in logical files or categories</p> <p>4.S.8 Demonstrate skills of oral, written and visual literacy:</p> <p>(1) organize and present information, taking particular audiences and purposes into consideration</p> <p>(5) communicate effectively through appropriate forms, such as speeches, reports and multimedia presentations, applying information technologies that serve particular audiences and purposes</p>
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Social Studies Grade 5

<p>5.1.1 Value Canada's physical geography and natural environment:</p> <p>(1) appreciate the variety and abundance of natural resources in Canada (ER, LPP)</p> <p>(4) appreciate how the land sustains communities and the diverse ways that people have of living with the land (GC, LPP)</p> <p>(5) appreciate the influence of the natural environment on the growth and development of Canada (LPP)</p> <p>(6) appreciate the geographic vastness of Canada (LPP)</p> <p>5.1.2 examine, critically, the physical geography of Canada by exploring and reflecting upon the following:</p> <p>(1) What are the major geographical regions, landforms and bodies of water in Canada? (LPP)</p> <p>(2) How do landforms, bodies of water and natural resources affect the quality of life in Canada? (LPP)</p> <p>(4) What are the differences and similarities among the geographical regions of Canada? (LPP)</p> <p>(5) How is the geographical region they live in different from other regions of Canada? (LPP)</p> <p>5.1.3 Analyze how people in Canada interact with the environment by exploring and reflecting upon the following:</p> <p>(2) How are natural resources used, exchanged and conserved in Canada? (ER, LPP)</p>	<p>5.S.1 Develop skills of critical thinking and creative thinking:</p> <p>(2) evaluate ideas, information and positions from multiple perspectives</p> <p>(3) re-evaluate personal opinions to broaden understanding of a topic or an issue</p> <p>(4) generate original ideas and strategies in situations of individual and group activities</p> <p>(5) seek responses to inquiries from various authorities through electronic media</p> <p>5.S.3 Develop skills of geographic thinking:</p> <p>(2) construct maps, diagrams and charts to display geographic information</p> <p>(4) use cardinal and intermediate directions and simple grids to locate places on maps and globes</p> <p>(5) use the scale on maps and globes to determine the distance between places</p> <p>5.S.4 Demonstrate skills of decision making and problem solving:</p> <p>(2) collaborate with others to apply strategies for decision making and problem solving</p> <p>(4) use data gathered from a variety of electronic sources to address identified problems</p> <p>(6) use graphic organizers, such as mind mapping/webbing, flow charting and outlining, to present connections between ideas and information in a problem-solving environment</p> <p>5.S.5 Demonstrate skills of cooperation, conflict resolution and consensus building:</p> <p>(3) work collaboratively with others to achieve a common goal</p> <p>(4) record group brainstorming, planning and sharing of ideas by using technology</p> <p>5.S.7 Apply the research process:</p> <p>(1) determine themes, patterns and trends from information gathered</p> <p>(2) use graphs, tables, charts and Venn diagrams to interpret information</p> <p>(3) draw and support conclusions, based on information gathered, to answer a research question</p> <p>(4) cite references as part of research</p> <p>(6) access and retrieve appropriate information from the Internet by using a specific search path or from given uniform resource locations (URLs)</p> <p>(8) organize information gathered from the Internet or an electronic source by selecting and recording the data in logical files or categories</p> <p>5.S.8 Demonstrate skills of oral, written and visual literacy:</p> <p>(1) select appropriate forms of delivery for written and oral information, taking particular audiences and purposes into consideration</p> <p>(7) communicate effectively through appropriate forms, such as speeches, reports and multimedia presentations, applying information technologies that serve particular audiences and purposes</p>
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<p>1.1 Discover and Explore</p> <p>Express ideas and develop understanding</p> <p>compare new ideas, information and experiences to prior knowledge and experiences</p> <p>ask questions, paraphrase and discuss to explore ideas and understand new concepts</p> <p>share personal responses to explore and develop understanding of oral, print and other media texts</p> <p>1.2 Clarify and Extend</p> <p>Consider the ideas of others</p> <p>identify other perspectives by exploring a variety of ideas, opinions, responses and oral, print and other media texts</p> <p>Combine ideas</p> <p>use talk, notes, personal writing and representing to record and reflect on ideas, information and experiences</p> <p>Extend understanding</p> <p>explore ways to find additional ideas and information to extend understanding</p> <p>2.1 Use Strategies and Cues</p> <p>Use prior knowledge</p> <p>use ideas and concepts, developed through personal interests, experiences and discussion, to understand new ideas and information</p> <p>2.2 Respond to Texts</p> <p>Experience various texts</p> <p>experience oral, print and other media texts from a variety of cultural traditions and genres</p> <p>Construct meaning from texts</p> <p>identify the main events in oral, print and other media texts; explain their causes, and describe how they influence subsequent event</p> <p>develop own opinions based on ideas encountered in oral, print and other media texts</p> <p>2.4 Create Original Text</p> <p>Generate ideas</p> <p>use a variety of strategies for generating and organizing ideas and experiences in oral, print and other media texts</p> <p>Structure text</p> <p>produce oral, print and other media texts that follow a logical sequence, and demonstrate clear relationships between character and plot</p>	<p>produce narratives that describe experiences and reflect personal responses</p> <p>3.1 Plan and Focus</p> <p>Determine information needs</p> <p>ask relevant questions, and respond to questions related to particular topics</p> <p>Plan to gather information</p> <p>develop and follow a class plan for accessing and gathering ideas and information</p> <p>3.2 Select and Process</p> <p>Use a variety of sources</p> <p>locate information to answer research questions, using a variety of sources, such as maps, atlases, charts, dictionaries, school libraries, video programs, elders in the community and field trips</p> <p>3.3 Organize, Record and Evaluate</p> <p>Organize information</p> <p>organize ideas and information, using appropriate categories, chronological order, cause and effect, or posing and answering questions</p> <p>record ideas and information that are on topic</p> <p>organize oral, print and other media texts into sections that relate to and develop the topic</p> <p>3.4 Share and Review</p> <p>Share ideas and information</p> <p>communicate ideas and information in a variety of oral, print and other media texts, such as short reports, talks, posters</p> <p>4.3 Present and Share</p> <p>Present information</p> <p>present to peers ideas and information on a topic of interest, in a well-organized form</p> <p>5.2 Work within a Group</p> <p>Cooperate with others</p> <p>take responsibility for collaborating with others to achieve group goals</p> <p>Work in groups</p> <p>share personal knowledge of a topic to develop purposes for research or investigations and possible categories of questions</p> <p>use brainstorming, summarizing and reporting to organize and carry out group projects</p>
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Language Arts

Grade 5

<p>1.1 Discover and Explore</p> <p>Express ideas and develop understanding</p> <p>use appropriate prior knowledge and experiences to make sense of new ideas and information</p> <p>read, write, represent and talk to explore personal understandings of new ideas and information</p> <p>use own experiences as a basis for exploring and expressing opinions and understanding</p> <p>1.2 Clarify and Extend</p> <p>Consider the ideas of others</p> <p>seek the viewpoints of others to build on personal responses and understanding</p> <p>Combine ideas</p> <p>use talk, notes, personal writing and representing to explore relationships among own ideas and experiences, those of others and those encountered in oral, print and other media text</p> <p>Extend understanding</p> <p>search for further ideas and information from others and from oral, print and other media texts to extend understanding</p> <p>2.1 Use Strategies and Cues</p> <p>Use prior knowledge</p> <p>describe ways that personal experiences and prior knowledge contribute to understanding new ideas and information</p> <p>2.2 Respond to Texts</p> <p>Experience various texts</p> <p>experience oral, print and other media texts from a variety of cultural traditions and genres</p> <p>write or represent the meaning of texts in different forms</p> <p>Construct meaning from texts</p> <p>support own interpretations of oral, print and other media texts, using evidence from personal experiences and the text</p> <p>2.4 Create Original Text</p> <p>Generate ideas</p> <p>use texts from listening, reading and viewing experiences as models for producing own oral, print and other media texts</p> <p>Structure text</p> <p>use structures encountered in texts to organize and present ideas in own oral, print and other media texts</p> <p>use structures encountered in texts to organize and present ideas in own oral, print and other media texts</p>	<p>3.1 Plan and Focus</p> <p>Determine information needs</p> <p>identify categories of information related to particular topics, and ask questions related to each category</p> <p>Plan to gather information</p> <p>develop and follow own plan for gathering and recording ideas and information</p> <p>3.2 Select and Process</p> <p>Use a variety of sources</p> <p>locate information to answer research questions, using a variety of sources, such as newspapers, encyclopedias, CDROMs, a series by the same writer, scripts, diaries, autobiographies, interviews and oral traditions</p> <p>3.3 Organize, Record and Evaluate</p> <p>Organize information</p> <p>use clear organizational structures, such as chronological order, and cause and effect, to link ideas and information and to assist audience understanding</p> <p>organize ideas and information to emphasize key points for the audience</p> <p>Record information</p> <p>combine ideas and information from several sources</p> <p>3.4 Share and Review</p> <p>Share ideas and information</p> <p>communicate ideas and information in a variety of oral, print and other media texts, such as illustrated reports, charts, graphic displays and travelogues</p> <p>4.3 Present and Share</p> <p>Present information</p> <p>organize ideas and information in presentations to maintain a clear focus and engage the audience</p> <p>5.2 Work within a Group</p> <p>Cooperate with others</p> <p>accept and take responsibility for fulfilling own role as a group member</p> <p>Work in groups</p> <p>formulate questions to guide research or investigations, with attention to specific audiences and purposes</p> <p>contribute ideas to help solve problems, and listen and respond constructively</p>
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Number

Develop number sense.

1. Represent and describe whole numbers to 10 000, pictorially and symbolically.
2. Compare and order numbers to 10 000.
8. Demonstrate an understanding of fractions less than or equal to one by using concrete, pictorial and symbolic representations to name and record fractions for the parts of a whole or a set.

Patterns and Relations (Patterns)

Use patterns to describe the world and to solve problems.

1. Identify and describe patterns found in tables and charts.
2. Translate among different representations of a pattern, such as a table, a chart or concrete materials.
3. Represent, describe and extend patterns and relationships, using charts and tables, to solve problems.
4. Identify and explain mathematical relationships, using charts and diagrams, to solve problems.

Statistics and Probability (Data Analysis)

Collect, display and analyze data to solve problems.

2. Construct and interpret pictographs and bar graphs involving many-to-one correspondence to draw conclusions.

Shape and Space (Measurement)

Use direct and indirect measurement to solve problems.

1. Read and record time, using digital and analog clocks, including 24-hour clocks.
3. Demonstrate an understanding of area of regular and irregular 2-D shapes by recognizing that area is measured in square units.

Math Grade 5

Number

Develop number sense.

1. Represent and describe whole numbers to 1 000 000.
2. Use estimation strategies in problem-solving contexts.
7. Demonstrate an understanding of fractions by using concrete, pictorial and symbolic representations to create sets of equivalent fractions.
8. Describe and represent decimals (tenths, hundredths, thousandths), concretely, pictorially and symbolically
9. Relate decimals to fractions and fractions to decimals (to thousandths)

Patterns and Relations (Patterns)

Use patterns to describe the world and to solve problems.

1. Determine the pattern rule to make predictions about subsequent elements.

Statistics and Probability (Data Analysis)

Collect, display and analyze data to solve problems.

1. Differentiate between first-hand and second-hand data.
2. Construct and interpret double bar graphs to draw conclusions.

Shape and Space (Measurement)

Use direct and indirect measurement to solve problems.

3. Demonstrate an understanding of measuring length (mm) by:
 - selecting and justifying referents for the unit mm
 - modelling and describing the relationship between mm and cm units, and between mm and m units.

