

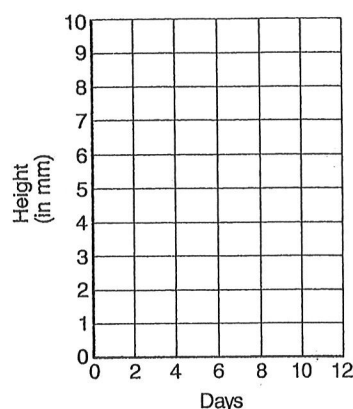
Reading and Making Graphs

A graph is a pictorial representation that shows us how two numbers or values are related to each other. Scientists use graphs to show the results of their experiments. Often it is easier for scientists to compare and contrast the results of their experiments when the results are shown on a graph. The two most common graphs used by scientists are line and bar graphs. To learn how to make these graphs, you will need red, blue, and green pencils and a ruler.

I. Making a Line Graph

Amy did an experiment to determine how temperature affects the growth of plants. In her experiment she grew nine plants. Three were grown at 18°C, three at 22°C, and three at 27°C. Every second day she recorded the height of the plants in mm.

Plant Height (in mm)			
Day	18°C	22°C	27°C
2	2	2	2
4	3	4	4
6	4	5	6
8	4	5	6
10	5	6	8
12	5	7	10



Follow these directions to draw a line graph to illustrate the growth of the plants.

1. Print a title at the top of your graph.
2. Across the bottom of your graph, number the vertical lines 2, 4, 6, 8, 10, and 12.
3. Under the numbers print the word days.
4. On the left side of your graph, number the horizontal lines 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10.
5. To the left of the numbers print the words height (in mm).
6. Refer to your chart. Note that on day 2 the average height of the plants grown at 18°C was 2 mm. Find the line representing 2 mm on the vertical axis and the line representing 2 days on the horizontal axis. Follow the two lines until they meet. At the place where they meet, make a red dot. This dot is a plot point.
7. Refer to your chart. Note that on day 4 the average height of the plants grown at 18°C was 3 mm. Find the line representing 3 mm on the vertical axis and the line representing 4 days on the horizontal axis. Follow the two lines until they meet. At the place where they meet, make a red plot point.
8. Follow the procedure outlined in steps 6 and 7 for each day the height of the plants grown at 18°C was recorded.
9. Use your ruler to connect the red plot points. On the line you draw, print plants at 18°C.
10. Follow steps 6 to 10 to make lines that show the growth of the plants at 22°C and 27°C. Use a different color to draw each line.