

WEATHER AND CLIMATE

Weather:

- is the day to day expressions of atmospheric conditions such as temperature, precipitation, humidity, wind speed and direction, cloud cover, and air pressure
- it affects each of us in many ways (i.e. a snowstorm may cancel school for the day, or a fresh fall of snow creates great conditions for skiing or snowboarding)

Climate:

- is the long term pattern of atmospheric (weather) conditions
- weather conditions of a place averaged over a long period of time
- climates influence where we live, what farmers can grow, which clothes we wear, and how we construct buildings

2. Weather is important to us all, but it is of vital importance to some. Fill in the following table by coming up with some ideas on how weather may affect certain occupations.

OCCUPATION	IMPORTANCE OF WEATHER ON THE JOB	SPECIAL MEASURES TAKEN TO OVERCOME THESE PROBLEMS
Airline Pilot		
Firefighter		
Farmer		
Hydro worker		
Bus driver		
Student		

4. Why does Canada's climate have so much variety?
5. What are the FACTORS that affect CLIMATE think: (L.O.W.E.R. N)

L:

O:

W:

E:

R:

N:

LATITUDE:

Sketch a diagram showing the how the Earth's tilt with respect to the sun affects Canada's climate

<u>SUMMER</u>	<u>WINTER</u>

Briefly explain:

Answers to Weather and Climate

1. a) Today is mostly cloudy to partly sunny skies. Winds are moderate from the east with a high of 4°C and a low of 0°C.
- b) The climate of Ottawa goes from one extreme to the other, with extremely warm and humid summers and cold, snowy winters. Rain can be expected any time of the year, but late summer, early fall tends to be the wettest seasons. A feature of the climate of Ottawa is the possibility of late autumn heat waves, enjoyed as “Indian summers”, which frequently occur.
2. a) 3 examples of how weather affects our lives:
 - wind speed & direction on the lake was perfect for sailing nearly every day at camp
 - temperature in your upstairs bedroom was so high in June that you had to sleep in the basement
 - a thunderstorm over the airport delayed your flight to Florida
- b) 3 examples of how climate affects our lives:
 - sunny climate necessitates the use of sunscreen on a daily basis
 - if you live in a cold climate with a short growing season, you pay more for vegetables because they have to be imported from a warmer climate
 - if you live in a foggy climate, your town needs special street lamps that cut through the fog at night

3.

OCCUPATION	IMPORTANCE OF WEATHER ON THE JOB	SPECIAL MEASURES TAKEN TO OVERCOME THESE PROBLEMS
Airline Pilot	Very important - many safety considerations (wind speed, lightening, snow & ice)	Avoid storms Postpone and/or cancel flights De-ice planes before takeoff
Firefighter	Very important - wind speed & direction, dryness of forest all affect their job	Wear special clothing If possible have wind at their backs
Farmer	Very important - success of crops depends on weather (temperature, rain, hail, etc.)	Crop insurance Irrigation systems Drought resistant seed
Hydro worker	Very important - ice and high winds can break lines - power outages due to electric storms	Produce stronger hydro lines or create something that helps melt ice build up on lines Use harnesses and protective clothing when fixing hydro lines
Bus driver	Important - weather can make driving difficult (snow, wind, rain and ice)	Heavy duty tires Put salt or sand on the roads when icy Plough the roads after a snowfall
Student	Minimal - affects what to wear and transportation to and from school	Wear clothes according to weather Cancel buses on heavy snowy & icy days

4. Canada's climate has so much variety because of the following:
 - Canada extends for a great distance from north to south
 - Different elevations produce different climate conditions
 - Coastal regions have different climates from inland regions
 - Wind and pressure systems move weather conditions from one part of the country to another