Lesson Focus: What can Maps, Graphs and Charts Tell Us About Earth's Climate?

Materials:

- Internet access for videos
- Notebook; art supplies

Invitation to Learn: Gathering evidence about Earth's climate from different sources of information.

(Technology Hint: if you launch these sites using Microsoft Edge
Browser, you will have access to the READ ALOUD option. Click
the triple dots at the top right corner to find this.

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Watch and read the following. Be ready to discuss what you have learned.

Weather and Climate

https://climatekids.nasa.gov/menu/weather-andclimate/

https://www.youtube.com/watch?v=vH298zSCQzY

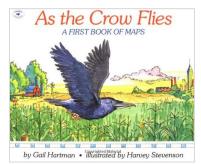
Difference Between Weather and Climate

Weather vs Climate

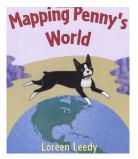
https://www.youtube.com/watch?v=YbAWny7FV3w

As the Crow Flies. By Gail Hartman

https://www.youtube.com/watch?v=zXXjIZBgBIU



Mapping Penny's World. By Loreen Leedy https://www.youtube.com/watch?v=fDTQ3qP_szg



Ask/Discuss:

What do the words "weather" and "climate" mean?

- Weather is the daily state of the atmosphere/air in any given place such as rain, sunshine, snow, and wind.
- Climate is the pattern of weather over a long period of time.
 - While weather can change every few hours, climate can take hundreds or thousands of years to change.

What does the word "infer" mean?

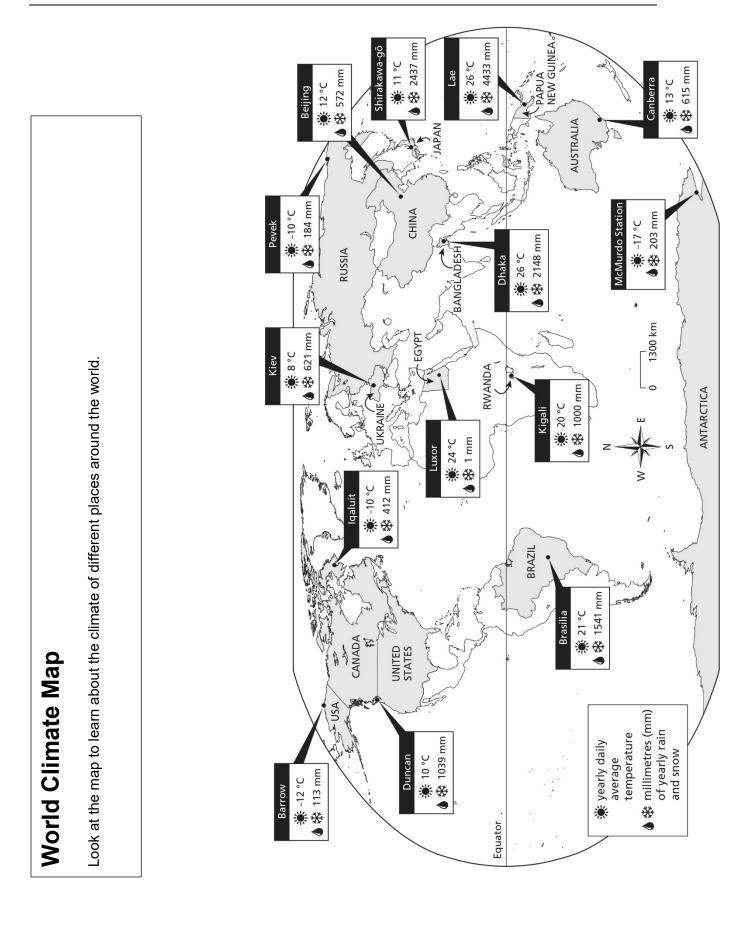
What does the word "precipitation" mean?

- To infer means to make a guess based on facts and observations.
- The liquid and solid water particles that fall from clouds and reach the ground are known as precipitation.

Have a Discussion using World Climate Map (next page):

This map shows the yearly average temperatures and precipitation of different places throughout the world.

- Where are the warmest places?
- Where are the coldest places?
- Which places get the most precipitation?
- Which places get the least precipitation?
- What can you infer from this map?



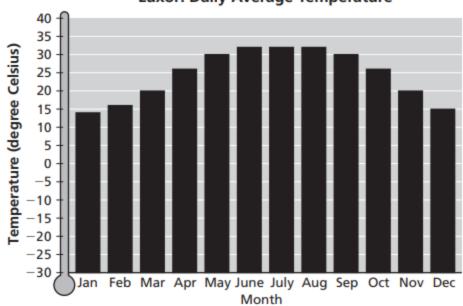
Have a Discussion using Climate of Communities (next page):

The bar graphs present numbers visually and allow us to compare information. The negative numbers on the temperature graphs for Shirakawa-go and Iqaluit are below 0 degrees Celsius (the freezing point).

- Which community is the warmest?
- Which is the coldest?
- Which gets the most rain and snow?
- Which gets the least?

Climate of Communities

Look at the bar graphs and charts to learn about the climate of each community.

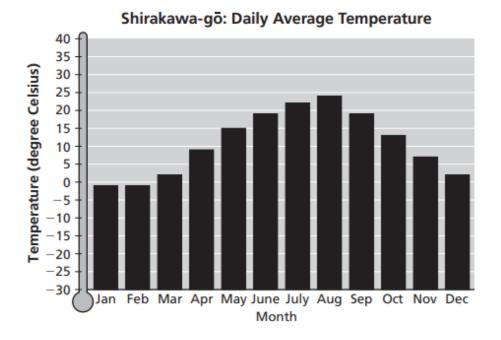


Luxor: Daily Average Temperature

Rain	in	Luxor ((millimetres)
			(

January	0
February	0
March	0
April	0
May	0
June	0
July	0
August	0
September	0
October	1
November	0
December	0

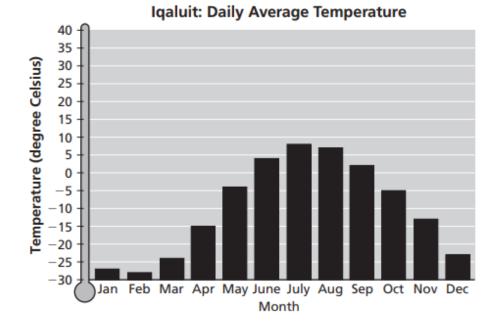
Climate of Communities (continued)



Rain and Snow in Shirakawa-gō (millimetres)

January	275
February	213
March	195
April	143
May	140
June	204
July	280
August	165
September	223
October	148
November	201
December	250

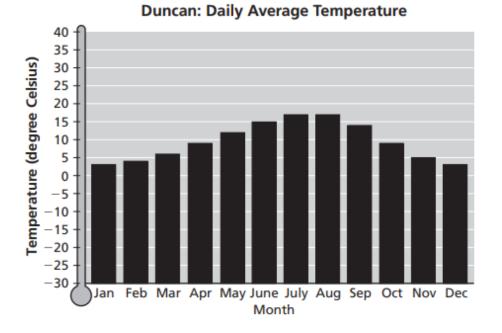
Climate of Communities (continued)



Rain and Snow in Iqaluit (millimetres)

January	21
February	15
March	22
April	28
May	27
June	35
July	59
August	66
September	55
October	37
November	29
December	18

Climate of Communities (continued)

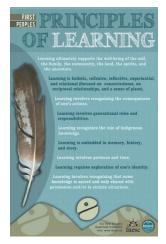


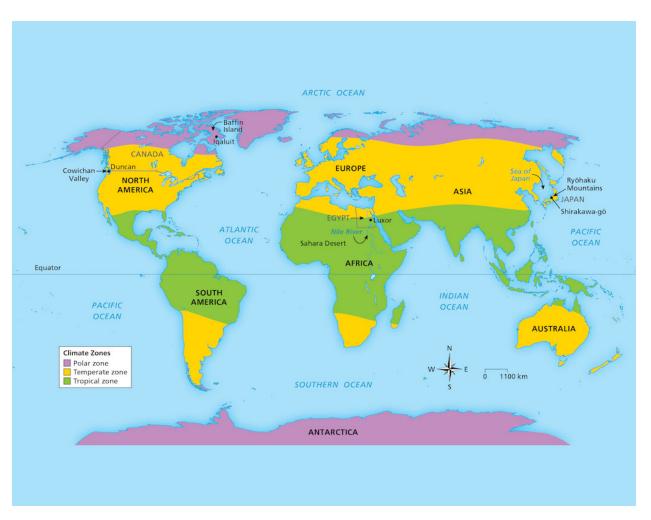
Rain and Snow in Duncan (millimetres)

January	145
February	130
March	102
April	54
May	44
June	37
July	20
August	25
September	47
October	80
November	169
December	186

Learning from First Peoples

First People's traditional knowledge and understanding of climate has enabled them to live successfully in their environment. For example, they built homes suitable to their climate; they followed the migration patterns of mammals, birds, and fish that they relied on for food and resources; they knew when to collect plants for food, medicine, and other uses.





Look at the image.

Ask:

- What map features do you see? (Answer Examples: Compass Rose, Legend, Scale)
- How do these map features help you learn about the climate zones of the world? For example, what does the legend tell you?
- Where is Duncan? What climate zone is it in? What can you infer about Duncan from this climate zone?
- Where is Iqaluit? What climate zone is it in? What can you infer about Iqaluit from this climate zone?
- Looking at the polar zone what can you infer about what life is like in this region?
- Where is Shirakawa-go? What climate zone is it in? What can you infer about Shirakawa-go from this climate zone?
- Where is Luxor? What climate zone is it in? What can you infer about Luxor from this climate zone?

Discuss:

- Climate is the pattern of weather over a long period of time. It determines what kinds of plants can grow and what animals can live in a place. It also influences what people do, how and where they live, and what they wear and eat.
- Different parts of Earth have different climate zones: polar, tropical, temperate.
 - The polar zones are the coldest zones because of limited sun exposure. There is little or no sunlight during winter in these zones, resulting in very long and cold winters in places like Iqaluit, Nunavut.
 - The tropical zones are near the equator. Places within this zone are among the warmest on Earth because the Sun's rays shine more directly over the equator. As a result, these zones are hot around the year. Warm air from the ocean blowing through the tropical zones brings a great deal of precipitation, resulting in rainy seasons. However, there are exceptions such as deserts, in these zones. Luxor, Egypt, for example, is in the Sahara Desert and gets almost no precipitation.
 - In temperate zones, temperatures can vary throughout the year depending on the position of the Sun. As a result, these zones have four seasons. Average temperatures are not extreme like those in the other two climate zones.

Notebook Time:

Choose one listed community that you would like to visit:

- o Luxor, Egypt
- Shirakawa-go, Japan
- Duncan, B.C.
- o Iqaluit, Nunavut

Based on everything that you learned about climate from the graphs, charts, and maps create a "**My Packing List** "of 5 -10 items that you would take on your visit

- Create a My Packing List Poster (Can be digital)
- Include a picture/image of your community
- o labelled images/illustrations of the 5 10 items that you would pack
- An explanation of why you included the items.

Extension Spark:

• Create a video of you presenting your MY PACKING LIST