

Y5 Line Scatter Graphs

KS2 Y5 Science · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

Draw a line graph of a cooling cup of water.

Step 1 · Put the thing you changed or the time on the x-axis (across)

Time (minutes)

Step 2 · Put what you measured on the y-axis (up)

Temperature (°C)

Step 3 · Choose an even scale for each axis

e.g. time in 5s, temperature in 10s or 20s

Step 4 · Plot each point with a small cross, then join them

Join with straight lines or a smooth curve

Answer: A line graph with labelled axes, units, an even scale, plotted points and a line.

Check: Give it a title, such as 'How a cup of water cools'.

2. Now try one with the steps

Use the cooling graph to estimate the temperature at 12 minutes.

Step 1 · Find 12 on the time axis

Step 2 · Go straight up to the line

Step 3 · Read the value

Answer:

3. Practice

Have a go at each one. There is space underneath to work it out.

1. Which axis goes across the bottom of a graph?

2. On a line graph of an investigation over time, which axis does time usually go on?

3. Name TWO things every axis needs.

4. Which type of graph is best for data where one variable is a category, like types of material?

5. Which type of graph is best for showing how something changes over time?

6. Which type of graph shows whether two measurements are related, such as shoe size?

7. Should you join the dots on a scatter graph?

8. Cooling results: 0 min 80°C, 5 min 64°C, 10 min 52°C, 20 min 38°C. What was the temperature in °C at 0 minutes?

9. Cooling results: 0 min 80°C, 5 min 64°C, 10 min 52°C, 20 min 38°C. What was the temperature in °C at 20 minutes?

10. Cooling results: 0 min 80°C, 5 min 64°C, 10 min 52°C, 20 min 38°C. How many degrees did the water cool in the first 5 minutes?

11. A y-axis goes 0, 10, 20, 30. What is each step worth?

12. Dots on a scatter graph go up from left to right. Describe the relationship.

13. Why is a line graph useful for estimating values you didn't measure?

14. A line on a graph gets less steep over time. What does that tell you?

4. Before you hand it in

Using an uneven scale, like 0, 5, 20, 50.

Use equal steps: 0, 10, 20, 30...

Forgetting axis labels or units.

Label each axis with what it shows and its unit, e.g. 'Time (minutes)'.

Using a line graph for categories.

Use a bar chart when one variable is a category.

Joining the dots on a scatter graph.

Describe the overall pattern of the dots instead.