



New SCIENCE Curriculum

Earth Systems Grade 2

October 12, 2023

Facilitator: Chris Zarski & Ted Zarowny



Alberta Regional Professional
Development Consortia
Adult learning for students' sake

Acknowledgment of Land and People

In the spirit of reconciliation, we want to acknowledge that this gathering is taking place on traditional lands across the province of Alberta, home to many diverse First Nations, Métis and Inuit peoples. We acknowledge that this land is a traditional meeting ground giving voice to its original peoples and the story of creation of this country in a way that history has forgotten.



The Honorable Harvest – Robin Kimmerer



Photo by [Chris Lawton](#) on [Unsplash](#)

Agenda



1. Spiraling Curriculum - Concepts

2. Spiraling Curriculum - Skills and Procedures

3. Spiraling Curriculum - Understanding

4. Spiraling Curriculum - Transfer

5. Teaching for Transfer

6. Surface Level Activities

7. Deep Level Activities

8. Transfer and Assessment

9. Resources





Photo by [Luke White](#) on [Unsplash](#)



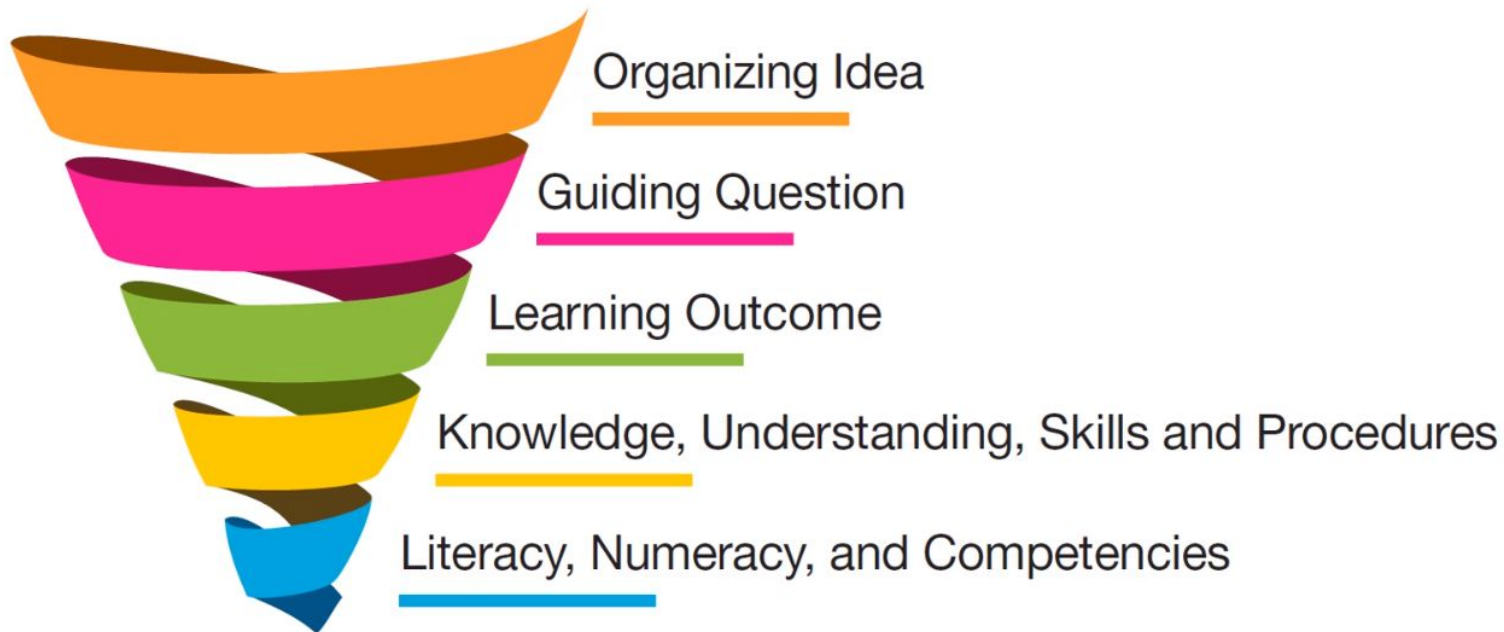
Spiraling Curriculum Concepts

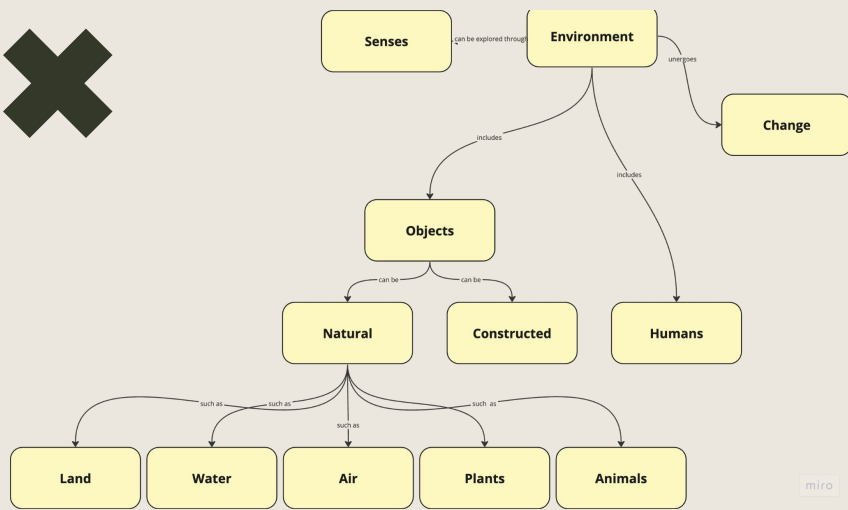


Spiraling Curriculum

[Guiding Framework Document](#)

[New LearnAlberta](#)

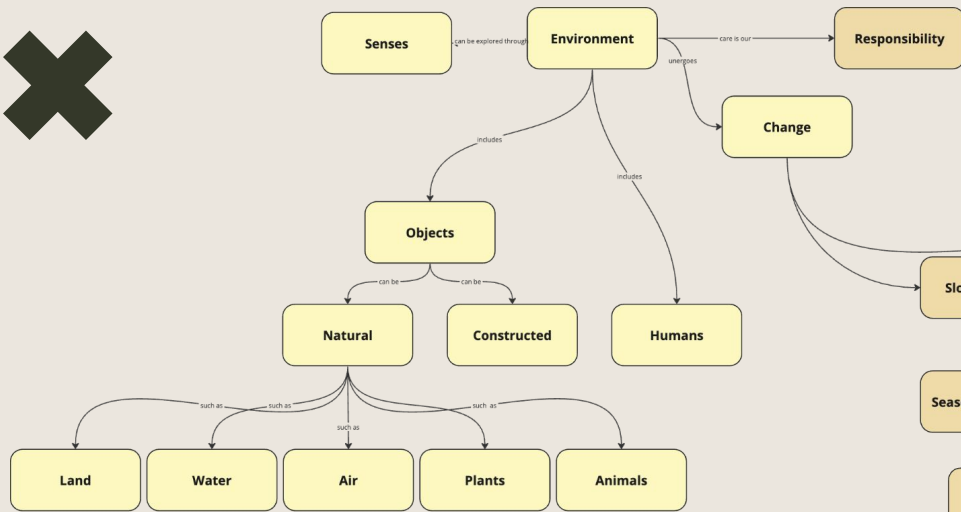




Concepts Spiraling and Growing

Kindergarten

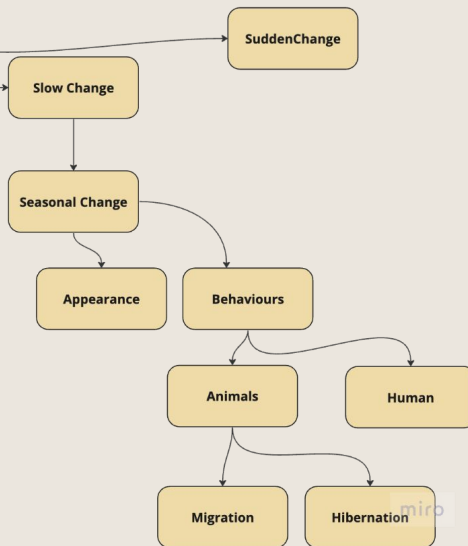
K-3
Earth Systems



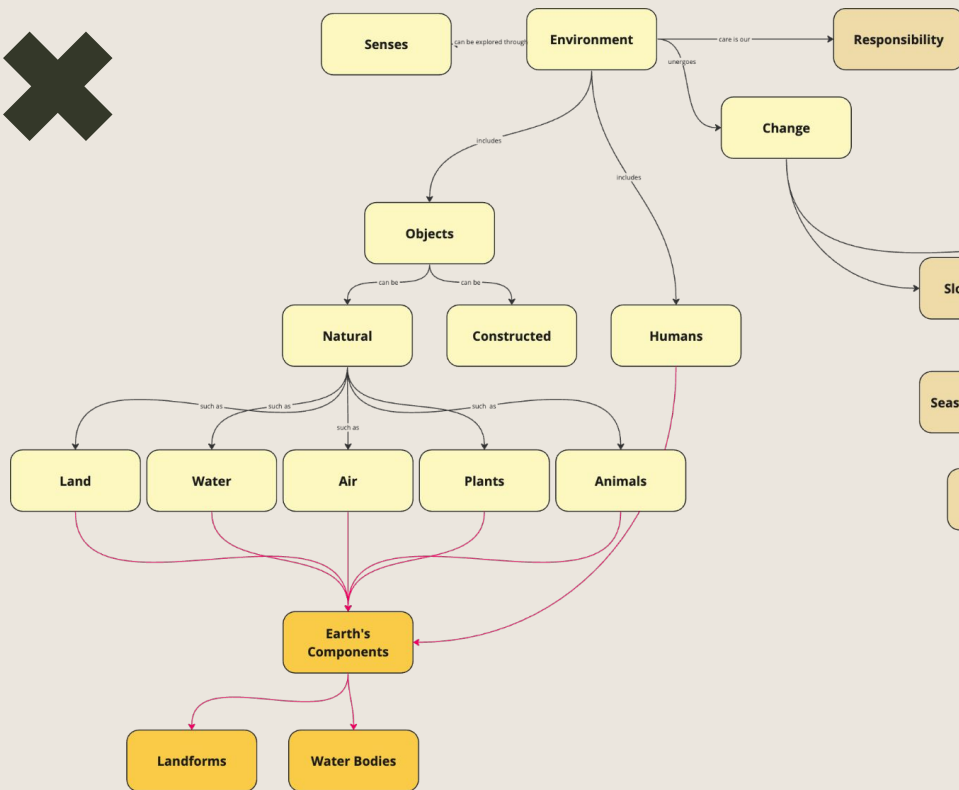
Concepts Spiraling and Growing

Kindergarten

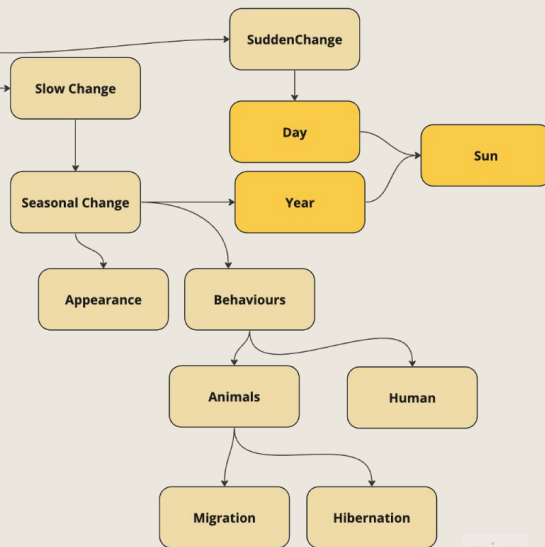
Grade 1



K-3
Earth Systems



Concepts Spiraling and Growing



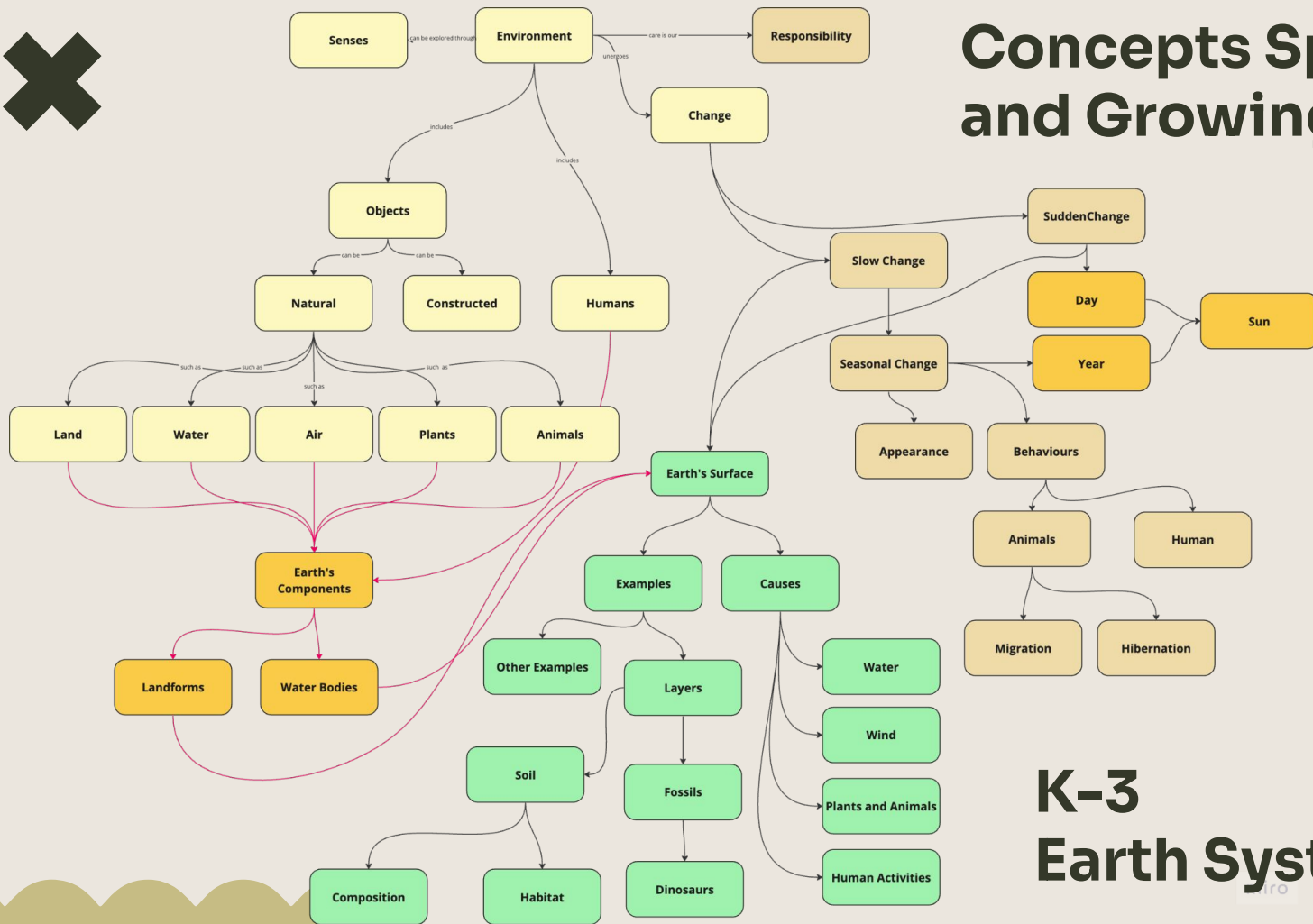
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Kindergarten

Grade 1

Grade 2

K-3 Earth Systems



Concepts Sprirling and Growing

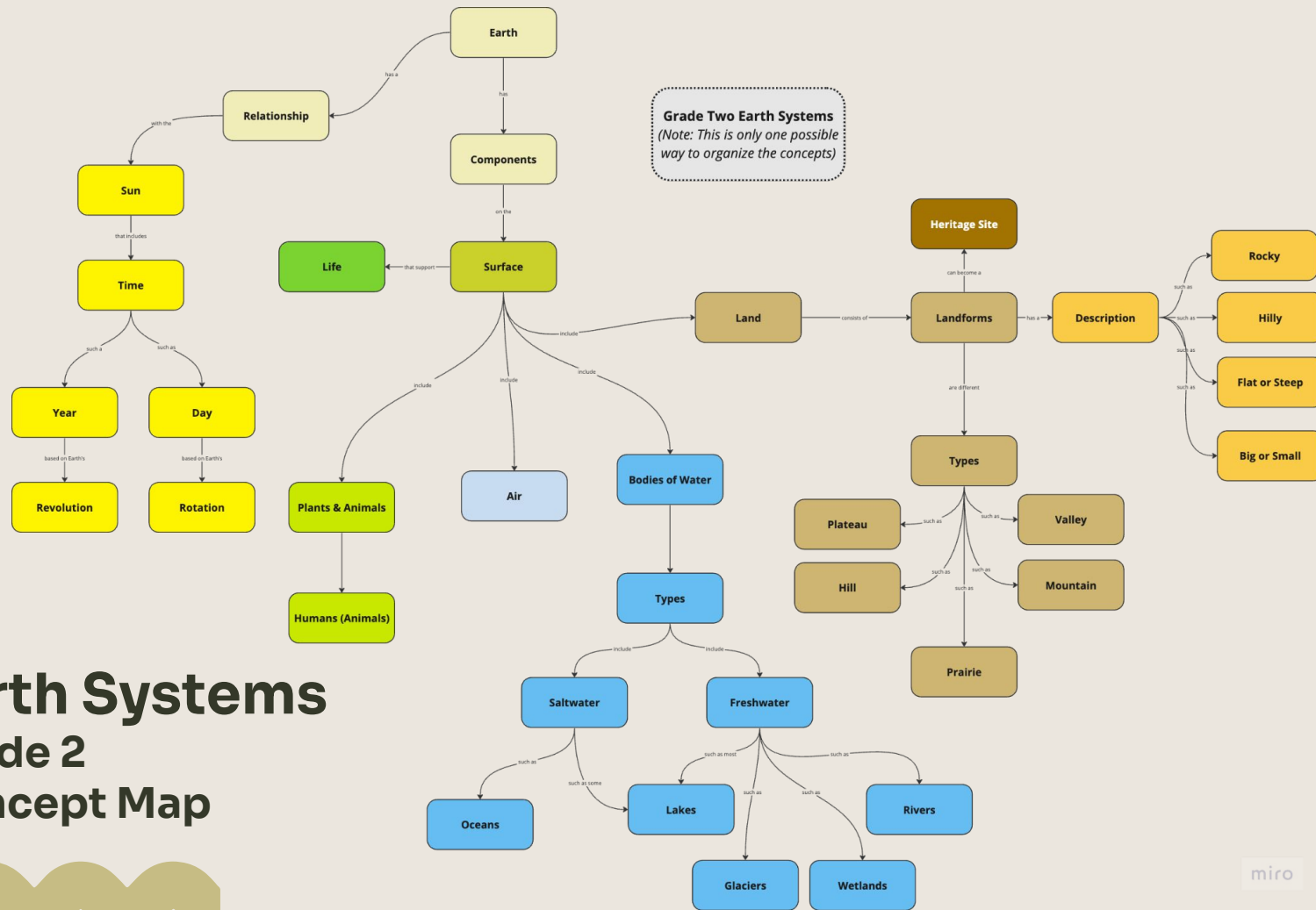
Kindergarten

Grade 1

Grade 2

Grade 3

K-3
Earth Systems



Earth Systems

Grade 2

Concept Map

EARTH SYSTEMS						
Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
Guiding Question: How can environments be explored?	Guiding Question: In what ways can environments change?	Guiding Question: How can Earth's components and relationship to the Sun be understood?	Guiding Question: What visible changes can be identified through examination of Earth's surface?	Guiding Question: How does Earth sustain life?	Guiding Question: How can climate and its effects be understood?	Guiding Question: What factors affect climate?
Learning Outcome: Children examine and describe surrounding environments.	Learning Outcome: Students analyze environments and investigate interactions and changes.	Learning Outcome: Students investigate Earth & its landforms, & its bodies of water & and its relationship to the Sun.	Learning Outcome: Students analyze changes in Earth's surface and explain how layers of the landscape hold stories of the past.	Learning Outcome: Students investigate the systems of Earth and reflect on how interconnections sustain life.	Learning Outcome: Students analyze climate and connect it to weather conditions and agricultural practices.	Learning Outcome: Students investigate climate, changes in climate, and the impact of climate change on Earth.
KEY CONCEPTS				KEY CONCEPTS		
Animal	Change	Axis	Bodies of Water	Care	Weather	Climate Change
Environment	Change: Seasonal	Bodies of Water (wetland, river, lake, glacier, ocean)	Cause	Action	Climate	Interaction
Exploration: Senses	Change: Seasonal: Environment	Components of Earth: land, water, air, plants, human, animals.	Change	Change	Climate Zones	Climate Change Causes
Human	Change: Seasonal: Human Activities	Day	Earth's Surface	Conservation	Patterns	Climate Change: Effects
Objects: Natural	Change: Sudden	Earth's Surface	History	Environment	Climate Characteristics	Climate Factors (Location)
Objects: Human-Made	Change: Seasonal: Plants and Animals	Landforms	Human Activities	Interaction	Climate Factors	Personal Actions
Plant	Environment: Responsibility: Care	Life	Intergenerational Knowledge	Interconnection	Weather: Tools: Measuring	Climate Change Observations
Shared Space	Environment	Revolution	Landscape	Life	Weather: Prediction	Extreme Weather
Wonder	Hibernation	Rotation	Landscape Layers	Lithosphere Hydrosphere Biosphere Atmosphere	Climate & Human Activity	Traditional Knowledge
FNMI: Ways of Living Connected to Land	Migration	Saltwater & Freshwater Bodies	Natural Events	Natural Resources	Climate & Animal Activity	FNMI: Impact of climate change on way of living
	Observation: Senses	Water Flow	Plant & Animal Activity	Responsibility	Climate and Agriculture	
	Seasons	Year	Soil	Spheres	Agriculture: Sustainable Practices	
	FNMI: Sense of responsibility and care with nature.		Time	Sunlight	Agriculture: Conservation Practices	
	FNMI: Products made from plants and animals.		Wind Water Ice	Systems	Agriculture: Sustainable Harvesting	
			FNMI: Knowledge of Earth's Surface	Water Resources	Intergenerational Observation	
				FNMI: Interconnectedness of Earth Systems	FNMI: Long-term climate observations	
				FNMI: Laws of Nature and Sacredness of Water	FNMI: Observations and weather predictions	
				FNMI: Conservation		

[Link: Concept Progressions \(ARPD\)](#)



02

Spiraling Curriculum Skills & Procedures



“Skills and procedures **are what students do to demonstrate their knowledge and understanding.** They are specific skills, methods, tools, strategies, and processes that students will develop as they achieve the learning outcome.”

[Guiding Framework](#)



Learner Outcome Verbs				
	Grade			
	K	1	2	3
Apply Creativity				
Analyze				
Describe				
Examine				
Explain				
Explore				
Follow Instructions				
Interpret Instructions				
Investigate				
Relate				

Learner Outcome Verbs

Verbs are the skills and procedures that students do or perform.

Learner outcome verbs are those verbs that are identified in the learner outcome

[Skills and Procedures K-3 Progressions](#)

Skills & Process Verbs				
	Grade			
	K	1	2	3
Ask Questions				
Classify (Sort)				
Compare (find similarities and differences)				
Conclude				
Create				
Demonstrate Safety				
Describe				
Design				
Discuss				
Examine				
Explain				
Explore				
Investigate				
Observe				
Predict				
Record Data/Observations				
Relate				
Represent				

2ES1.2 Understanding: *Earth's surface consists of various types of landforms.*

2ES1. Skills and Procedures Grade 2

- **Compare** various landforms on Earth's surface.
- **Observe** various landforms on Earth's surface.
- **Represent** various landforms on Earth's surface to a location.

Instruction and Assessment

These skills and procedures can be taught, practiced, and assessed.

Doing so will help students become more proficient in their use and better able to demonstrate their knowledge and understanding when using these skills.



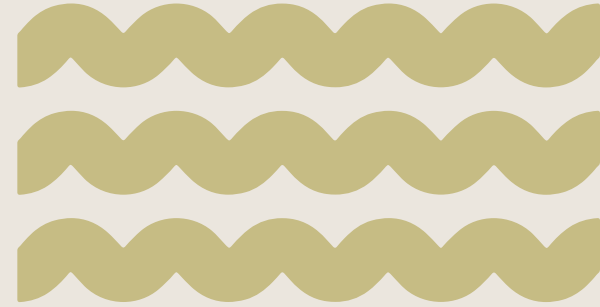
03

Spiraling Curriculum Understanding



“Understanding is about putting pieces of knowledge into **logical and meaningful order** with other knowledge.”

[Guiding Framework](#)



Knowledge	Understanding	
• Components of Earth • Life/Survival (from Grade 1 Living Systems)	 How can these two concepts can be put into a logical and meaningful order?	

Knowledge	Understanding	
Components of Earth include • land • water • air • plants, humans, and other animals	Earth consists of many components that support life.	



04

Transfer





Concepts Transfer (Different Contexts)

Knowledge
Landform: Mountain



Photo by [Mads Schmidt Rasmussen](#) on [Unsplash](#)

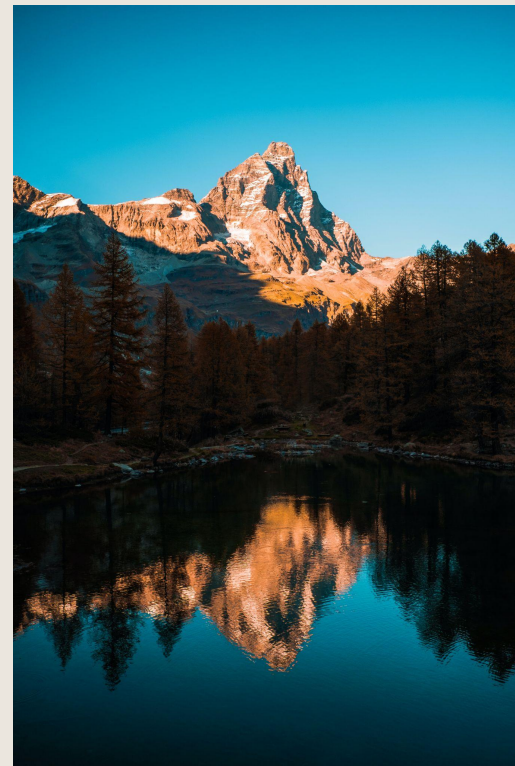


Photo by [Matteo Catanese](#) on [Unsplash](#)



Concepts Transfer (Different Contexts)

Understanding

Earth consists of many components that support life.



Photo by [Bannon Morrissy](#) on [Unsplash](#)



Photo by [Nikolay Zakharov](#) on [Unsplash](#)



05

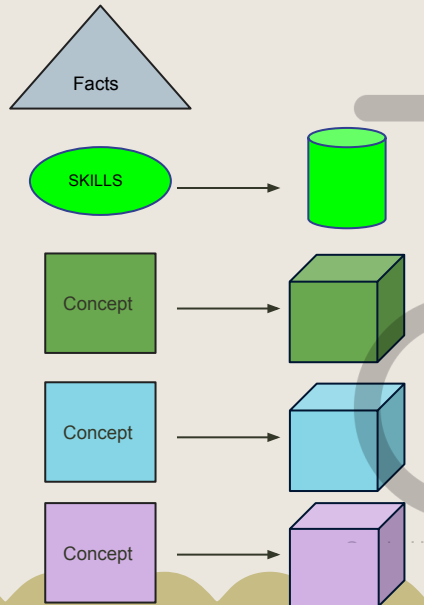
Teaching for Transfer

✖ *Phases of Learning*

Hattie, Fisher & Frey: *Visible Learning for Literacy* (2016)

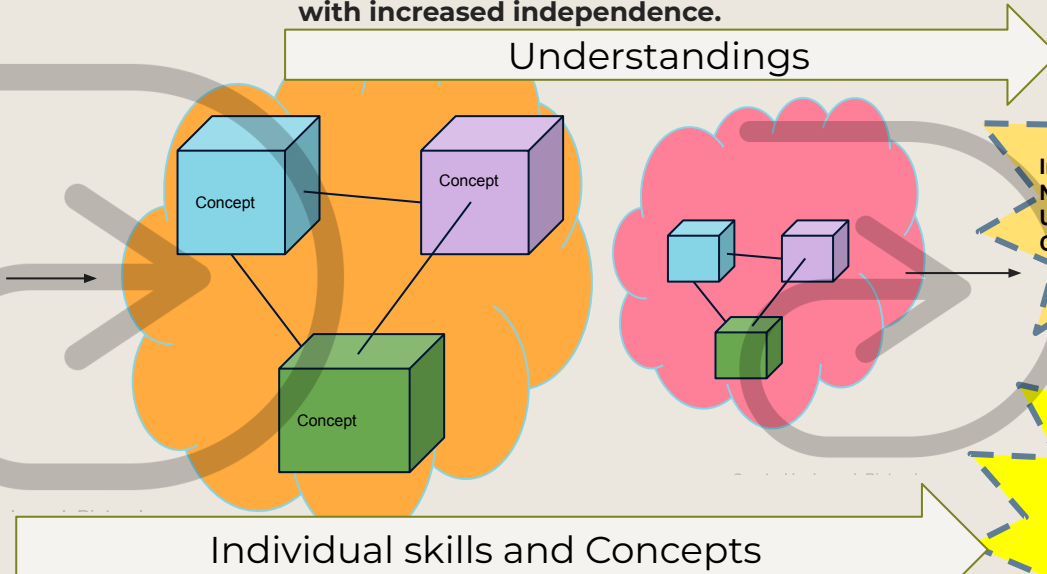
Surface

Students are first exposed to individual skills, concepts and their related knowledge.



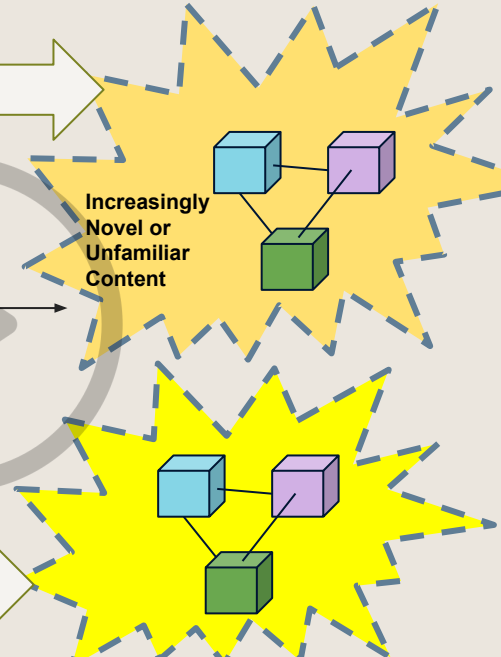
Deep

Students make connections between concepts to create deeper understanding and appropriately skills/ procedures to new situations with increased independence.

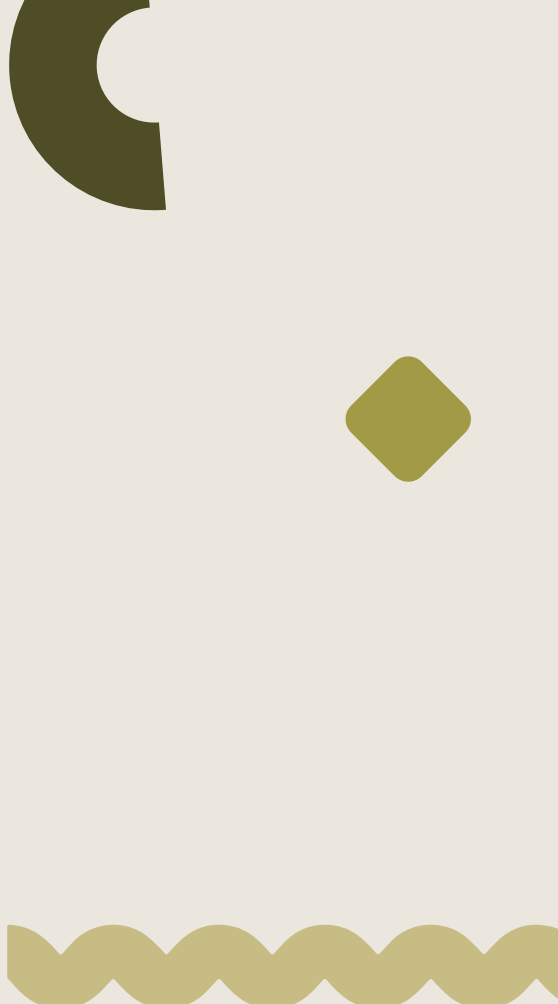


Transfer

Students apply concepts, understandings and skills to a variety of novel and unfamiliar contexts.



Planning

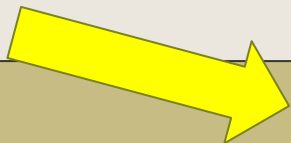


**Begin
With
the
End
In
Mind**

Stephen R. Covey, 1989

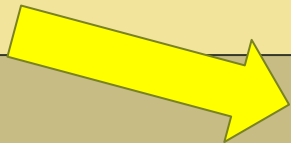
**Backward
by
Design**

Grant Wiggins & Jay McTighe, 1998



Learning Outcome

Students analyze environments and investigate interactions and changes.



Understandings

2ES1.1 Earth consists of many components that support life.

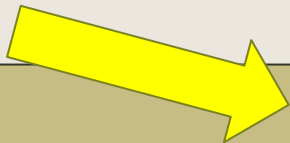
2ES1.2 Earth's surface consists of various types of landforms.*

2ES1.3 Earth's surface is mostly covered by bodies of water.*

2ES1.4 Earth revolves around the Sun and rotates.*

Transfer

- Formative Assessments
- Summative Assessments
- Unit End Projects as Assessments



Learning Outcome

2ES1: Students **investigate** Earth, its **landforms**, its bodies of water, and its relationship to the Sun.

What will students do to demonstrate their learning?

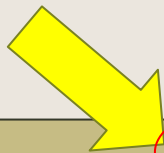
Possible Assessment:
Investigate four different water bodies to determine how similar and different they are.

What will students need to know and/or understand in order to be successful?

**Similarity and Difference |
Different Landforms | Criteria |
Steps in an Investigation**

What will students need to be able to do in order to be successful?

Investigate | Compare and Contrast | Research



Understanding

2ES1.1: Earth consists of many components that support life.

Formative Assessment

EXAMPLE Formative Assessment:

SKILLS & PROCEDURE : Discuss how the various components of Earth interact to support life.

What will students need to be able to do in order to be successful?



	Understanding	Formative Assessment
Components of Earth include • land • water • air • plants, humans, and other animals Interaction Discussion	1ES1.3: Seasonal or sudden changes can affect the behaviour of animals.	EXAMPLE Formative Assessment: SKILLS & PROCEDURE Discuss how the various components of Earth interact to support life.

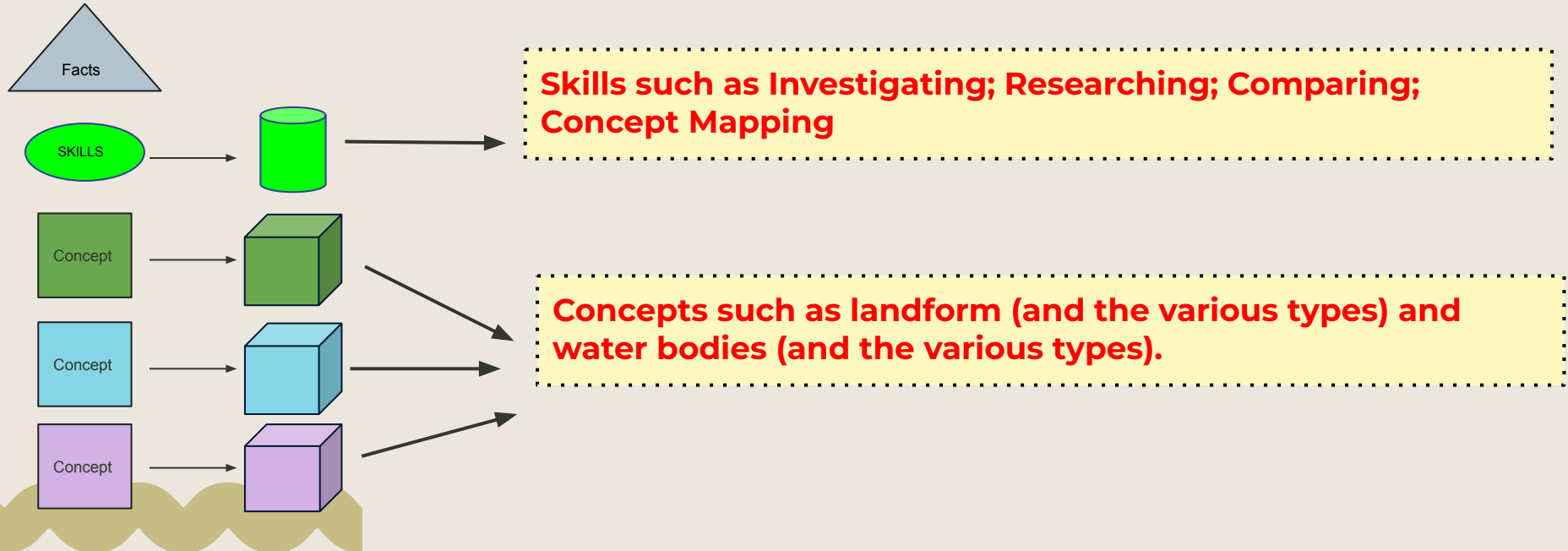
What will students need to be able to do in order to be successful?

✖ *Phases of Learning*

Hattie, Fisher & Frey: *Visible Learning for Literacy* (2016)

Surface

Students are first exposed to individual skills, concepts and their related knowledge.





06

Surface Level Activities



Prior Learning

What concepts from previous grades are important?





Living Systems - Prior Learning



Living vs Nonliving
Basic Needs of Living Things



Environments

To the Teacher: Ask if anyone has heard the word...what do they think it means. You could start a list of words (explanations) on chart paper or the board that could be used to create a definition of what it means and what it includes.

The following 3 slides, focus on what they see and not on differentiating between natural and man-made. After discussing their notices and wonders, ask again what they think an environment is.



What does it mean to “notice”?

What does it mean to ‘wonder’?



Look at the picture of an *Environment*. What do you notice? Discuss with your shoulder partner.

Be ready to share your ‘notice’ by finishing the sentence “We notice ____”

What do you both ‘wonder’ about the picture? Be ready to share your ‘wonder’ by finishing the sentence “we wonder ____”.

What do you 'wonder'?

What do
you
"notice"?

What do you
'wonder'?



Look at the picture of an **Environment**. What do you notice? Discuss with your shoulder partner.

Be ready to share your 'notice' by finishing the sentence "We notice ____"

What do you both wonder about the picture? Be ready to share your
wonder wonder

What do
you
“notice”?

What do you
‘wonder’?



Look at the picture of an **Environment**. What do you notice? Discuss with your shoulder partner.

Be ready to share your ‘notice’ by finishing the sentence “We notice ____”

What do you both wonder about the picture? Be ready to share your ‘wonder’ by finishing the sentence “we wonder ____”.



What is an environment?

**How would you describe it in
your own words?**



What are some objects that are the same and different in each of these environments?



An environment includes [plants, animals, (humans)]
Environments are made of Man-Made structures and
Natural things including air, water, land, rocks..)



Man-Made or Natural?

What do these mean?

Exploring Environments

How do we 'explore' our environments?

Teacher note: this is an opportunity to review work done/initiate work on senses and how they can assist us in learning about and experiencing our environments.

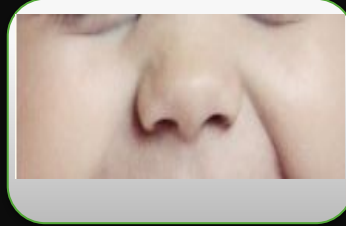
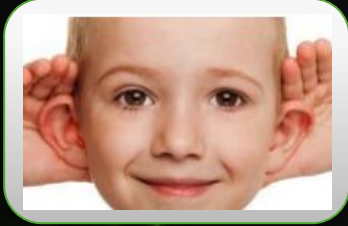


Review of Senses

Can you name our 5 senses?

Let's Do A Card Sort!

With your partner, place the card on the sense you would use to identify it.



How can we explore our environments?



How can we know and describe what is in the environments?



Using My Senses in the Environment

Look at the following 3 pictures.

In each picture, which of your senses would you use and what would you use them for?

Are there any object in each of the picture that you would use more than one sense to identify?

**Are there any items that would use all 5 senses?
(Assessment)**

Using My Senses in the Environment - which one's will you use? How?



[Unsplash](#) photo by [zeliikosantrac](#)



iStock photo by [Imgorhand](#)



Unsplash photo by Omar Ram



Seasons in Earth - video for kids



Sesame Street: Learn About the Four Seasons |
Elmo's World (includes what clothes to wear in each
season)

What is a Season?

What are the names of the seasons?



**Can you
name
the
seasons
shown in
each
picture?**

Surface Level

Instructional Approaches

INTENT: Introduce and begin developing Individual Concepts (Knowledge) and Skills and Procedures

- Concept Attainment Strategy
- Frayer Model
- SEEI (State - Explain - Exemplify - Illustrate)
- Card Sorts/Classify
- Students Making/Finding examples & non-examples.
- Show a photo. Ask students how the concept you are studying is evident in the photo (eg. symmetry, empathy, authority, conflict, etc.)
- Diamond Ranking.
- Making Analogies (“diversity” is like ..., “motivation” is like ..., “our senses are like ...”)
- Case Studies



Sample Activities (Surface)

In planning surface activities, consider ...

- [Earth's Components & Slides 52-53](#)
- Landforms: [Slides 54-56](#)
- Water Bodies: [Slides 57-61](#)
- Rotation and Revolution: [Slide 62](#)
- [Comparing](#)
 - [Similarities and Differences](#)
 - [Criteria](#)
- [Investigation](#)
 - Asking Questions ([Notice and Wonder](#))
 - [Observing \(Using senses\)](#)
 - [Analyzing](#)
 - [Prediction](#) and [Predicting](#)
 - [Conclusion](#)
- [Relationship](#)
 - [Concept Map](#)
 - [Cause and Effect](#)
 - [Affect/Effect](#)
 - [Interaction](#)
- Research: [Slide 65](#)

The Earth System

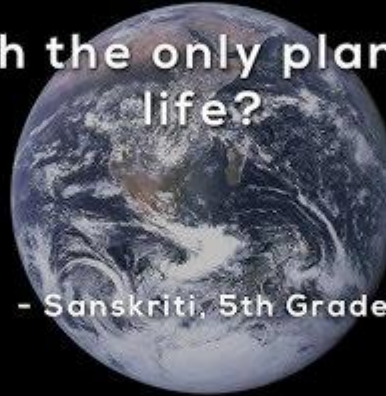


M. Ruzek, 1995

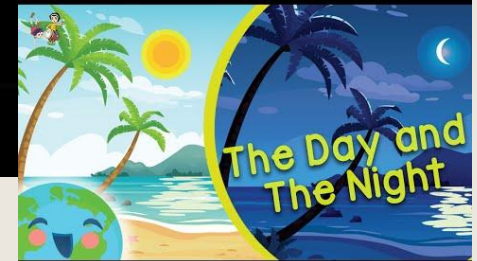
Is Earth the only planet with life?



Is Earth the only planet with life?



- Sanskriti, 5th Grade



Landforms - What are they?



Write down the terms in the picture. Listen for what they are in the presentation.

Landforms of Alberta

Plateaus

Head
Smashed
In Buffalo
Jump



shutterstock.com · 1117162190

Mountains

Mount
Edith
Cavell



D 158111083 | © Hecke01 | Dreamstime.com

Valleys

Dinosaur
Provincial
Park

UNESCO

Hills
Cypress
Hills



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Prairies
Drumheller
Prairies



<https://www.worldatlas.com/milestones/10-most-unique-places-in-canada.html>

Landforms on Earth have varying characteristics.

Slopes



Zhang Yu @ Dreamtime

Size



Terrain



Peyto Lake @Pixabay20

Water, Water Everywhere!

Earth's surface is covered mostly by bodies of water.

Do you have any water near where you live or go to school? What type of water is it?



Water

Water on Earth's Surface

oceans

glaciers

lakes

wetlands

rivers

Water in Alberta

glaciers

lakes

wetlands

rivers

What are the characteristics of the different 'waters' in Alberta?

Glaciers

Glaciers are huge, thick masses of ice. They form when lots of snow falls in one location for many years. Over time—decades or centuries—the snow on the bottom gets squished down by the weight of falling new snow. This compressed snow becomes ice, forming a glacier.

Can a glacier move? Explain.

National Parks Service

Wetlands

Wetlands are areas where the land does not drain well. The ground in a wetland is saturated, or full of water. Often the ground is covered with shallow water. Wetlands are usually classified as swamps, marshes, or bogs.

Source: Britannica for Kids

Lakes



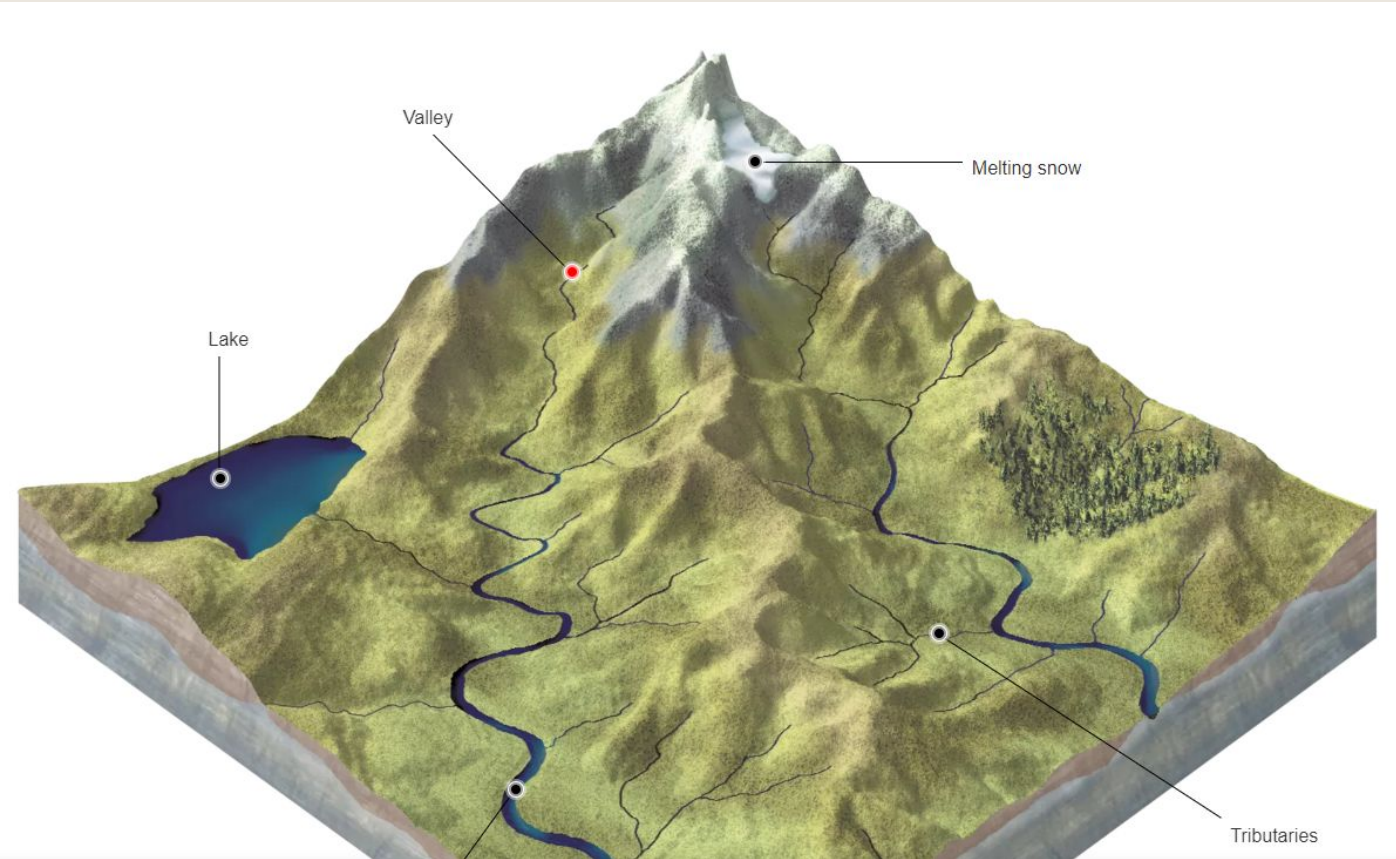
Source: Lily Uits Learning - How are lakes formed?

Rivers

Important characteristics of a river.

Source: Study 'n' Learn

How does a river get formed?



The link below will take you to this image which is [interactive](#).

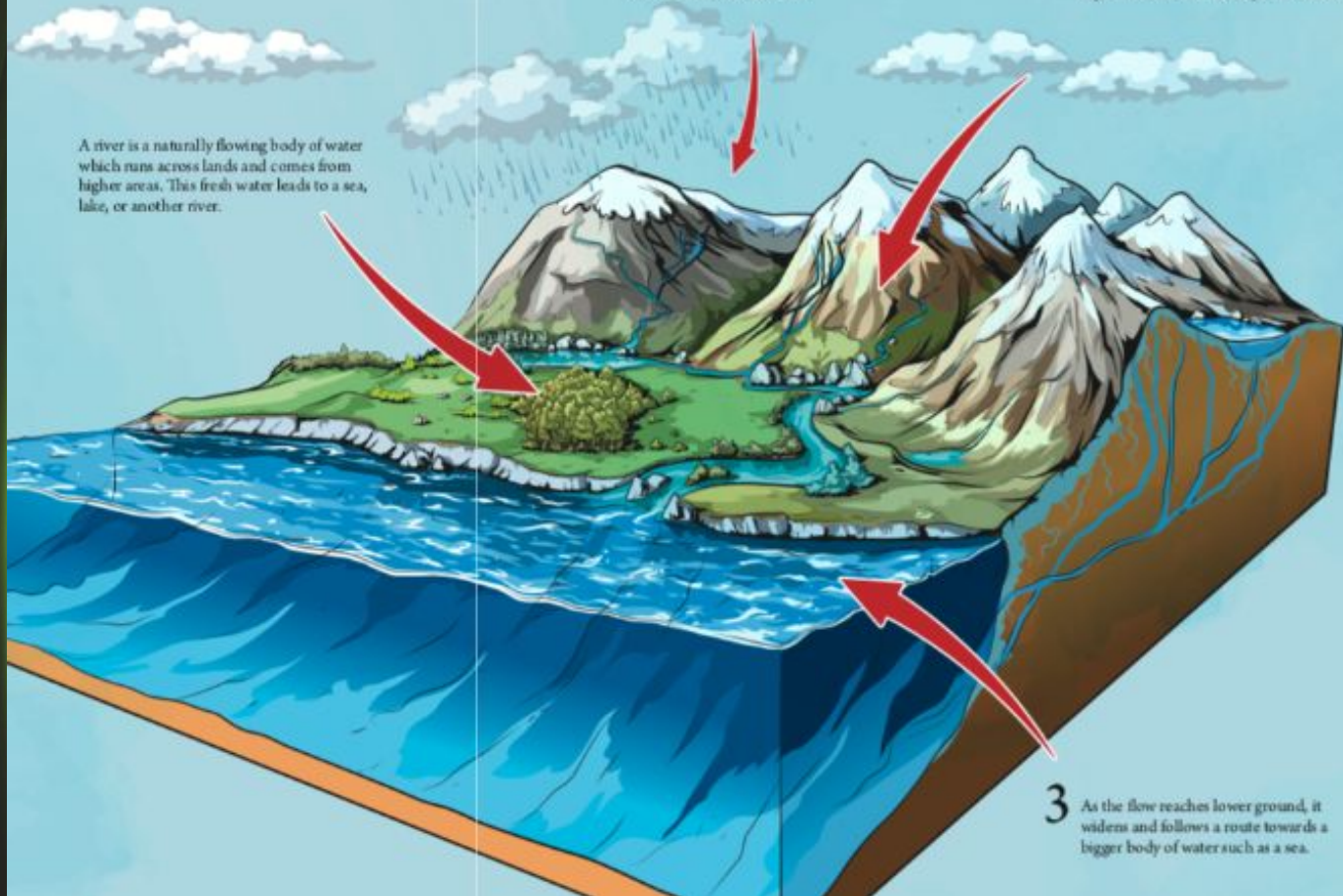


Here is an outline of how rivers are generally formed:

1 Water from melting ice or rain runs down a slope. The running water follows cracks in the land.

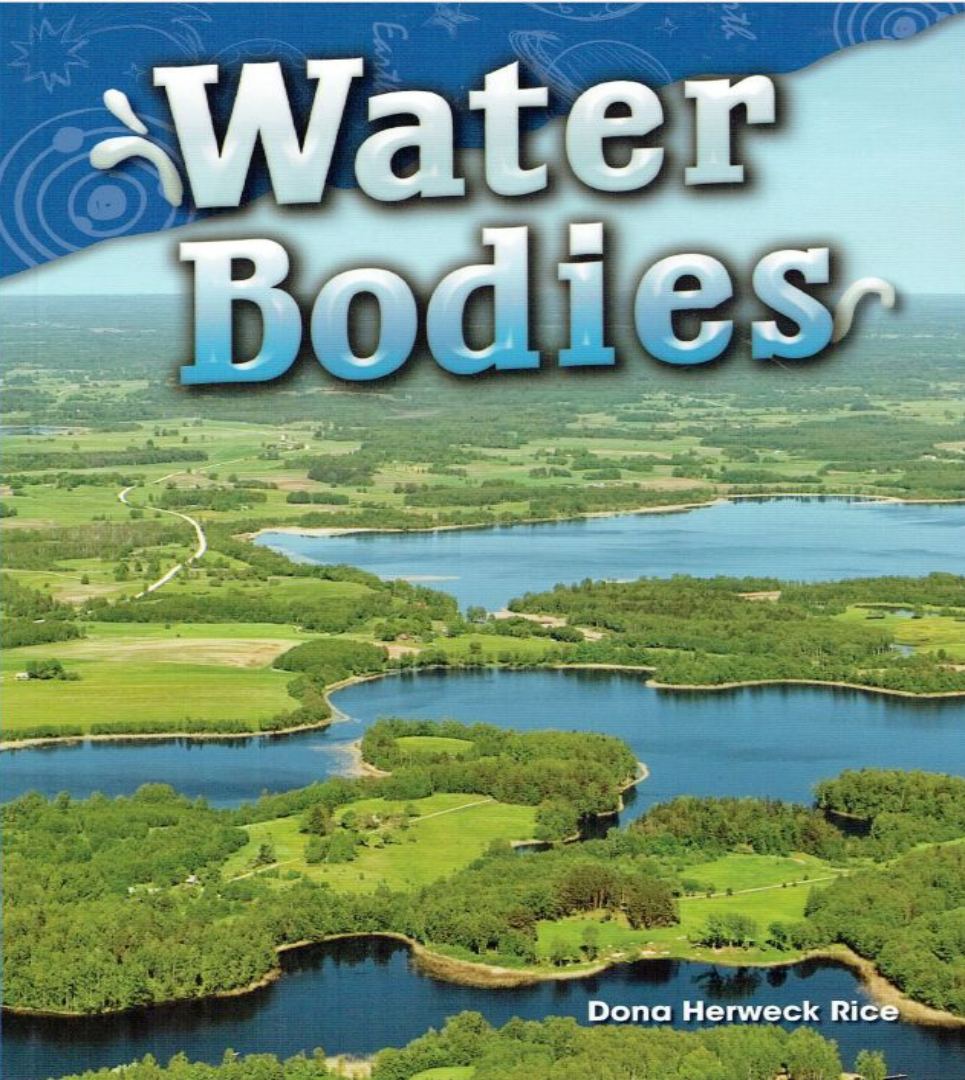
2 Different small streams meet. The uniting streams become larger and larger until the flow develops into a river.

A river is a naturally flowing body of water which runs across lands and comes from higher areas. This fresh water leads to a sea, lake, or another river.



3 As the flow reaches lower ground, it widens and follows a route towards a bigger body of water such as a sea.

Water Bodies



Dona Herweck Rice

Water Bodies

Did you know that most of Earth is covered with water? Oceans, lakes, and rivers are water bodies on Earth. Lakes and rivers are freshwater. Oceans are saltwater. Living things depend on water for survival.



EARTH and SPACE
SCIENCE

Lexile 470L



TCM 21609

Understanding the Earth's Rotation by Examining Shadows

Example Integration: Investigation: Experiment

Grade 2: Earth Systems (Understanding: Earth revolves around the Sun and rotates.)

- Video Series
 - [Why is My Shadow Shorter Sometimes and Longer Other Times?](#)
 - [Sunlight on the National Mall](#)
- [Investigation Planning Sheet](#)

Understanding the Earth's Rotation and Revolution





07

Deep Level Activities





Learning Outcome	
Students investigate Earth, its landforms, its bodies of water, and its relationship to the Sun.	
Understandings	
2ES1.1: Earth consists of many components that support life.	
2ES1.2: Earth's surface consists of various types of landforms.	
2ES1.3: Earth's surface is mostly covered by bodies of water.	
2ES1.4: Earth revolves around the Sun and rotates.	



Skills & Procedures 2ES1.4 : *Compare various landforms on Earth's surface.*

Comparative Investigation

There are seven sub skills in the investigation procedure in grade 2.

- a. asking questions
- b. making predictions
- c. planning the investigation
- d. observing and recording data
- e. analyzing data
- f. reaching conclusions
- g. discussing observations and conclusions

How similar or different are mountains, hills, plateaus, valleys and prairies?

Research

- [Sample introduction to investigation using research \(Grade 3\)](#) - Appropriate Grade Reading or Viewing Material Needed.
- [Research Data Collection Sheet.](#)
- [Single Point Rubric for Researching \(Grades 1-3\)](#)



Skills & Procedures 2ES1.4 : *Compare various landforms on Earth's surface.*

Focus/Criteria Characteristic	Mountain	Hill	Plateau	Valley	Prairie	Same or Different?
Slope						
Size						
Terrain						
Compare/Contrast Scale: Different > Somewhat Different > Somewhat Similar > Similar						
Conclusion:						

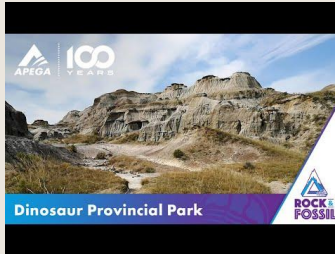


Compare and Contrast two Landforms

Head
Smashed in
Buffalo Jump



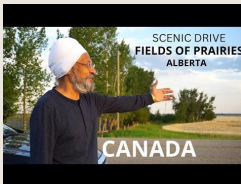
Dinosaur
Provincial
Park



Mount Edith
Cavell



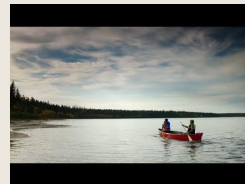
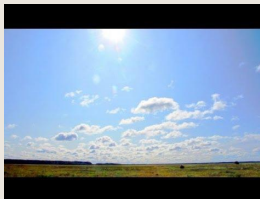
Prairies of
Drumheller



Cypress Hills



Wood Buffalo
National Park



Maligne Canyon



Banff National Park



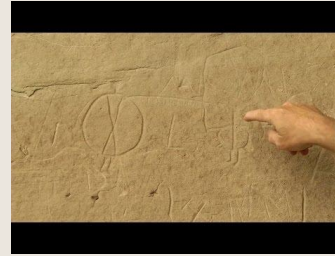
Jasper National Park-Maligne Lake



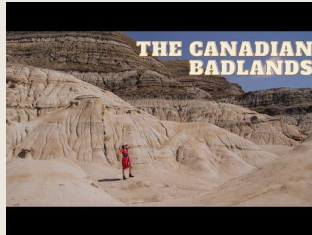
Waterton-Glacier International Peace Park



Writing-on- Stone



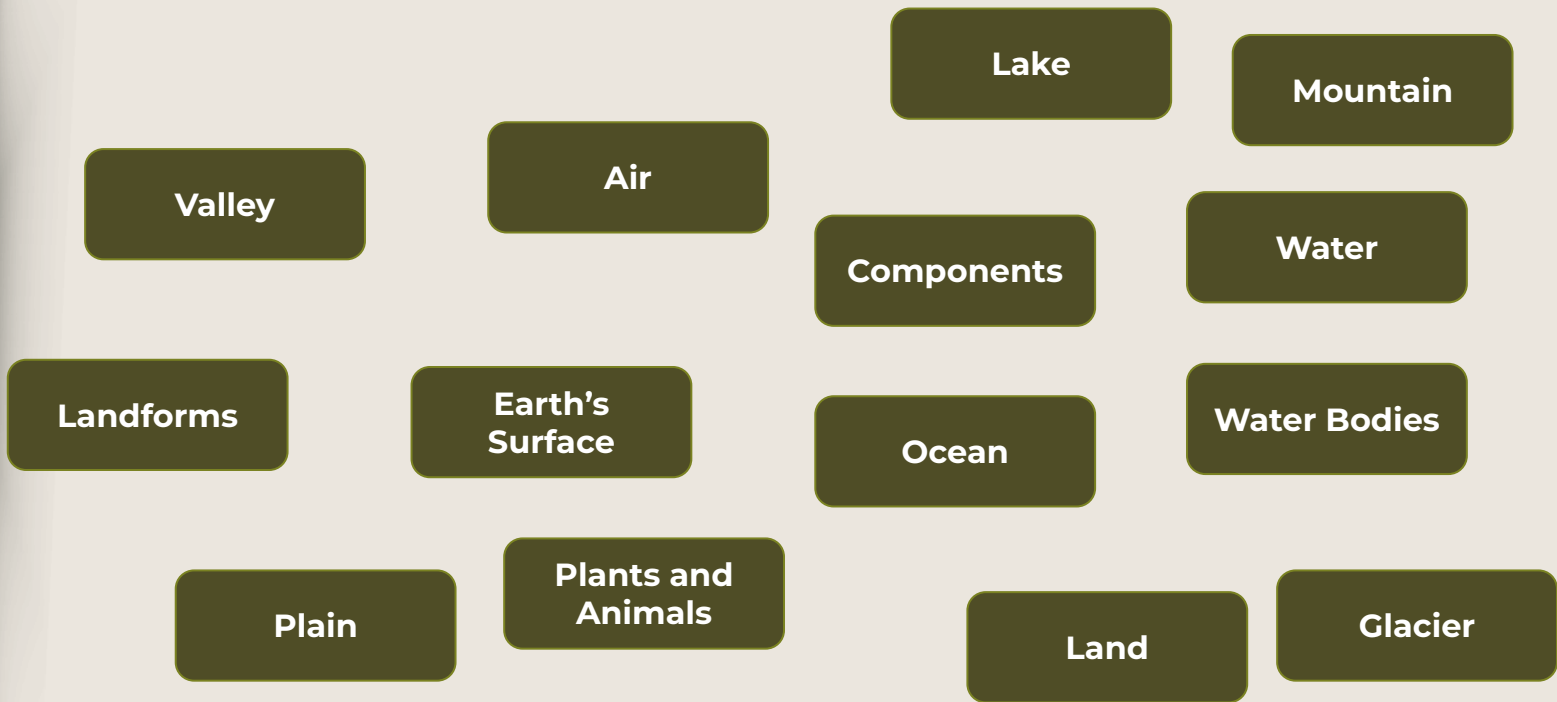
Drumheller Badlands



Concept maps help demonstrate understanding.

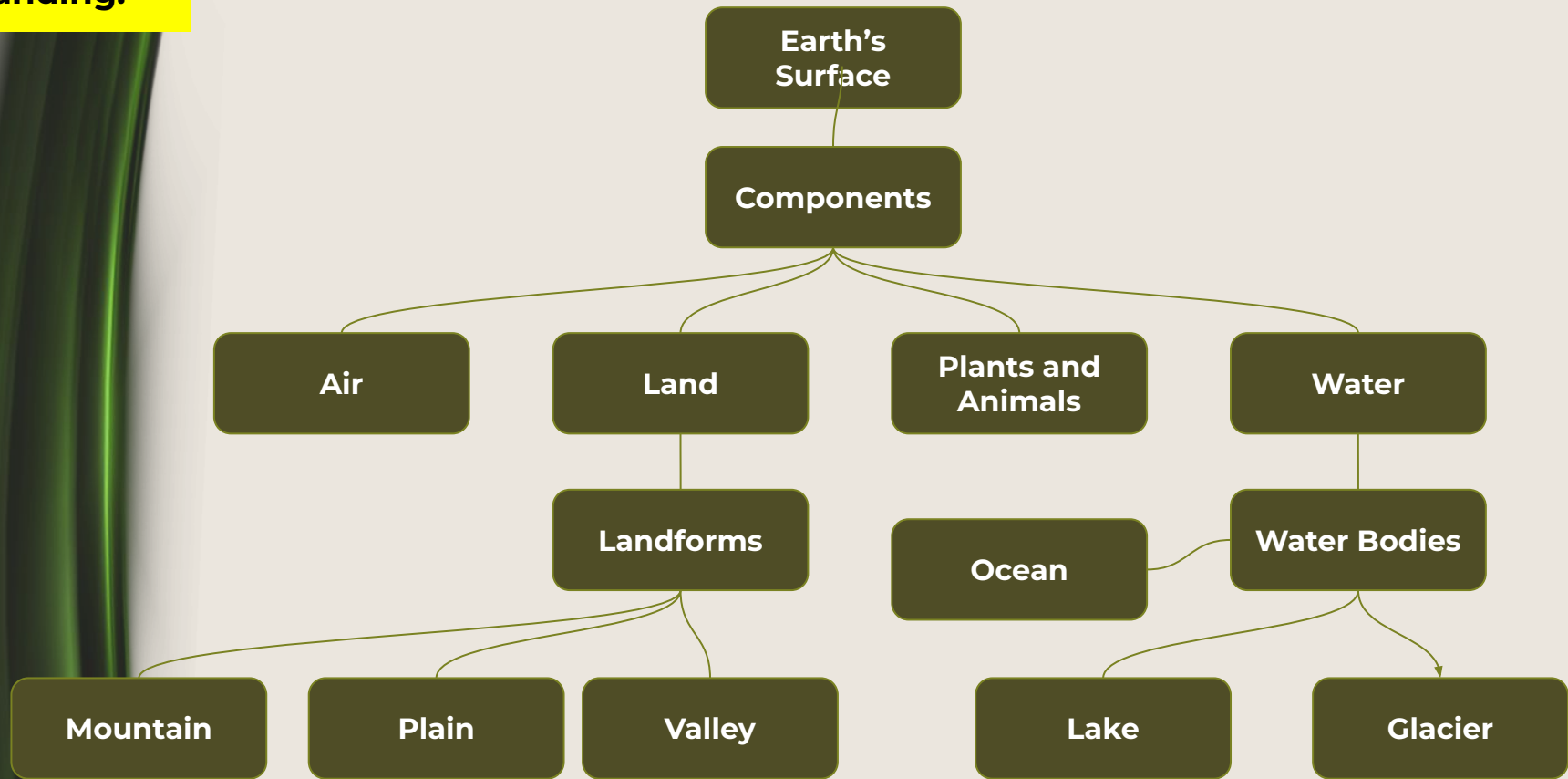
Understanding 2ES1.2: Earth’s surface consists of various types of landforms.
Understanding 2ES1.3: Earth’s surface is mostly covered by bodies of water.

Arrange these concepts into a meaningful concept map.



Concept maps help demonstrate understanding.

Understanding 2ES1.2: Earth's surface consists of various types of landforms.
Understanding 2ES1.3: Earth's surface is mostly covered by bodies of water.



08

Transfer & Assessment

Transfer

Create a model or Investigate a site and describe the relationship between the landform and water in their choice.



Computer Science

Angela Dearing

- What exactly IS Computer Science?
 - What does successful integration of Computational Thinking across the grades look like?
 - How can we teach it and support each other integrating computational thinking into instructional practices effectively when we've never taken a computer science course ourselves?
-
- [Kindergarten CS Connections to Earth Systems](#)
 - [Grade 2 CS Connections to Earth Systems](#)



Resources





[Link](#)



STEM Engagement

What is Water?

Water

Link

OLogy: American Museum of Natural History

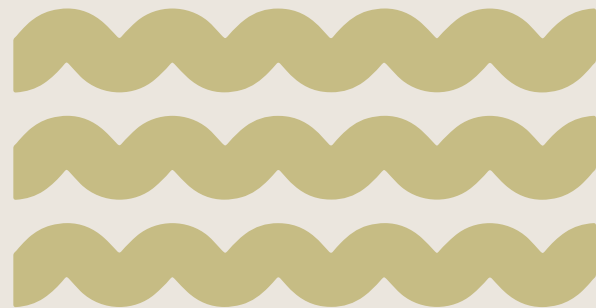
Sacred Relationships - Importance
of Water and Wetlands

Resources



Resources to Consider

- [Alberta Regional Professional Development Consortia](#)
- [Sparkle Box](#)
- [Mystery Science](#)
- [Let's Talk Science](#)
- [Edmonton Catholic Schools Curriculum Crates](#)
- [Sample “concept introduction” activities \(ARPDC\)](#)
- [Concept Maps \(ARPDC\)](#)
- [ARPDC Site](#)
- [Common Sense Education](#)
- [Edmonton Public Scope and Sequence](#)
- [New LearnAlberta](#)



Resources

Previous Grades Resources that may be of interest





Seasons in Earth



Sesame Street: Learn About the Four Seasons |

Using Time Lapse Photography - Can You name the seasons? How will you know?



Winter, Spring, Summer, Fall - Seasonal Transition Timelapse



The Season's - Filmed everyday for 1 year



Tree in 4 Seasons | spring, summer, autumn, winter



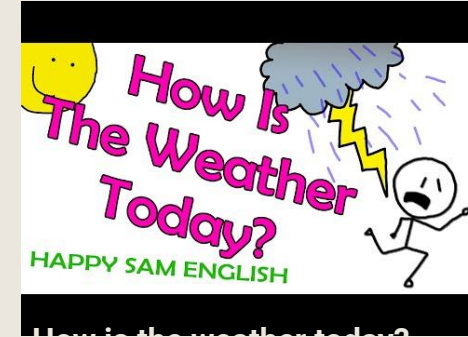
One year in 40 seconds
Can you name the season as it appears?

How do environments change? [weather, daytime, night time]



<https://www.youtube.com/watch?v=EuNb2k2fKs>

Extreme Weather:
Interconnections in Extreme
Weather (National
Geographic)



Posted and Upcoming Sessions (ARPDc)

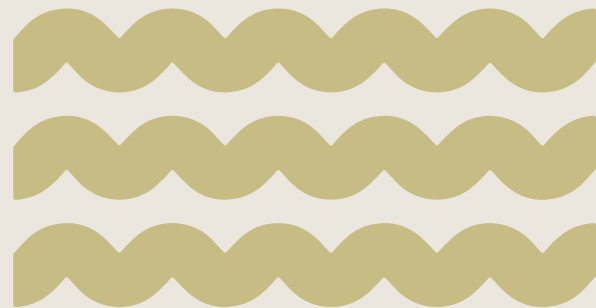
Have been Completed Before the End of June

- Introductory Videos
- Living Systems - May 1 (Grade 1) +
- Matter - June 8 (Kindergarten) +

Coming in the Next School Year **Fall (6-8 weeks apart)**

- Earth Systems (Oct 10 - 19)
- Energy (November 20 - 29)
- Space (Feb 5, 6, 12)

Check the [CARC](#) or [ERLC](#) website for registrations





Thanks!

Do you have any questions?

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CREDITS: This presentation template was created by [Slidesgo](#), and includes icons by [Flaticon](#), and infographics & images by [Freepik](#)



Photo by [Gaelle Marcel](#) on [Unsplash](#)

Ted Zarowny
Chris Zarski



Grade 2

I NOTICE...I WONDER

Earth's Landforms, Water and the SUN

SESSION 4: EARTH SYSTEMS

Possible Unit Design

➤ Review of what they have learned in K-1 that is relevant to Landforms, Water and the Sun

➤ Earth's components that support life.

➤ Is Earth The Only Planet with Life?

➤ Landforms of Alberta

➤ Landforms have varying characteristics.

➤ Water, Water Everywhere



Review

Environment

Natural and Man Made



Seasons - how they relate to change in an environment; looking at characteristics of each season using senses in their explanations

The Earth System



Natural
Components

How do
these
components
interact to
support life?

M. Ruzek, 1995

Universities Space Research
Association

Is Earth the only planet with life?

Is Earth the only planet with
life?

- Sanskriti, 5th Grade



Landforms - What are they?



Write down the terms in the picture. Listen for what they are in the presentation.

Landforms of Alberta

Plateaus

Head
Smashed
In Buffalo
Jump



Mountains

Mount
Edith
Cavell



Valleys

Dinosaur
Provincial
Park



Hills
Cypress
Hills



Prairies
Drumheller
Prairies



Compare and Contrast two Landforms

Head Smashed
in Buffalo
Jump



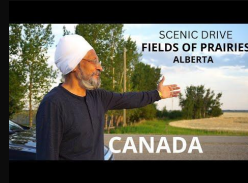
Dinosaur
Provincial Park



Mount Edith
Cavell



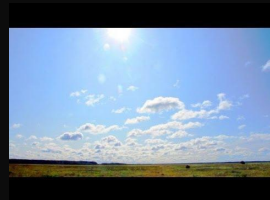
Prairies of Drumheller



Cypress Hills



Wood Buffalo National Park



Maligne Canyon



Banff National Park



Jasper National Park



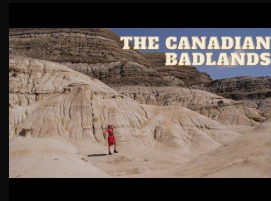
Waterton-Glacier International Peace Park



Writing-on- Stone



Drumheller Badlands



Videos also highlight the different landforms, glaciers, weather, seasons etc.

Landforms on Earth have varying characteristics.

Slopes



Zhang Yu @ Dreamtime

Size

Terrain



Peyto Lake @Pixabay20

Water, Water Everywhere!

Earth's surface is covered mostly by bodies of water.

Do you have any water near where you live or go to school? What type of water is it?



Water

Water on Earth's Surface

oceans
glaciers
lakes
wetlands
rivers

Water in Alberta

glaciers
lakes
wetlands
rivers



How does a river get formed?



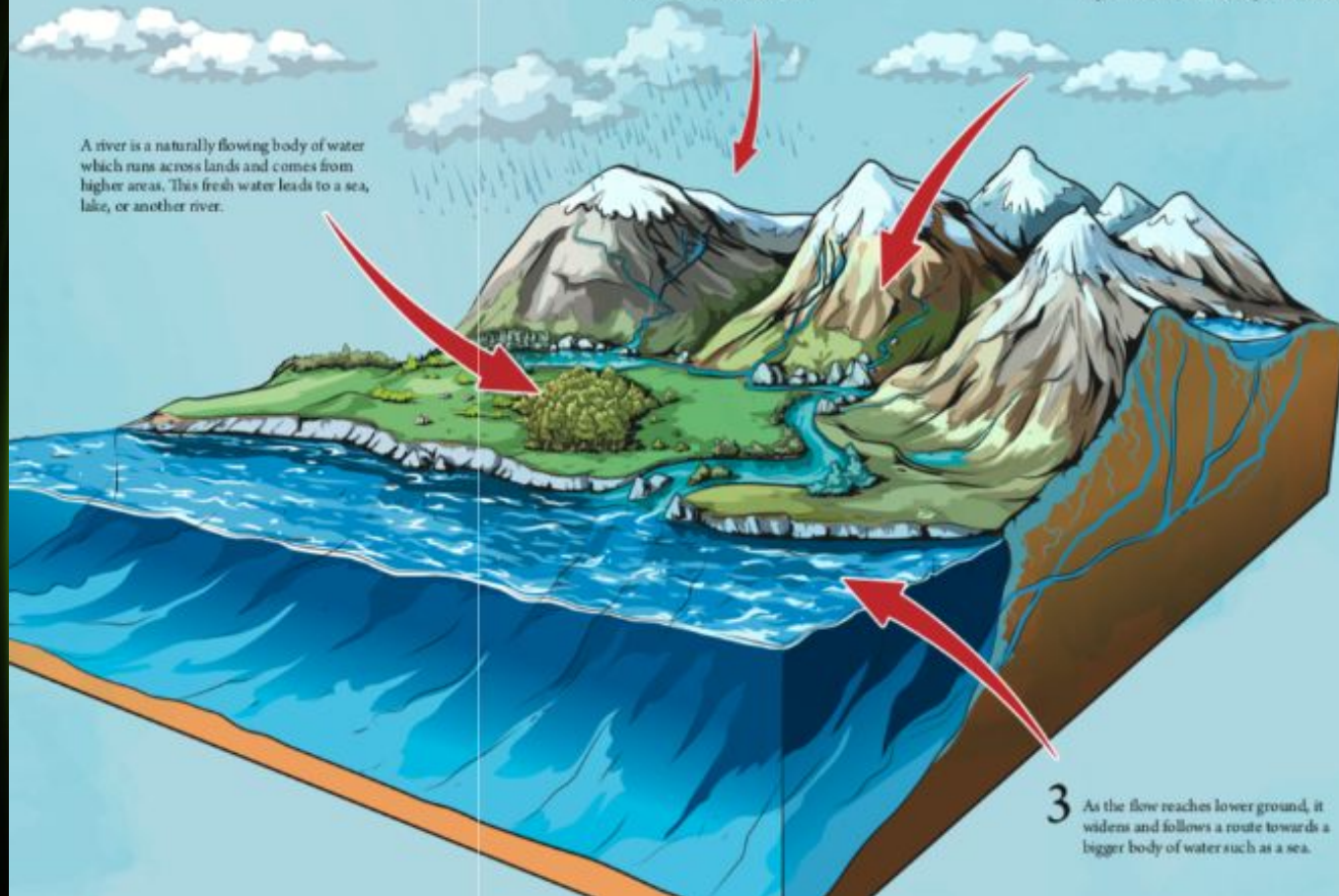
The link below will take you to this image which is [interactive](#).

Here is an outline of how rivers are generally formed:

1 Water from melting ice or rain runs down a slope. The running water follows cracks in the land.

2 Different small streams meet. The uniting streams become larger and larger until the flow develops into a river.

A river is a naturally flowing body of water which runs across lands and comes from higher areas. This fresh water leads to a sea, lake, or another river.



3 As the flow reaches lower ground, it widens and follows a route towards a bigger body of water such as a sea.

Transfer

Create a model or Investigate a site and describe the relationship between the landform and water in their choice.



Resources





[Link](#)



STEM Engagement

What is Water?

Water

Link

OLogy: American Museum of Natural History

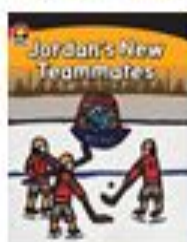
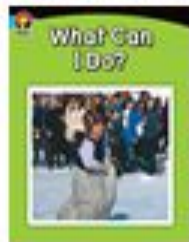
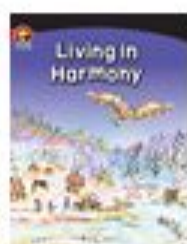
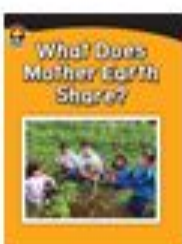
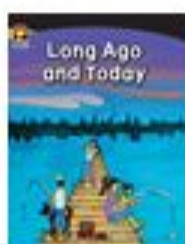
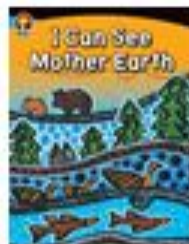
Sacred Relationships - Importance
of Water and Wetlands

Under One Sun

Sample Environment to
Discuss - Shared Reading



Kindergarten to Grade 2



Kindergarten
Little Books

Grade 1
Little Books

Grade 2
Little Books

NELSON

Resources

Previous Grades Resources that may be of interest





Seasons in Earth - video for kids



**Sesame Street: Learn About the Four Seasons |
Elmo's World (includes what clothes to wear in each
season)**

What is a Season?

What are the names of the seasons?

Using Time Lapse Photography - Can You name the seasons? How will you know?



Winter, Spring, Summer, Fall - Seasonal Transition Timelapse



The Season's - Filmed everyday for 1 year



Tree in 4 Seasons | spring, summer, autumn, winter



One year in 40 seconds
Can you name the season as it appears?

How do environments change? [weather, daytime, night time]



Day and Night Kids
(Learning Videos For Kids)

<https://www.youtube.com/watch?v=EuNb2k2fkKs>



Types of Weather | Learning
about Weather for Children

Extreme Weather:
Interconnections in Extreme
Weather (National
Geographic)



How is the weather today?
(Song)

My Own Environment Changes Representation



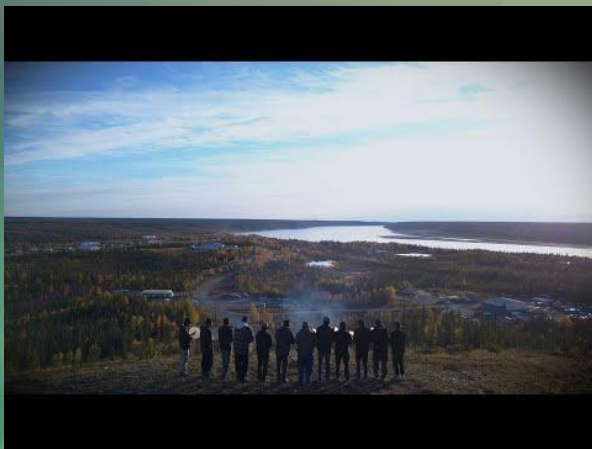
Find an environment that you can watch all year. Take a picture of the same place in each season.



Machacekcz on istockphoto.com

Identify each season and give an explanation as to 'why' it represents that season. Document and explain how *change* occurs in your environment in each season.





Honouring Our Land

Indigenous Leadership Initiative:

@indigenousleadershipinitiative



**RESPECT
& CARE**



<https://www.sacredrelationship.ca/>

People of the Land

As Aboriginal people, our relationship with the land shapes who we are and our place in the world. Featuring Cree, Blackfoot, Dene and Nakota people, *People of the Land* takes the viewer on a beautiful journey of people and place.

- **Running time: 11:40**

KEEPERS OF THE EARTH

Native American Stories and Environmental Activities for Children



Michael J. Caduto and Joseph Bruchac

Foreword by N. Scott Momaday

Illustrations by John Kahionhes Fadden and Carol Wood

Native American/Education

"Keepers of the Earth is a sensitive and well thought-out guide for helping children love and care for the Earth. I heartily recommend it as a resource for parents and teachers."

—JOSEPH CORNELL,
author of *Sharing Nature with Children* and *Listening to Nature*

This environmental classic teaches children respect and stewardship for the Earth and all living things. Joseph Bruchac's lyrical retellings set the stage for Michael Caduto's abundance of related activities.

- Connects to social studies, science, environmental studies, and other content areas.
- Uses a holistic approach suitable for all ages.
- Provides field-tested activities.
- Includes charts, illustrations, and graphs to enhance the projects and concepts.

Michael J. Caduto is an internationally known, award-winning author, storyteller, ecologist, educator, and musician. He travels widely presenting environmental and cultural performances, speeches and workshops for children and adults. His recent books include *Earth Tales from Around the World* and *The Crimson Elf: Italian Tales of Wisdom*. He lives in Vermont.

Joseph Bruchac, a scholar of Native American culture, is an internationally known and award-winning Abenaki author, poet, and storyteller. His writings have appeared in more than five hundred publications, from *Parabola* to *National Geographic* and *Smithsonian* magazines. He is author of the novels *Dawn Land* and *Long River* and other books for children. He lives with his wife in upstate New York.

Look for other Fulcrum books in this series: *Keepers of the Animals*, *Keepers of Life*, and *Keepers of the Night*.


FULCRUM PUBLISHING
www.fulcrumbooks.com



The Walk



The Walk is a wonderfully drawn story about the Seven Teachings. Join Johnny and an Elder from his community as they go for a walk on a beautiful sunny day. They observe the animals of the Seven Teachings and Johnny is taught by the Elder how important the Seven Teachings are for all of us including himself.



www.nativerellections.com