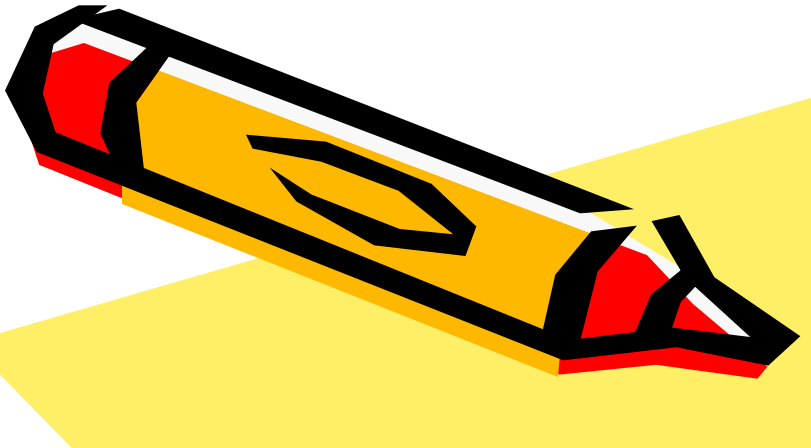


Drawing Graphs

Bar Graphs & Line Graphs

Bar Graphs

- Numbers up the side
- Words along the bottom
- Labels up side & along the bottom

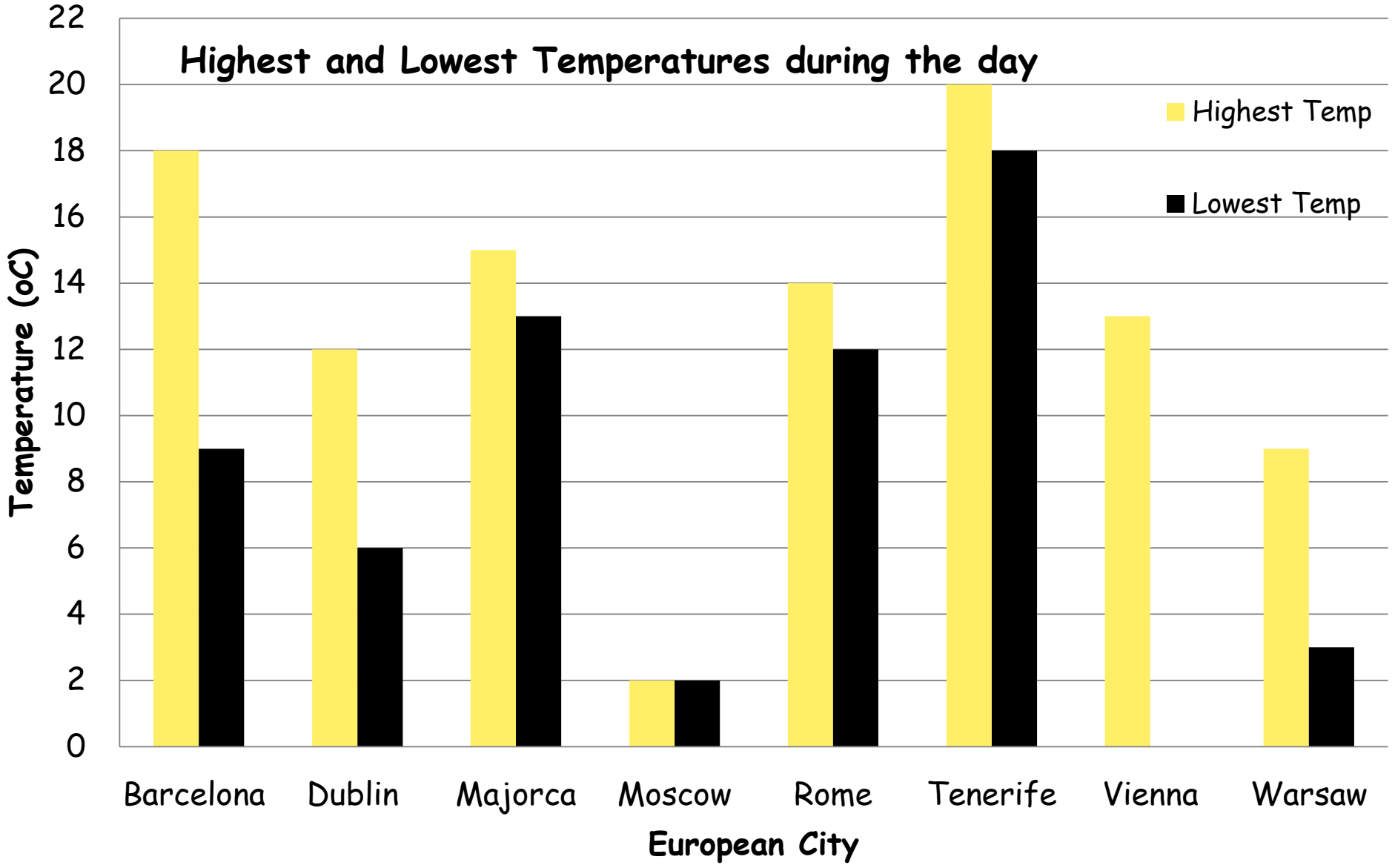
Line Graphs

- Numbers go up the side & along the bottom

- Side and base of graph need to be labelled

Bar Graph - Example

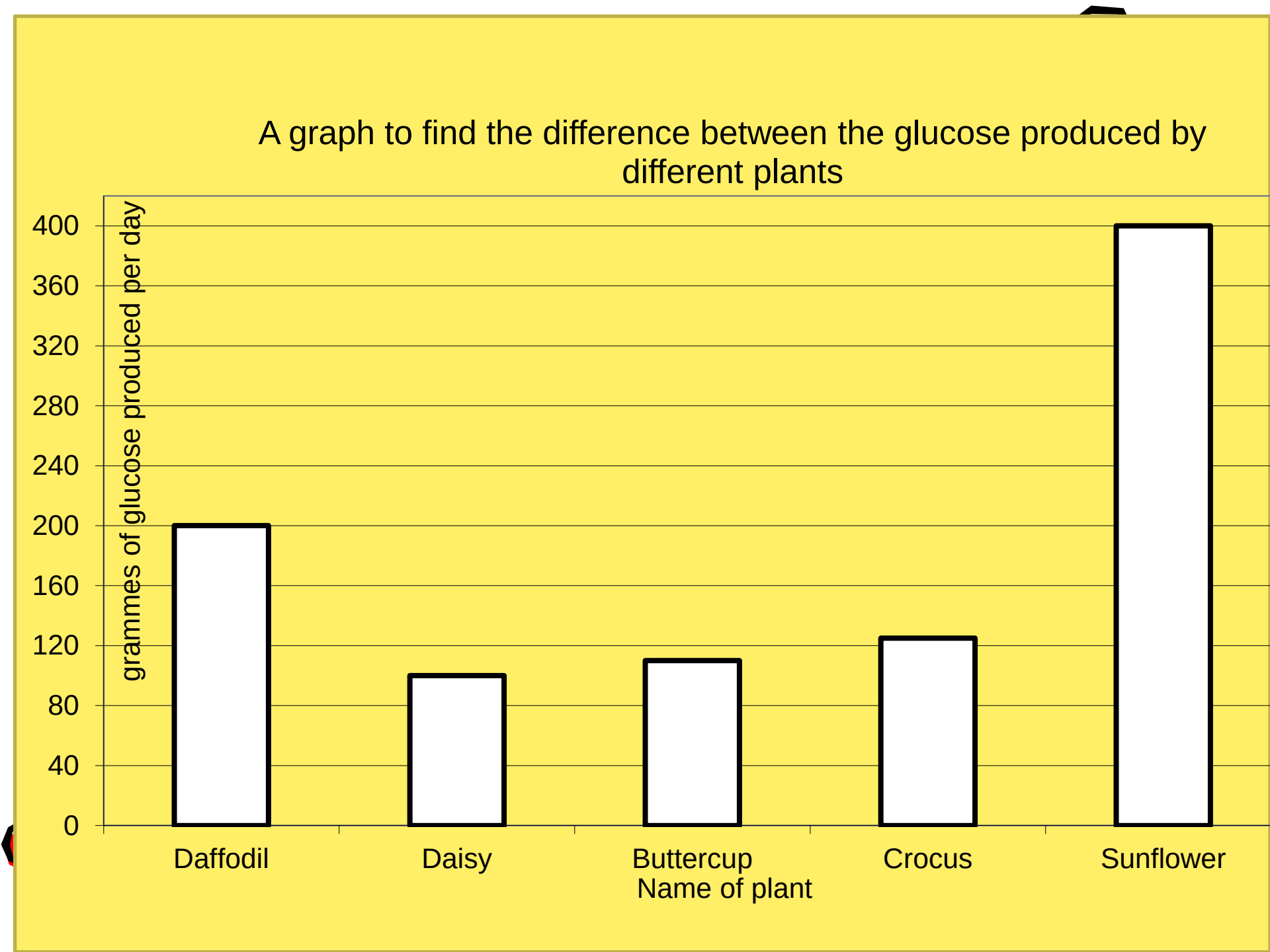
Place	Highest Temp (°C)	Lowest Temp (°C)
Barcelona	18	9
Dublin	12	6
Majorca	15	13
Moscow	2	2
Rome	14	12
Tenerife	20	18
Vienna	13	0
Warsaw	9	3


Highest and Lowest Temperatures during the day
Highest Temp
Lowest Temp
Temperature (oC)
22
20
18
16
14
12
10
8
6
4
2
0
Barcelona
Dublin
Majorca
Moscow
Rome
Tenerife
Vienna
Warsaw
European City

Graph Work

The table below shows the number of grams of glucose produced by different plants in one day.

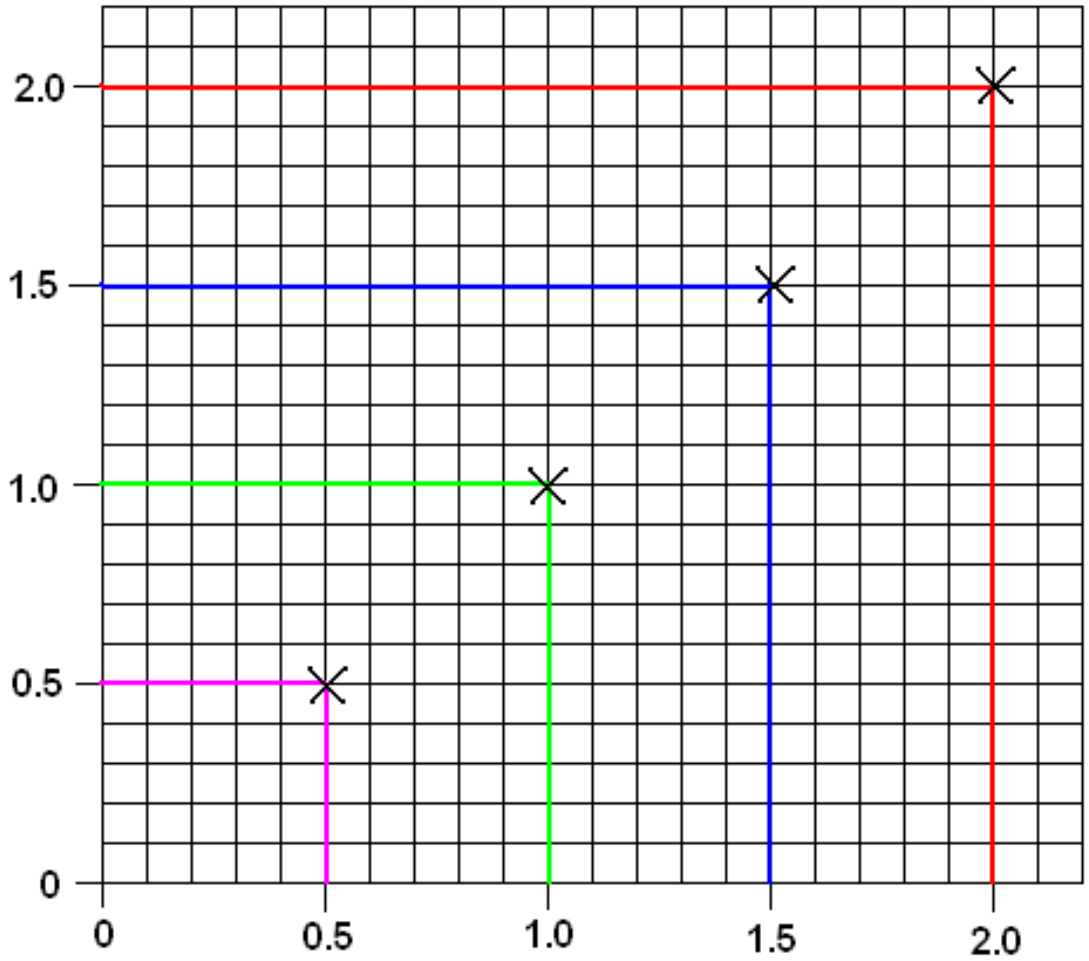
Plants	Grammes of glucose produced in one day
Daffodil	200
Daisy	100
Buttercup	110
Crocus	125
Sunflower	400


A graph to find the difference between the glucose produced by different plants
grammes of glucose produced per day
400
360
320
280
240
200
160
120
80
40
0
Daffodil
Daisy
Buttercup
Crocus
Sunflower
Name of plant

How to draw line graphs

- Line graphs are used to show information more clearly than a simple results table.
- Line graphs compare information that is similar, e.g. time.
- You can not use line graphs to compare information that is very different, e.g. eye colours.

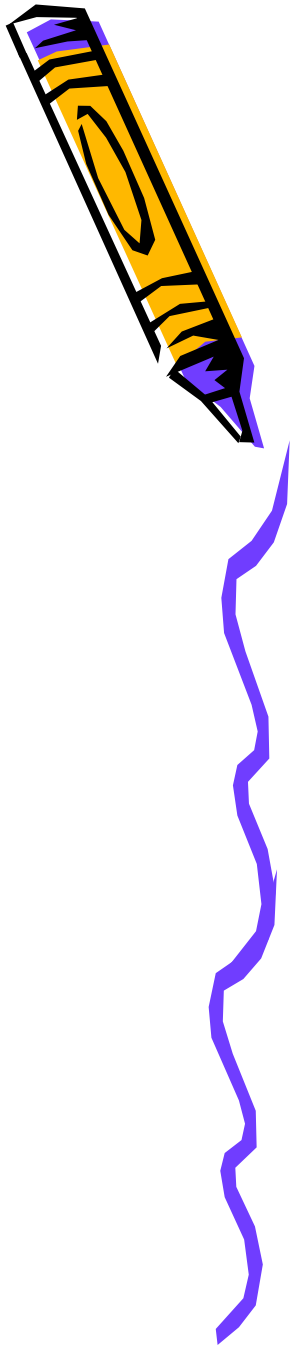
Dependant variable goes along the vertical (y – axis)



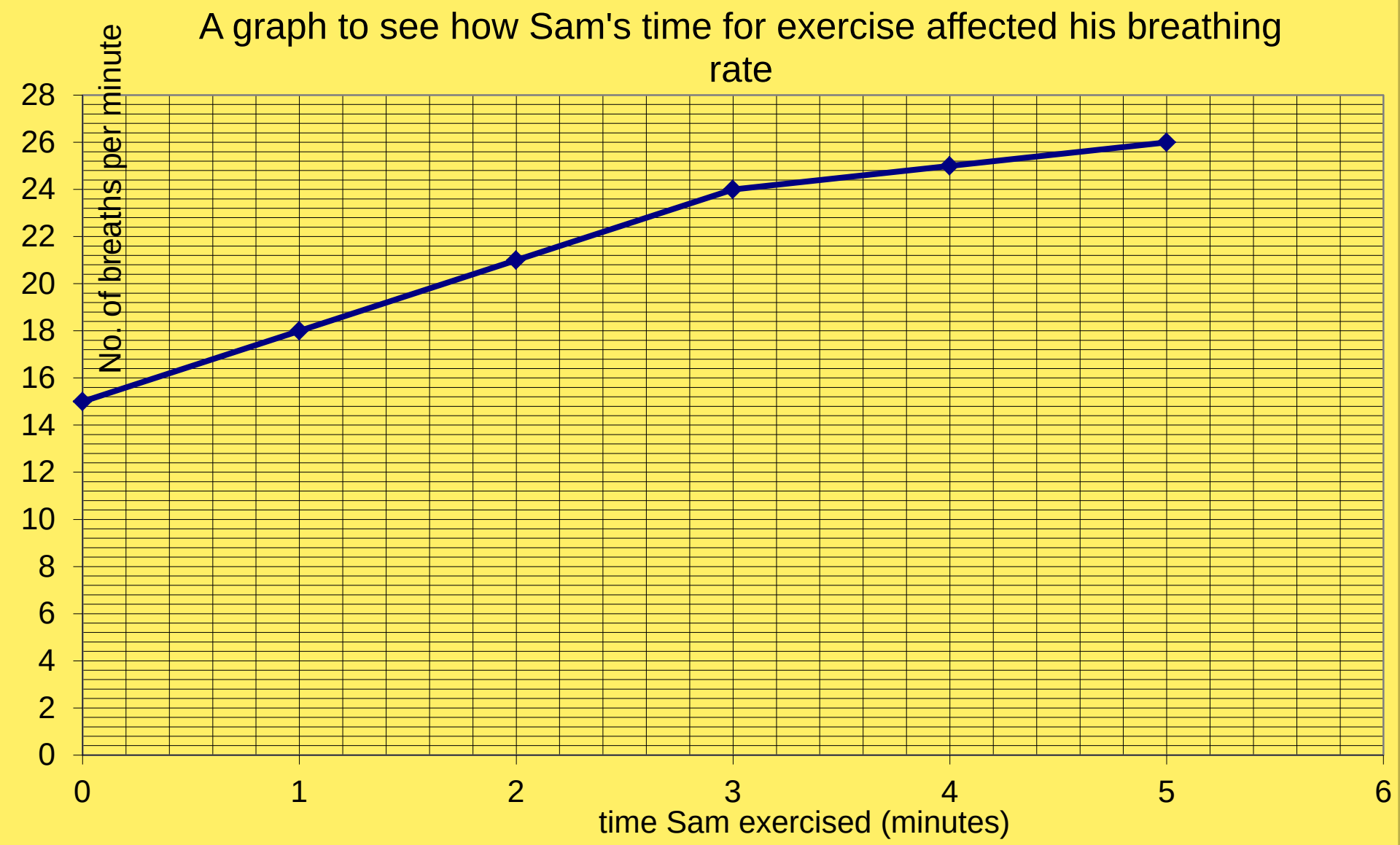
Independent variable goes along the horizontal (x – axis)

Don't draw in the coloured lines use these to find where to put the small cross.

- Remember to <u>ALWAYS</u> write a title and labels on the axes (including units).



Time Sam exercised (minutes)	No. of breaths per minute
0	15
1	18
2	21
3	24
4	25
5	26


A graph to see how Sam's time for exercise affected his breathing rate
No. of breaths per minute
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
0
1
2
3
4
5
6
time Sam exercised (minutes)

Line Graph - Example

- Use your temperature readings from your Cooling Down experiment to draw a line graph

- Use graph paper with the scale already drawn

Cooling Down

- When is cooling fastest & when is it slowest?

- Read P40 of Science in View
- Write & underline the heading
- Answer all 4 questions

Success in Science - Drawing a Line Graph

A. Label the axes, remembering the units.

*Input Variable - Goes on the x axis (horizontal)

*Outcome Variable - Goes on the y axis (vertical)

B. Choose a scale for each variable that uses the MOST of the available space.

Success in Science - Drawing a Line Graph

C. Plot the points with a small (but visible) dot or cross.

D. Draw a line or a curve that best fits the data points. Most graphs of experimental data are not drawn as "join-the-dots".

E. Give your graph a title.

Success in Science - Drawing a Line Graph

- When marking a graph, write down the letter(s) from the above list to show what needs to be fixed.