Alberta Curriculum Outcomes

* Statements written in green italics are suggestions for carrying out each outcome

Grade 3

Grade 3 Science

Organizing Idea
Matter: Understandings of the physical world are deepened through investigating matter and energy.
Guiding Question: How can materials change?
Learning Outcome: Students investigate and analyze how materials have the potential to be changed?

Knowledge:
- Natural materials are any product or physical matter that comes directly from plants, animals, or the ground.
- Processed materials are modified from natural materials and do not occur in the natural world.
- First Nations, Métis, and Inuit communities respectfully use natural materials, including: • trees • rocks • ice • shells • plants • animals
- First Nations, Métis, and Inuit communities use natural materials for particular purposes, including: lodges • tipis • iglus • medicines • teas • clothing

•These outcomes may be achieved through introductory lessons on agriculture, i.e. place-based learning. Have students brainstorm a list of natural resources.

Understanding:
- Use of materials for First Nations, Métis, and Inuit traditional knowledge is guided by balance and harmony with the land.

Skills and Procedures:
- Identify examples of natural and processed materials.
- Diagram the steps of how a natural material is processed to make a new material.
- Compare natural and processed materials.
- Discuss how use and selection of materials is guided by relationships with the land for First Nations, Métis, and Inuit communities

Knowledge:

- In the water cycle, liquid water evaporates into water vapour, condenses to form clouds, and precipitates back to Earth.
- Water in the environment can change state from solid to liquid and back again.
- Water in the environment can change state from liquid to gas and back again.
- A reversible change is a change that can be undone.
- A permanent change is a change that cannot be undone.

Understanding:

- The water cycle is a process of change in which water on Earth moves continuously between bodies of water, land, and the atmosphere.

Skills and Procedures:

- Describe and diagram the changes of state of water in the environment using the water cycle.
- Discuss examples of changes to materials that are permanent and examples of changes to materials that are reversible.

•*Students can provide examples of the states of water in the environment*

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Knowledge:

-Soil includes: • living plants and animals • decaying plants and animals • rock particles • air • water

-Habitat is a natural environment where a plant or an animal establishes a home.

-Animals whose habitat is soil can include: • worms • mice • gophers • rabbits

Understanding:

-Soil is a continually changing upper layer of Earth's crust in which plants grow

-Soil provides a habitat for many animals.

Skills and Procedures:

-Examine soil in the local community.

-Describe how soil helps plants and animals survive.

*The teacher can provide soil samples to groups to observe as they learn about the attributes of soil

Organizing Idea:
Living Systems: Understandings of the living world, Earth, and space are deepened through investigating natural systems and their interactions.
Guiding Question: How do plants and animals interact?
Learning Outcome: Students analyze and describe how plants and animals interact with each other and with the environment.

Knowledge:
- A food chain displays the order in which plants and animals depend on each other for food.
- A food chain can be represented through an illustration, a diagram, a story, or words.
- A food chain only represents one possible way that plants and animals interact.
- Plants and animals are part of many different food chains.

Understanding:
- Plants and animals interact with each other in ways that can be represented by a food chain.

Skills and Procedures:
- Represent various food chains in local and other Canadian environments.

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Knowledge:
- Actions that can be taken to protect plants and animals in the local environment include: • respectfully interacting with natural environments • minimizing disturbance to plants and animals • being aware of animal crossings following fishing and hunting regulations • counting and tracking populations
- Diverse plants and animals can be found in Canada's: • forests • prairies • lakes and rivers • mountains • oceans

Understanding:
- Understanding the interactions of plants and animals in a particular environment helps us protect them.
- Plants and animals exist in variety and are dispersed over Earth.

Skills and Procedures:
- Reflect on actions that can be taken to protect plants and animals in the local environment.
- Demonstrate respectful and safe practices during observations of plants and animals.

- Investigate plants and animals in various environments in Alberta and Canada.

Students can brainstorm how they can help the environment, i.e. not litter, clear up garbage, etc.)

Organizing Idea
Scientific Methods: Investigation of the physical world is enhanced through the use of scientific methods that attempt to remove human biases and increase objectivity.
Guiding Question: How can investigation help to develop knowledge in science?
Learning Outcome: Students engage in investigation and consider its potential to build understanding of the natural world.

Knowledge:
- Three types of scientific investigations are descriptive, comparative, and experimental.
- Descriptive investigations involve gathering observations to describe the physical world.
- Comparative investigations involve collecting sets of data to make comparisons. -Experimental investigations involve designing experiments to determine if there is a cause-and-effect relationship.

Understanding:
- Investigation is a process that aims to explain observable phenomena.
- Investigation can be approached in multiple ways depending on context and purpose.

Skills and Procedures:
- Investigate through description, comparison, and simple experiments.
- Develop conclusions from descriptive, comparative, and experimental investigations based on observation.

Students can observe the plants they grow and plot the data (ex. Height of plant)

Knowledge:
- Scientific attitudes and values are based on objectivity and include accuracy in recording data and honesty in communicating data.
- Objectivity in science is an attempt to learn about the world using methods that remove the influence of personal thoughts, feelings, and expectations.

Understanding:
- Investigation requires the understanding and application of scientific attitudes and values

Skills and Procedures:
- Identify possible issues that may occur during an investigation, including dishonestly recording and communicating data.
- Demonstrate objectivity during an investigation by accurately recording and honestly communicating the data.

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Knowledge*:*
- Investigations can build on previous knowledge by: • confirming previous understanding finding new evidence that conflicts with previous understanding • deepening previous understanding

Understanding:
- Investigations build on previous knowledge and contribute to learning.

Skills and Procedures:
- Reflect on how conducting an investigation contributes to learning.

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Knowledge:
- Observations and results from investigations can be analyzed by making connections to previous knowledge through: • asking questions • noticing changes that happen • discussion • collaboration

Understanding:
- Observations and results from investigations should be analyzed to confirm accuracy and build knowledge.

Skills and Procedures:
- Discuss observations and the results of investigations.
- Analyze observations and the results of investigations.
- Ask questions about observations and the results of investigations.

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Knowledge:
- Scientists often use their own investigations and those of other scientists to develop new questions for further study.
- Sources of information or data can include: • experts • text • personal observations • websites • elders • community members
- Some sources of information are more trustworthy than others.

Understanding:
- Analysis of data and scientific results may spark new questions for investigation.
- Information or data from investigations can be used to make decisions.

Skills and Procedures:
- Develop new questions for further study from an analysis of data and the results of a simple investigation.
- Use data to determine if a statement is true or false.
- Discuss the trustworthiness of sources of information or data.

Grade 3 English Language Arts

Organizing Idea:
Oral Language: Listening and speaking form the foundation for literacy development and improve communication, collaboration, and respectful mutual understanding.
Guiding Question: How can listening and speaking improve oral communication?
Learning Outcome: Students examine and apply understandings of listening and speaking through a variety of formal and informal interactions.

Knowledge:
- Listening strategies can include
- Listening with a purpose
- Asking relevant questions
- Seeking clarification
- Responding appropriately

Understanding:
- Listening can enhance interactions and learning.

Skills and Procedures:
- Use a variety of listening strategies to interact and learn effectively.
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Knowledge:
- Presentations can be delivered in different ways, including • oral reports • readers' theatre • dramatizations.
- Audience participation and behaviour may affect the presenter or other audience members.

Understanding:
- Presentations share stories, ideas, or information with an audience.

Skills and Procedures:
- Group relevant ideas, events, or information in a logical sequence when presenting ideas and information.
- Develop communication skills through individual or group presentations.
- Present dramatizations of characters and events encountered in texts.
- Share a poem from memory with some awareness of phrasing and pausing.
- Compose and share a short speech or oral report.
- Participate in presentations as a respectful audience member.

*Create student groups and have them make a short presentation on the data they collected from their plant growth
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Organizing Idea:

Comprehension: Text comprehension is supported through applying varied strategies and processes, and considering both particular contexts and universal themes.
Guiding Question: How can the development of skills and strategies support comprehension of text?
Learning Outcome: Students relate personal experiences to interactions with texts to support meaning.

Knowledge:
- Information that is synthesized to make predictions can include • background knowledge • personal experience • clues from a text anticipation of logical outcomes or events.
- Inferencing involves drawing conclusions based on known facts or evidence.
- Inferencing can include • making connections • questioning • predicting • visualizing.
- Summarizing information involves determining key ideas and specific details • logically ordering ideas • writing ideas in own words.

Understanding:
- Comprehension can involve predicting outcomes or events that reflect clues from texts.
- Comprehension can be enhanced by inferring meanings that are not stated explicitly in text.
- Comprehension is enhanced when information is summarized.

Provide literature for students to read concerning the plants they are growing. Given the climate of the classroom, have students make predictions about the attributes of each plant before growing them. Ex. How tall will the plant grow?

Skills and Procedures:
- Connect background knowledge to information within a text to make predictions.
- Identify information from texts that supports predictions.
- Modify predictions based on new or additional information.
- Reflect on predictions to confirm or change understandings.
- Make inferences by combining background knowledge with information that is not explicitly stated within a text.

- Identify the connection between the actions, feelings, or motives of a character based on evidence in text.
- Determine the most important information in a text.
- Order significant information in a logical sequence.
- Share the most important information from a text in a logical order using own words.

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Grade 3 Mathematics

Organizing Idea:

Statistics: The science of collecting, analyzing, visualizing, and interpreting data can inform understanding and decision making.

Guiding Question: How can representation support communication?

Learning Outcome: Students interpret and explain representation.

Knowledge:

- Statistical questions are questions that can be answered by collecting data.

Understanding:

- Representation connects data to a statistical question.

Skills and Procedures:

- Formulate statistical questions for investigation. Predict the answer to a statistical question.

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