

Name:

Cohort:

Factors that Affect Climate

To learn about the different factors that affect climate, you are going to independently work through this document.

- Work in order, do not skip anything.
- You will need to watch the videos and fill in notes in all of the **BLUE** boxes.
- You can use the images on the left of each question to help you. If you can't read the words, drag the corner of the picture to make it bigger (then put it back).
- **I highly recommend that you use all the sentence stems provided for full credit.**

1. Watch this video: <https://player.vimeo.com/video/80266773>

Weather

- The *day-to-day characteristics* of temperature, rain, cloud cover and wind
- Why is it important to know/inquire about weather?
 - Short term plans:
 - Going to Six Flags this weekend
 - Playing a soccer game outside tonight
 - Recess tomorrow

What is weather?

Sentence Stem:

- Weather is...

Climate

- Long-term patterns of weather (the **AVERAGE/USUAL** weather)
 - For example:
 - Cool/rainy summers
 - Mild & dry winters
- Why is it important to know about the climate of an area?
 - Long term plans (travelling)
 - Determines where we live, what we wear, what we grow

What is climate?

Sentence Stem:

- Climate is...

From the video:

What are the 6 main factors that affect climate? Fill in the word(s) next to the letter.

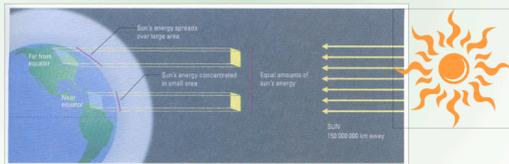
L:
O:
W:
E:
R:
N:

2. Watch this video: <https://player.vimeo.com/video/80266782>

L = Latitude:

LOWERN

- The distance (north and south) from the equator (0°).
- Regions close to the equator are warmer since direct sunlight produces more heat.
- Latitude determines if a region is hot or cold



How does latitude affect climate?

Sentence Stem:

- At 0° latitude (the equator), the climate is typically...
- As you go North and South from the equator, the climate gets..

Fill in the following blanks with:

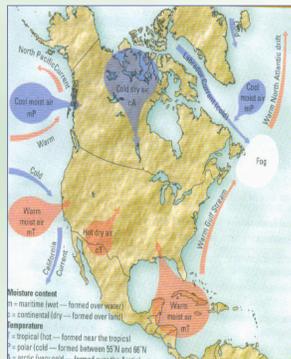
- Moderate
- Hot
- Cold

- At 20° it is:
- At -20° it is:
- At 80° it is:
- At -80° it is:
- At 50° it is:
- At -50° it is:

3. Watch this video: <https://player.vimeo.com/video/80266984>

O = Ocean Currents

- Ocean currents bring warm or cold water to new places
- If the ocean current is **warm** then it will **heat** the air above it.
- If the ocean current is **cold** then it will **cool** the air above it.
- West - Warm Pacific Current
- East - Cold Labrador and Warm Gulf Stream

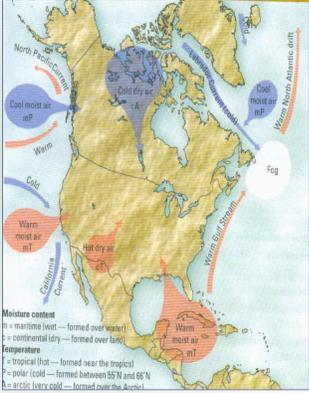


How do ocean currents affect climate?

Sentence Stem:

- Ocean currents affect climate by...
- If the ocean current is **warm**, then it will _____ the air above it.
- If the ocean current is **cold**, then it will _____ the air above it.

4. Watch this video: <https://player.vimeo.com/video/80266777>

<p style="text-align: right;">LOWERN</p> <h2>W = Wind:</h2> <ul style="list-style-type: none"> • Wind moves hot and cold "air masses" to other parts of the world. • Prevailing winds establish a pattern of weather (i.e. Jet Stream) <ul style="list-style-type: none"> ◦ Prevailing wind = normal/typical wind • Weather moves from West to East across Canada (easterly direction) • If there is no wind, our weather wouldn't change very much! 	<h2>How does wind affect climate?</h2>
	<p><i>Sentence Stem:</i></p> <ul style="list-style-type: none"> • Wind affects climate by... • If there was no wind...
<h2>What are prevailing winds?</h2>	
<p>5. Watch this video: https://player.vimeo.com/video/80266781</p>	
<p style="text-align: right;">LOWERN</p> <h2>E = Elevation</h2> <p><i>Elevation:</i> refers to the height above sea level.</p> <ul style="list-style-type: none"> • The higher up you are the colder it gets 	<h2>How does elevation affect climate?</h2>
	<p><i>Sentence Stem:</i></p> <ul style="list-style-type: none"> • The higher the elevation the... • The lower the elevation the...
<p>6. Watch this video: https://player.vimeo.com/video/80266985</p>	
<p style="text-align: right;">LOWERN</p> <h2>R = Relief:</h2> <ul style="list-style-type: none"> • <i>Relief:</i> refers to physical features such as mountain ranges • For example: big difference in elevation). • Mountains/hills act like a barrier to air masses 	<h2>How does relief affect climate?</h2>
<h2>What is relief? Click this link to learn more.</h2> <ul style="list-style-type: none"> • Hint: What is it the opposite of? 	<p><i>Sentence Stem:</i></p> <ul style="list-style-type: none"> • When places have more relief... • When places have less relief...

7. Watch this video: <https://player.vimeo.com/video/80266776>

N = Nearness to Water:

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- Region that are close to oceans and large lakes have different climates = Moderating Effect



- In the summer → water remains cooler than the land and when wind blows, it brings cool air over the land.
- In the winter → water keeps its heat and when wind blows, it brings warm air over the land.

How does nearness/proximity to water affect climate?

Sentence Stem:

- Places that are near large bodies of water have more _____ climate. There is _____ (more or less) precipitation in these areas.
- Places that are **not** near large bodies of water have more _____ climate. There is _____ (more or less) precipitation in these areas.

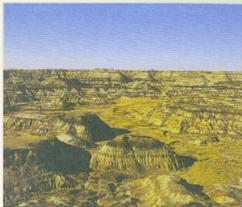
Why does nearness/proximity to water affect climate? How does the moderating effect work?

8. Continental & Maritime Climates

Continental and Maritime Climates

LOWERN

Continental Climate



Maritime Climate



What is a continental climate?

Sentence Stem:

- A continental climate is a region that is...

What is a maritime climate?

Sentence Stem:

- A maritime climate is a region that is...