Raffles Girls' School (Secondary)
Raffles Programme
Year 2 Geography 2021

Name of Student: _____ ( ) Date: _____

Class: _____

SLS Diagnostic Test: Climograph and Climate Types

Issue: Can forest resources be sustainably managed?

Theme: The World as Interacting Systems
Topic: Physical Systems: Weather and Climate (II)
Enduring Understanding:

- The physical characteristics of a place influence the natural vegetation biome which can contribute to biodiversity and sustain life.

Essential Questions:

- What is a biome?
- What are the physical factors that influence the spatial distribution of biomes?
- How does natural vegetation adapt to its physical environment?
- Is climate the sole physical determinant of the type of natural vegetation found in a place?

A. Watch the following video to revise on climographs.
Video 1
https://www.youtube.com/watch?v=s_DA9Aos3i4&t=376s

1. Which of the following is true of about annual temperature range?
   A) It measures the difference between the maximum temperature and minimum temperature of the year.
   B) It measures the sum of the maximum and minimum temperature of the year.
   C) It measures the sum of all temperatures in a year.
   D) It measures the sum of all temperatures in a year ÷ 12.

2. How is the mean annual temperature calculated?
   A) Maximum temperature – Minimum temperature
   B) Sum of all temperatures in a year ÷ 12
   C) Maximum temperature + Minimum temperature
   D) Sum of all temperatures

3. Why did the video describe the temperature in the first climograph shown as "constant throughout the year"?
   A) The temperatures throughout the year do not fluctuate much.
   B) The measurements on the y-axis scale exaggerated the changes in temperature.
   C) The changes in temperature are constant throughout the year.
   D) There are no changes in temperature throughout the year.

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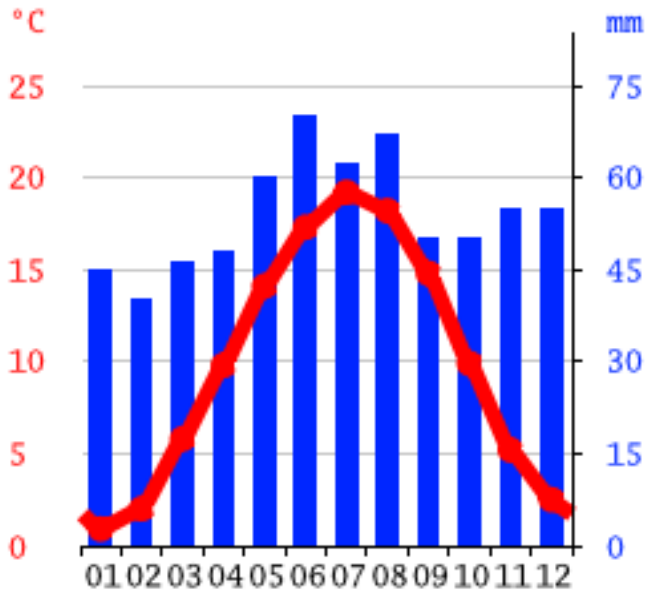
4. How are wet and dry seasons identified from the rainfall graph as shown in the 2nd climograph shown?

5. Describe the climate below by filling in the blanks below.



The temperatures _____throughout the year. The maximum temperature is about _____C in _____while the minimum temperature is about 1°C in_____. Therefore, the annual temperature range is _____. The mean annual temperature is (choose one of the following: 10°C, 20°C or 5°C) is about _____C and is (choose one of the following: low, moderate or high) _____. The temperatures shows that this place experiences _____seasons, with summer in the middle of the year and _____ from the end to the beginning of the year. Hence, this place experiences the _____ climate in the _____ hemisphere. The total annual rainfall is about (choose one of the following: 200 mm, 650 mm or 2000 mm) _____mm, which is (choose one of the following: low, moderate or high) _____.

B. Watch the following video to recap on the main climate types.
Video 2:
https://www.youtube.com/watch?v=7yiqkOH1GTQ

6. Recap from Year 1. From the map shown, name the 3 types of climate types that is found within the zones in the following lines of latitude:

   Ans: (Fill in the blanks)
   Between 23.5°N and 23.5°S _____
   Between 23.5°N and 66.5°N, Between 23.5°S and 66.5°S _____
   Between 66.5°N and 90°N, Between 66.5°S and 90°S _____

However, climate types are more complex than just the 3 major types of climates. Wladimir **Köppen** (1846–1940) was a German meteorologist and climatologist best known for his delineation and mapping of the climatic regions of the world. He played a major role in the advancement of climatology and meteorology for more than 70 years and mapped out the world's

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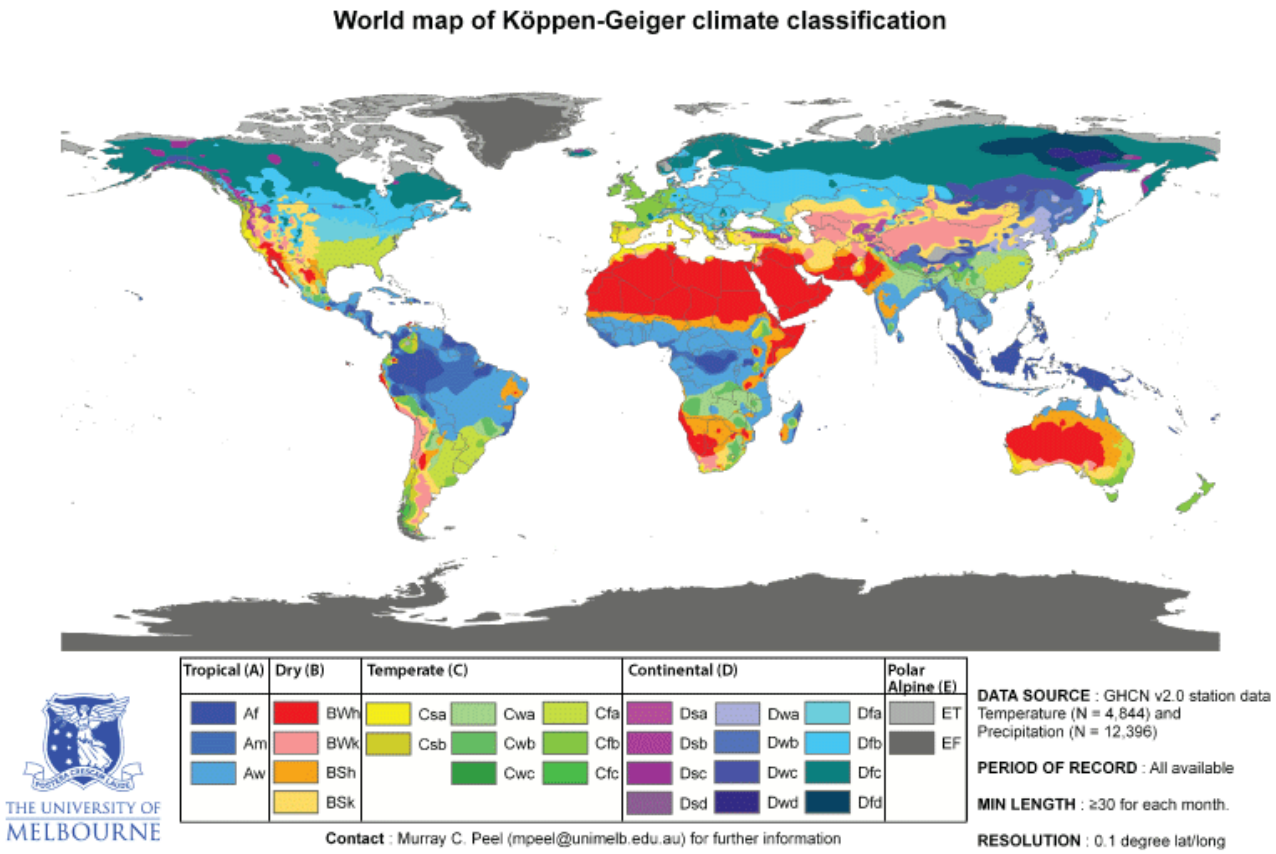
climate types in the **Köppen**. Rudolf **Geiger** was a German meteorologist and climatologist. He introduced some changes to the **classification** system, which is then called the **Köppen–Geiger climate classification system.**



Watch this video on Monsoon Winds at https://www.youtube.com/watch?v=vwD0UpsA5kE

The tropical climate can be further classified into equatorial climate (which you've learnt in Sec 1) and tropical monsoon climate as affected by the monsoon winds shown in Climograph 1 in Video 1.

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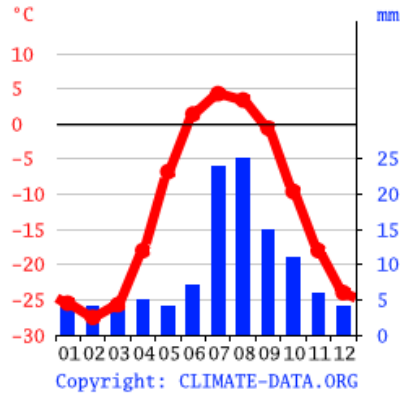
7. Match the following climographs (A, B, C and D) to the climate types.

Equatorial climate _____

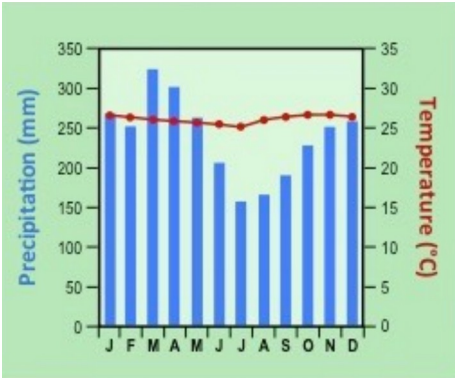
Tropical monsoon climate _____

Temperate climate _____

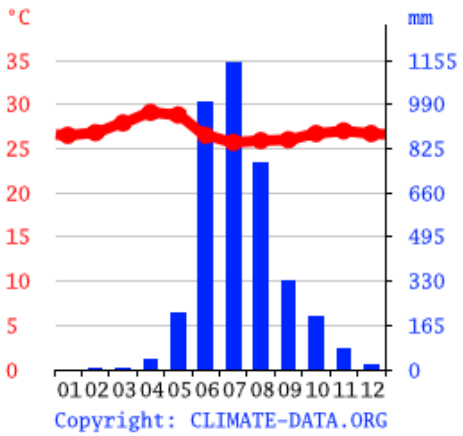
Polar climate _____



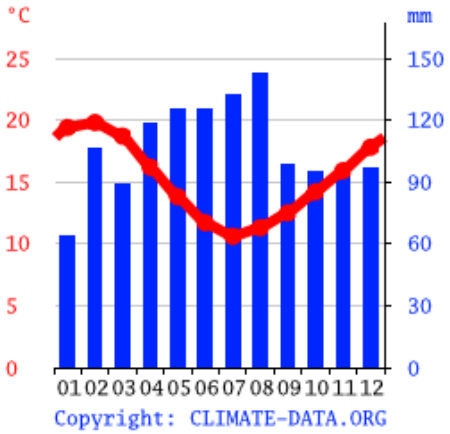
A



B



C



D

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