

Making Connections



Earth
Systems



Computer
Science

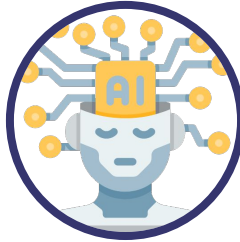


grade 1

Organizing Idea	Computer Science: Problem solving and scientific inquiry are developed through the knowledgeable application of creativity, design, and computational thinking.	
Guiding Question	How can instructions affect outcomes?	
Learning Outcome	Students follow instructions and relate them to outcomes.	
Knowledge	Understanding	Skills & Procedures
<p>Instructions are directions that can be followed and given in various forms, including</p> <ul style="list-style-type: none"> • verbal • audio • visual • written 	The form in which instructions are given may not affect the outcome.	Follow instructions with two or three steps given in different forms.
<p>Many types of instructions need to be in a specific order, such as</p> <ul style="list-style-type: none"> • directions • recipes • computer programs • safety protocols 	Instructions are ordered in a way that will produce a desired outcome.	<p>Determine if instructions with two or three steps given in different orders still produce the desired outcome.</p> <p>Sequence two or three instruction steps to achieve a desired outcome.</p> <p>Exchange ideas for creating three-step instructions that achieve a desired outcome.</p>
Following instructions is a way to demonstrate respect and safety during investigations.	Instructions help to keep people safe.	Follow instructions during investigations.

Computational Thinking

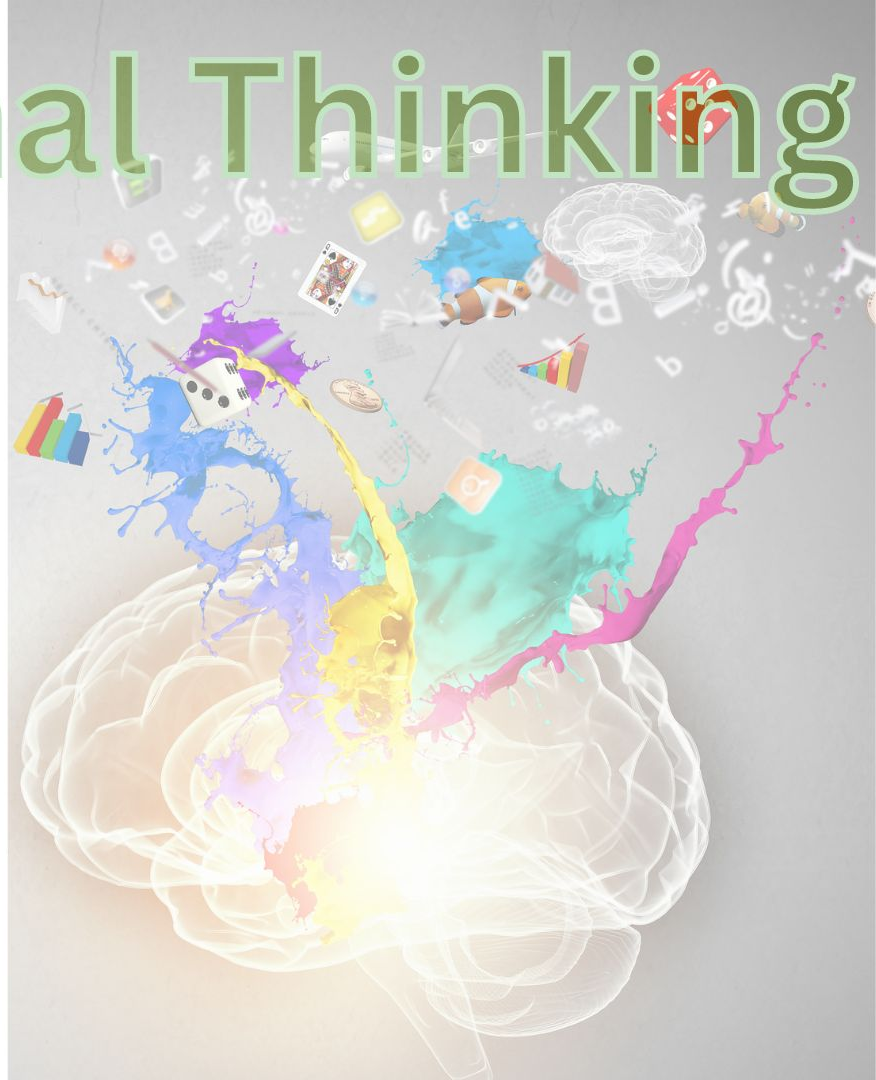
Decomposition



Pattern Recognition

Pattern Abstraction

Algorithm Design





Design Thinking Process



*Learn About
Your Audience*



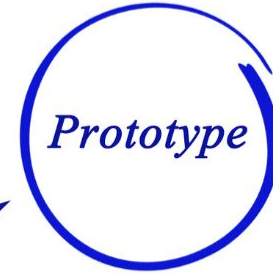
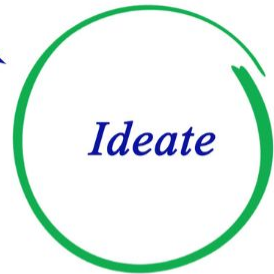
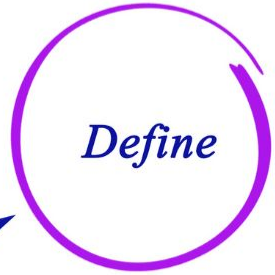
*Brainstorm and
Come up with
Creative Solutions*



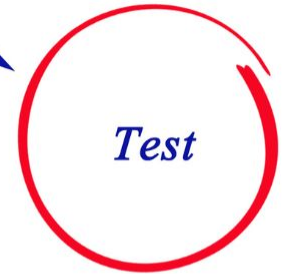
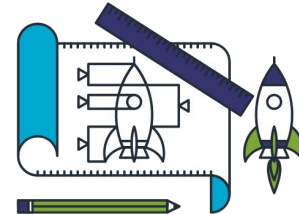
Test Your Ideas



*Construct Point
of View Based
on User Needs*



*Build
Representation
of Your Ideas*



Creativity

Finding different ways to reach the same outcome.

Problem solving to overcome obstacles to achieve a desired outcome.



Organizing Idea	Earth Systems: Understandings of the living world, Earth, and space are deepened by investigating natural systems and their interactions.
Guiding Question	In what ways can environments change?
Learning Outcome	Students analyze environments and investigate interactions and changes.

Skills & Procedures

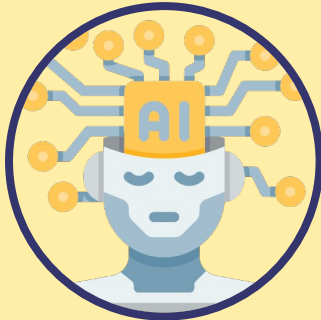




Observe seasonal changes in local environments over time.

Document signs of seasonal change over time.

Share personal experiences related to seasons.

Discuss how changes in the appearance of environments, plants, and animals are related to the seasons.

Represent an environment in different seasons to show environmental changes.

Sequence two or three instruction steps to achieve a desired outcome.

SKILLS & PROCEDURES

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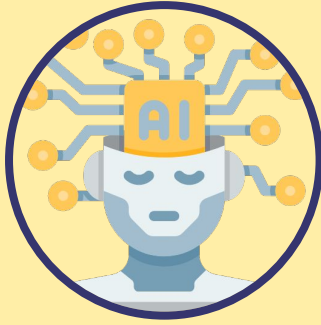
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 SKILLS & PROCEDURES 



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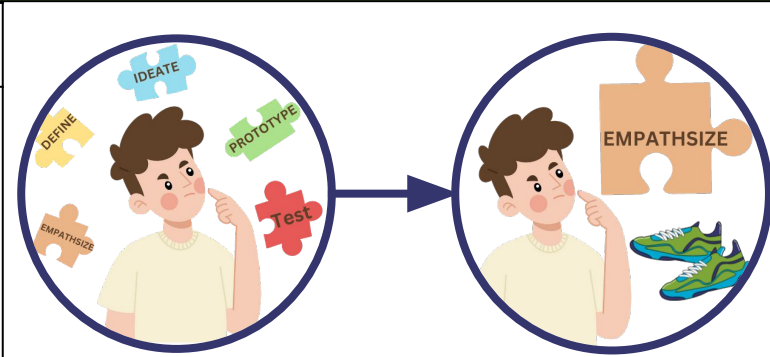
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Represent an environment in different seasons to show environmental changes.



Follow instructions during investigations.

SKILLS & PROCEDURES

1. Draw a picture of an activity you like to do in the winter.
2. Find a friend and compare your activities. How are they the same? How are they different?
3. If you have also done the same activity in winter as your partner, add it to your drawing.

Can we do this in the summer?





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Skills & Procedures


Investigate animal behaviour throughout the seasons, including migration and hibernation.

Share personal experiences related to sudden changes in environments.


Follow instructions with two or three steps given in different forms.

Sequence two or three instruction steps to achieve a desired outcome.




SKILLS & PROCEDURES




Follow instructions during investigations.

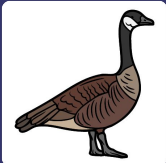
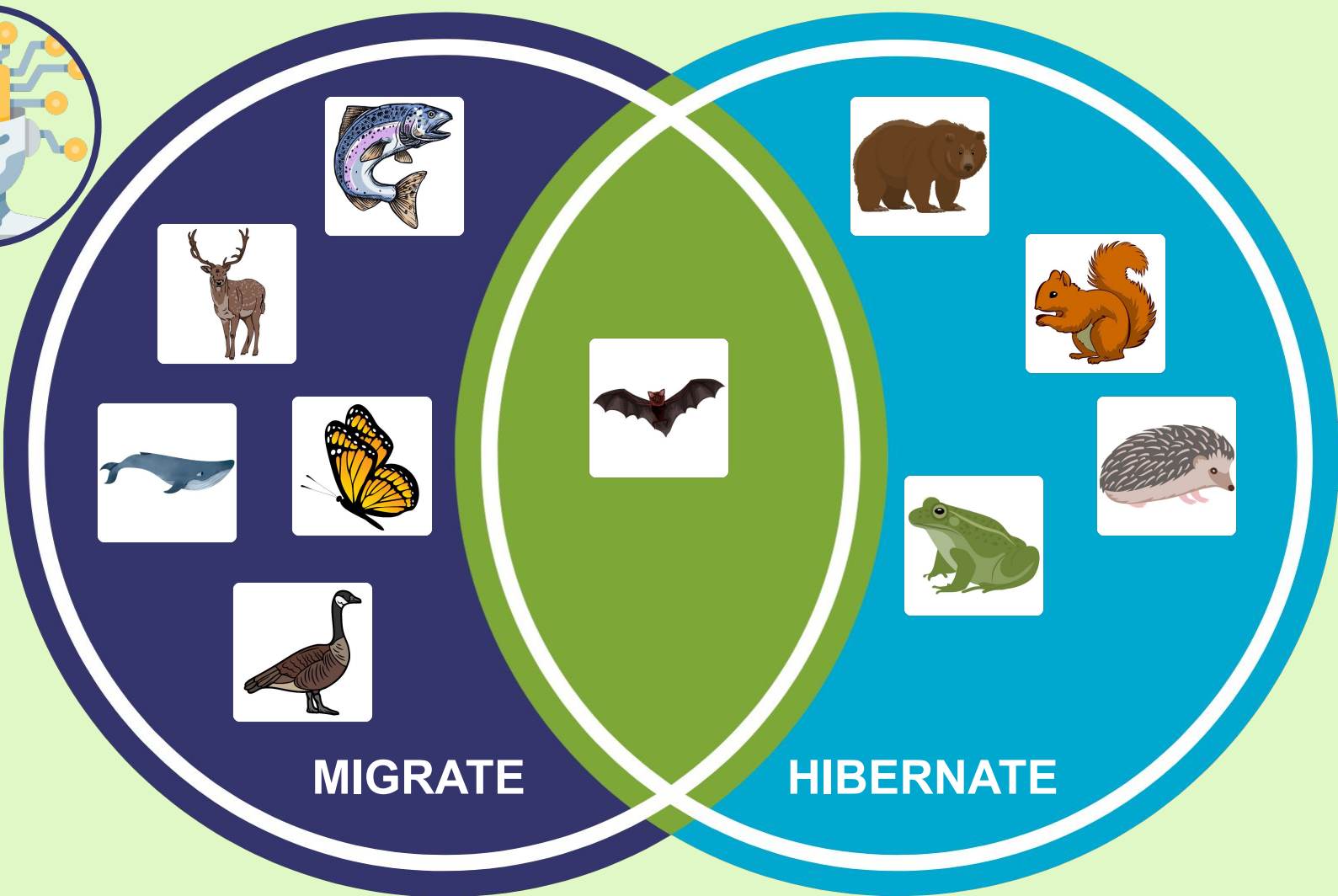
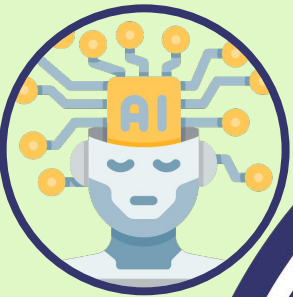



Determine if instructions with two or three steps given in different orders still produce the desired outcome.



SKILLS & PROCEDURES



MIGRATE



HIBERNATE



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Skills & Procedures

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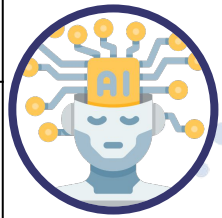
Share personal experiences related to sudden changes in environments.

Sequence two or three instruction steps to achieve a desired outcome.

SKILLS & PROCEDURES

Exchange ideas for creating three-step instructions that achieve a desired outcome.

SKILLS & PROCEDURES

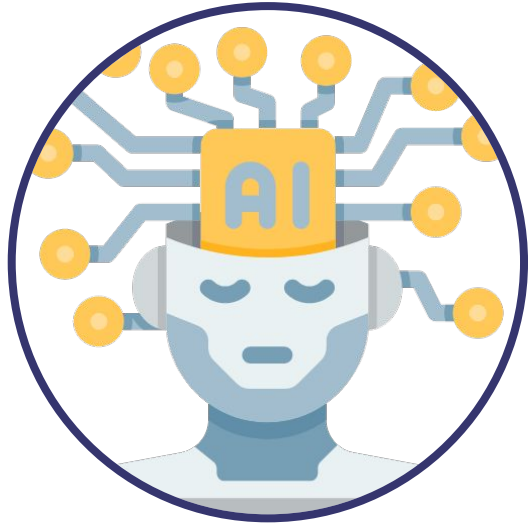


Work with a partner to come up with a set of instructions for extreme cold weather.






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Skills & Procedures






Describe various environments, drawing from information gathered using the senses.








The five senses of Winter

I can see 	I can hear 	
I can smell 	I can taste 	I can touch 






The five senses of Spring

I can see 	I can hear 	
I can smell 	I can taste 	I can touch 

The five senses of Summer

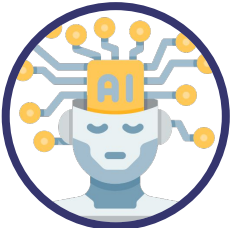
I can see 	I can hear 	
I can smell 	I can taste 	I can touch 

The five senses of Autumn

I can see 	I can hear 	
I can smell 	I can taste 	I can touch 

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UNDERSTANDING
Instructions are ordered in a way that will produce a desired outcome.



UNDERSTANDING
Instructions help to keep people safe.



Let's work together to create a set of instructions for each of the seasons.

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Skills & Procedures
Discuss benefits of spending time in nature.
Identify personal and group actions that demonstrate responsibility and care for nature.
Discuss and reflect on First Nations, Métis, and Inuit traditional teachings that demonstrate a sense of responsibility to care for nature.



EMPATHY

Talking and thinking about feelings helps students develop empathy.

