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CHAPTER 1 Practise Reading Climatographs

BLM 1-8

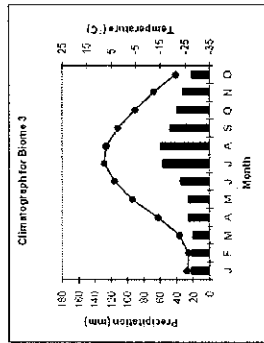
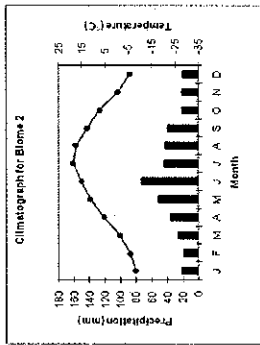
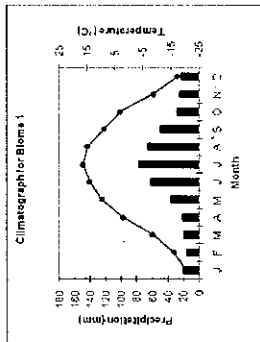
Goal • Compare climatographs from three locations that are typical of different biomes.

Question

What inferences can you make by comparing the climatographs from three locations?

What to Do

The following climatographs give temperature and precipitation data for three typical locations within three biomes. Use the data from the climatographs to complete the table below. You will have to estimate values.



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| Biome | 1 | 2 | 3 |
|--|--|---|---|
| Warmest average monthly temperature (°C) | +16 | +19 | +8 |
| Month with warmest average temperature | July | July | July |
| Coldest average monthly temperature (°C) | -20 | -10 | -26 |
| Month with coldest average temperature | JANUARY | JANUARY | JANUARY or FEBRUARY |
| Total precipitation (mm) in January, March, August, and October | J: 20 M: 20 A: 65 O: 28 | J: 26 M: 25 A: 42 O: 21 | J: 20 M: 20 A: 60 O: 40 |
| Driest month and total amount of precipitation for this month (mm) | Month: Feb Total precipitation: 16 | Month: Dec, Nov, Total Dec, Feb precipitation: 20 | Month: Dec, Jan, Total Feb, Mar precipitation: 20 |
| Wettest month and total amount of precipitation for this month (mm) | Month: July Total precipitation: 75 | Month: JUNE Total precipitation: 79 | Month: August Total precipitation: 60 |
| Start and end of growing season (months where temperatures first rise above or fall below 5°C) | Start: May End: Sept. | Start: April End: October | Start: July End: August |

Analyze

1. Which biome is the closest to the equator? Assume that there are no great differences in altitude among the three locations. Explain your answer.

Biome 2 (Lethbridge, 49.63°N) lowest growing season, warmest temperatures, little precipitation/snow

2. Which biome has the most northerly latitude? Explain your answer.

Biome 3 (Igdluit, 63.75°N) shortest growing season, coldest temperature, very dry

3. Which biome receives the most annual precipitation? Explain your answer.

Biome 1: 445 mm Biome 2: 415 mm Biome 3: 412 mm

For McMurray: receives the most

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4. Which biome receives the least annual precipitation? Explain your answer.

Biome 3: 410 mm

5. Which biome has the longest growing season? Explain your answer.

Biome 2: seven months

6. Which biome has the shortest growing season? Explain your answer.

Biome 3: two months

7. In which biome would animals need to have structural and behavioural adaptations to survive long, cold winters? Explain your answer.

Biome 3: Tundra. Animals would have to have structural and behavioural adaptations to long, cold winters

Conclude

8. Infer the biome that is represented by each climatograph. Provide two reasons why you made each inference.

(a) Biome 1: Taiga

Summer temperatures allow ground to thaw. Winters are long and cold, but not as long as in the tundra. Precipitation is sufficient to support coniferous forests.

(b) Biome 2: Grassland

Precipitation is insufficient to support large forests. Growing season is long, with dry periods (drought) during the summer. Supports grasses that are adapted to survive drought as well as grazing animals.

(c) Biome 3: Tundra

Winters are long and cold. Precipitation in form of snow. Short growing season. Soil would not be able to thaw completely in summer. Summer is short and cold.