

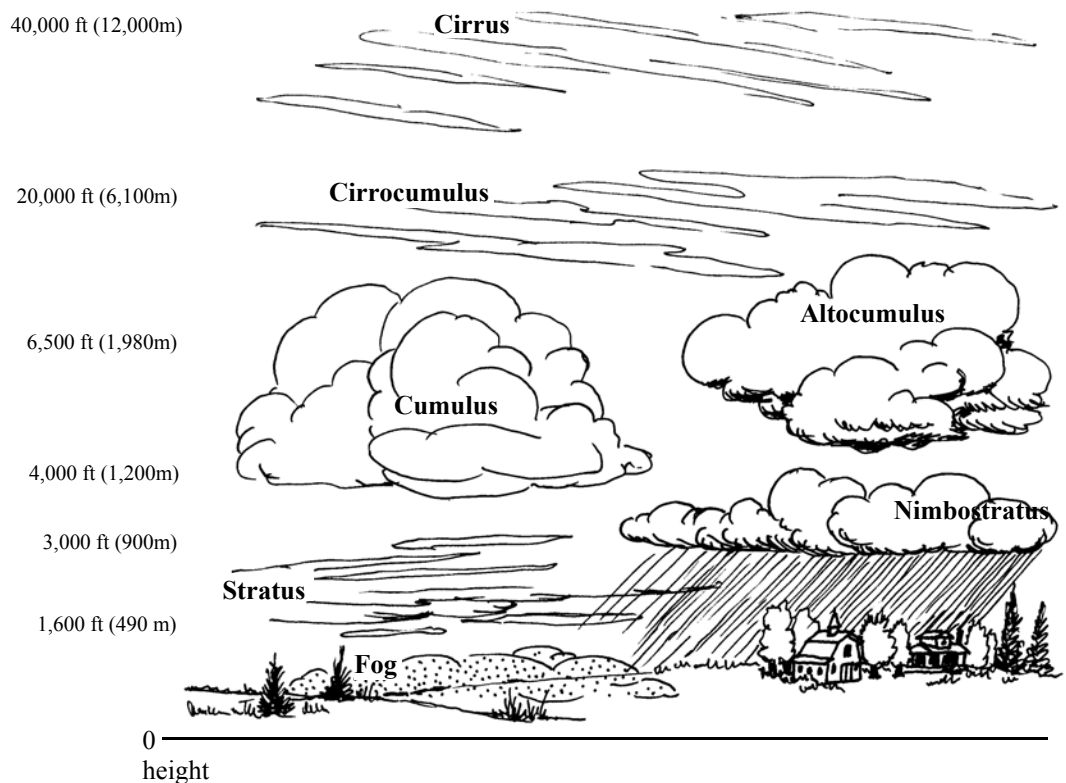
## CHAPTER 6 — Mathematics Problem Solving

- A. Study the weather map shown here. It lists high and low temperatures for certain cities in Washington, Oregon, Idaho, Montana, and British Columbia.



1. Which city has the greatest high-to-low temperature *range*?
2. Which city has the highest temperature? The lowest? What is the *range* from the highest to lowest temperature?
3. Calculate the average (*mean*) high and low temperature for Oregon, Washington, and Idaho. What is the most common (*mode*) high temperature in the region?
4. Study the low and high temperatures. List each set in order so that you can find the middle (*median*) high and low temperatures for the region.
5. Compare the *mean*, *median*, and *modal temperatures* for the region's high and low. How do mean, median, and mode compare? Which do you think is the most useful statistic?
6. Look at the map for temperature patterns. Draw the coastal and Cascade mountain ranges on the map to help you find temperature patterns. Write a sentence to explain the difference between mean, median, and mode.

- B. Identify three cities: yours, any other city in the Pacific Northwest, and a city in any other country.
1. Look in the daily newspaper for the high and low temperatures for each city over a 2-week period.
    - a. Record your findings each day.
    - b. Make a line graph for each city. Indicate high temperatures in red lines and low temperatures in blue lines.
- C. Work with a partner to draw and/or photograph cloud formations in your local area.
1. Make sketches or take photographs over several days so that you can identify different cloud patterns.
  2. Use the accompanying illustration to identify the types of clouds you record and your *estimation* of their heights.
  3. Study the illustration to answer the following: what is the ratio of the average (*mean*) height of stratus clouds to cirrus clouds? What is the ratio of the average (*mean*) height of nimbostratus clouds to altocumulus clouds?



D. Here is a problem that does not have a simple single answer. Consider the following numbers. Which number is least like the other three? Try to list at least three reasons for your answer. By the way, there is no definite right or wrong answer.

1903 1066 1804 1620

1. Name something that happened in each of these years.
2. Make a timeline showing the years listed here and include at least four other significant dates between 1066 and 1903.
3. Illustrate your timeline.

E. Make a timeline showing the journeys of the following people to the Pacific Northwest:

1. Captain James Cook
2. Captain George Vancouver
3. Captain Robert Gray
4. Meriwether Lewis and William Clark
5. Marcus and Narcissa Whitman

