

Shedding Light on the Sun and Earth Episode 1: Seasons

Name: _____

Part A
Part B

- The sun provides both _____ and _____ to everything on Earth.
- The hottest season is _____ and the coldest season is _____. _____ follows summer and is characterised by falling temperatures. _____ follows winter and is characterized by _____ temperatures.
- Why do plants grow more during spring and summer? _____

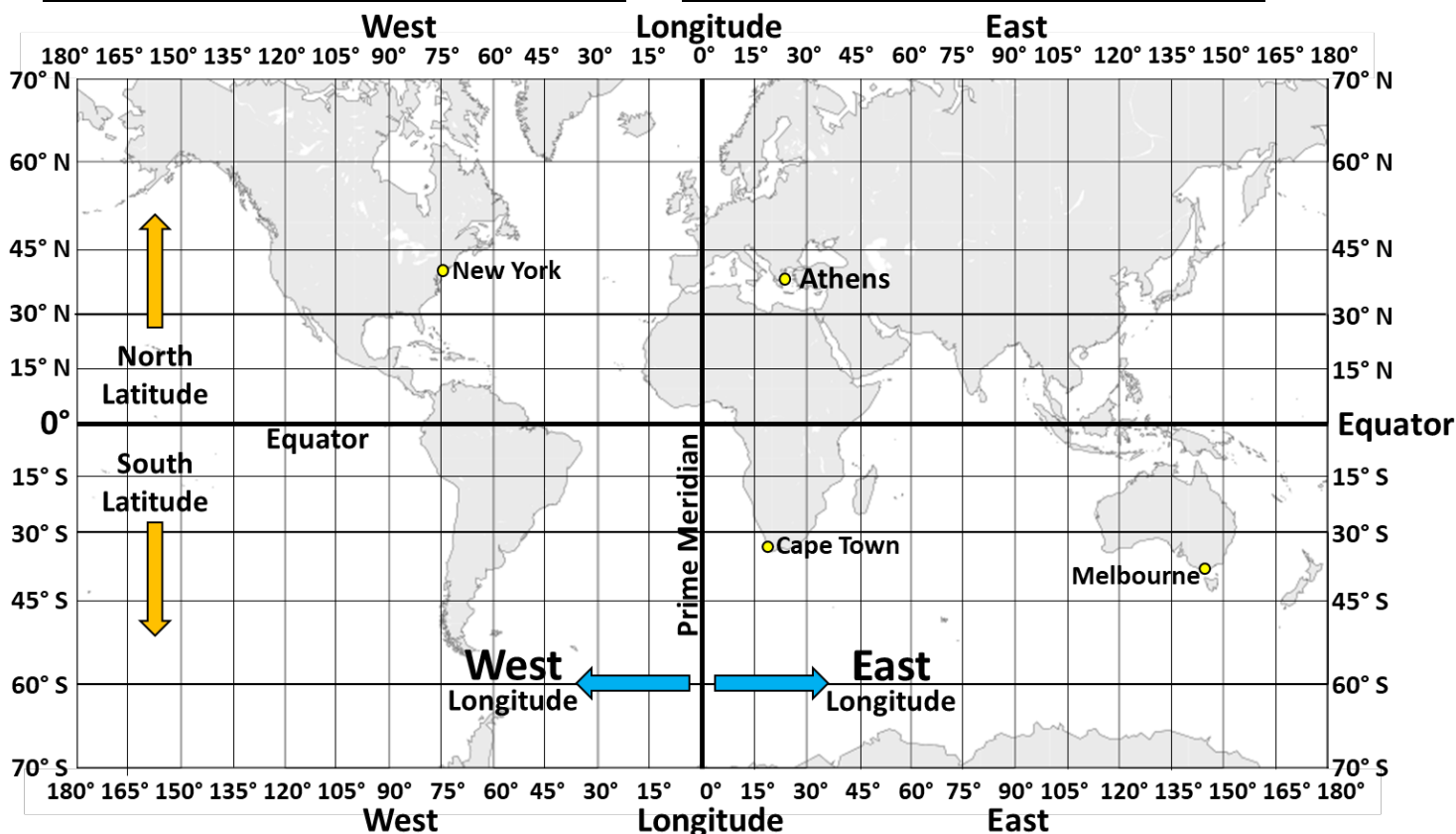
Part C

- Explain (with words and a diagram) the reason that we have days and nights.

- Why is a day 24 hours long? _____
- With respect to the Earth and the Sun, what is a year? _____
- (a) Use the map below to find the latitude and longitude of Melbourne, New York, Athens, and Cape Town.
(b) Use the co-ordinates in the table on the right to mark in the location of Nairobi, Cairns, Montevideo, and Anchorage.
Remember: Latitude: how far from the equator (N or S); Longitude: how far from the prime meridian (W or E)

City	Latitude	Longitude
Melbourne		
New York		
Athens		
Cape Town		

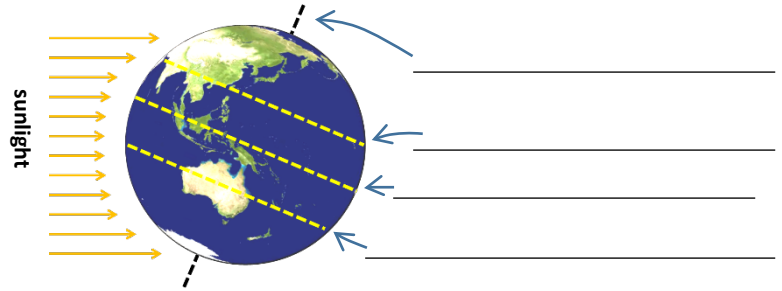
City	Latitude	Longitude
Nairobi	1°S	37°E
Cairns	17°S	146°E
Montevideo	35°S	56°W
Anchorage	61°N	150°W



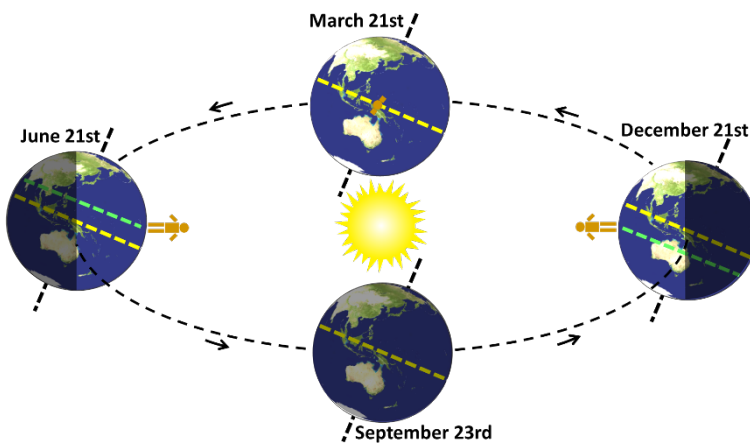
- Which of the eight cities marked on your map is likely to have the warmest climate and which is likely to have the coolest climate? Why? _____
- If it isn't already marked, place a mark on the map of your city or town and determine its latitude and longitude.
City or town: _____; Latitude: _____; Longitude: _____

Part D

10. The angle of Earth's axis of rotation with respect to the orbital plane is _____.
11. Use the diagram at right to explain why the Southern Hemisphere experiences summer and the Northern Hemisphere experiences winter when it is in the position shown.



12. Label the four important dotted lines on the diagram above.



13. On around _____ every year, the December solstice occurs. It is often called the _____ solstice in the southern hemisphere and the _____ solstice in the northern hemisphere. On this day, the sun is directly over the _____.

The nights in the southern hemisphere are _____ and the days are _____.

In the northern hemisphere, the nights are _____ and the days are _____.

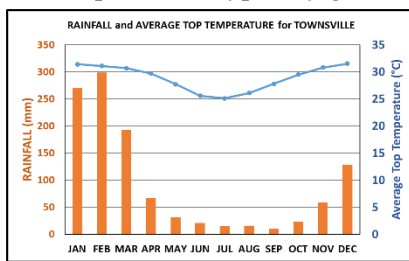
14. On around March 21st and September 23rd every year, the two _____ occur.

The sun is directly over the _____. Daytime last approximately _____ hours and night time also lasts about _____ hours.

15. On around _____ every year, the June solstice occurs. It is often called the _____ solstice in the southern hemisphere and the _____ solstice in the northern hemisphere. On this day, the sun is directly over the _____.

Part E

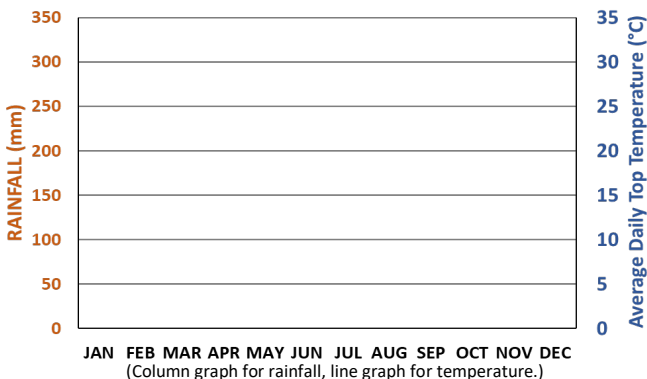
16. The tropics don't typically get four seasons, but only two: the _____ and the _____.



17. Write a brief description of Townsville's rainfall and temperature data. _____

18. Use the internet to find climate data for the city you live in. Fill in the table and then complete the climate graph. (Eg. Most Wikipedia articles on a city have a climate section.)

RAINFALL and AVERAGE TOP TEMPERATURE for



Climate Data for the City of

Month	Rainfall (precipitation) (mm)	Average Daily High (°C)	Month	Rainfall (precipitation) (mm)	Average Daily High (°C)
Jan			Jul		
Feb			Aug		
Mar			Sep		
Apr			Oct		
May			Nov		
June			Dec		

19. On the map on Page 1, mark in with a straight line the Tropics of Capricorn and Cancer, and the Polar Circles.