

Name: _____
Hour: _____ Date: _____

Chemistry: *Graphs*

Reading Graphs

Being able to read a graph is a very important skill. Many fields of endeavor, including science, politics, and economics often use graphs to quickly and effectively relate a large amount of information.

Look at the graph on the right and answer the questions.

1. What is the **label** on the x-axis?

...the y-axis?

2. What **units** are used to describe these labels?

...x

...y

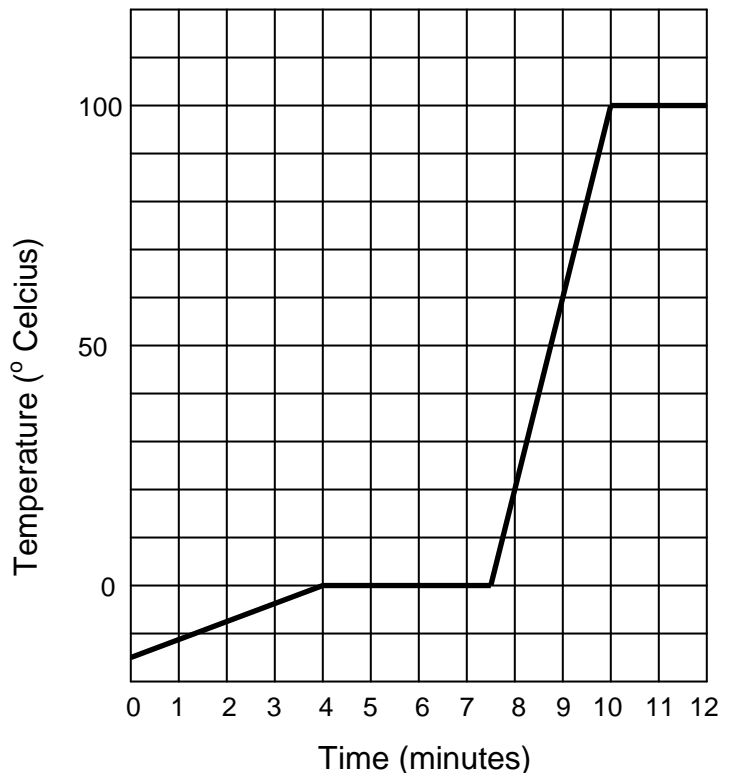
3. Describe in detail what you think the experimenter did to get the data for this graph.

4. Over what time interval(s) does the temperature remain constant? Include units.

5. Over what time interval(s) is the temperature rising? Include units.

6. What is the temperature of the water after four minutes? Include units.

7. At what time is the temperature 10°C? Include units.



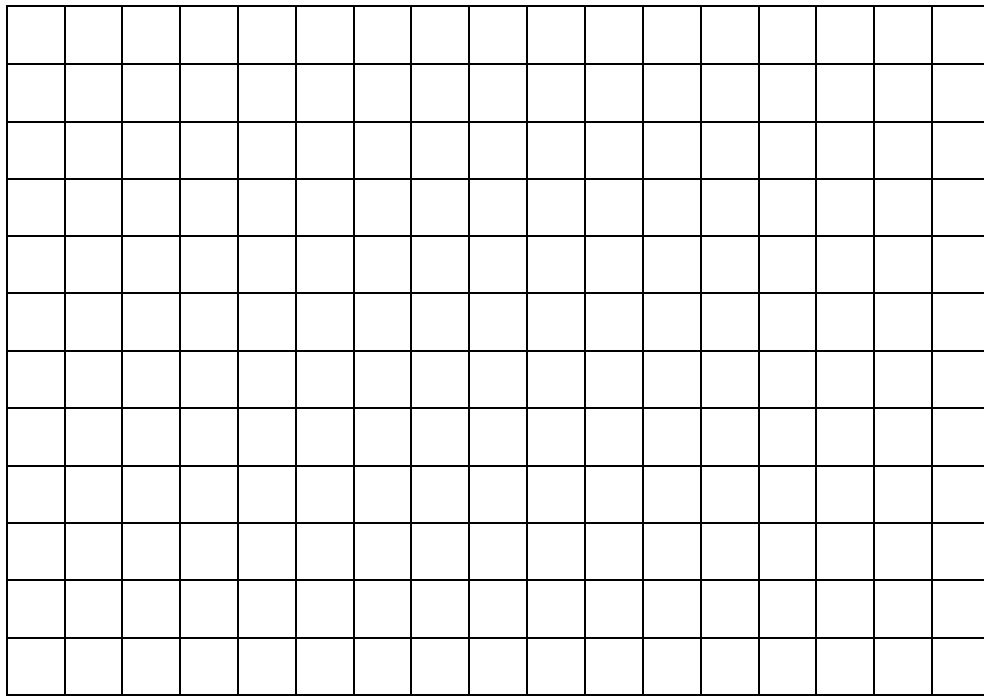
Creating Graphs

All good graphs have several items in common. All good graphs...

1. have a title at the top.
2. have axes that are labeled, with proper units.
3. are neat, and easy to read.
4. use most of the available space.

| Time | Total Distance Bicycled (km) |
|------------|------------------------------|
| 8:00 a.m. | 0 |
| 9:00 a.m. | 12 |
| 10:00 a.m. | 23 |
| 11:00 a.m. | 33 |
| noon | 42 |
| 1:00 p.m. | 50 |
| 2:00 p.m. | 57 |
| 3:00 p.m. | 63 |
| 4:00 p.m. | 68 |

Using the table on the previous page, prepare a graph that illustrates this data about a bicycle trip.



- a. How would you expect the graph to look if data were available for 5 and 6 p.m.? Then, identify one factor that might cause the graph NOT to look like this.

- b. Use your graph to estimate the total distance traveled by 10:30 a.m. Can you be absolutely certain of this value? Why or why not?

- c. Compare the distance traveled during the first hour of the trip with the distance traveled during the last hour of the trip. Suggest a possible explanation for the difference. How is this difference illustrated on the graph?