

# Maths

Activity 1 & 2 – Watch the videos on statistics. Then answer the questions below.

Maths Skills Practise:

Daily Challenge:

## JUNE MATHS MASTERS

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1 What number is represented here: MCCXII?	2 What is double 357? Can you work it out 2 ways?	3 What is 765,551 rounded to the nearest 1000?	4 Is $43 \times 10$ the same as $4300 \div 100$ ? Why?	5 If $x - 57 = 35 + 76$ , what is the value of $x$ ?	6 What's missing in this sequence: 3, 6, 10, 15, __, 28. How do you know?	7 What is 13,563 rounded to the nearest 100? What is the rule?
8 How many degrees in a complete turn?	9 What is $10.7 - 4.9$ ? How did you work it out?	10 If $y = 37$ , what is the value of $x$ in ' $y + 67 = x$ '?	11 One third of a number is 59, what was the number?	12 Which number is bigger: 267676 or 276767? Describe how you know.	13 Calculate $4 \times 17 + 4$ .	14 List all the prime numbers between 30 and 60.
15 $(6 \times 5) + 6 = 30$ . Is this right? Why?	16 What is three and two thirds plus two thirds?	17 What is $10 \times 13$ ? What other calculations would give you the same answer?	18 What is $4.04 + 2.07 + 9$ ?	19 Put these numbers in descending order: 7543, 3457, 7453, 4753, 5743.	20 How many grams in 4.7kg? How do you know?	21 What time is 22:05 in words? Can you draw it on a clock face?
22 What is today's date in Roman Numerals?	23 What are the properties of a triangular prism? Can you draw one?	24 How many ml in 5.43l?	25 Which fraction is bigger: $\frac{3}{5}$ or $\frac{40}{100}$ ? How do you know?	26 Can you draw a regular and an irregular hexagon?	27 Jake says, "If $y+7=5$ , then $y$ must be 2." Is he right? How do you know?	28 What is $14.3 - 1.7 + 5.2$ ?
29 Joshua says, "the area of my shape is 32cm so the perimeter <b>must</b> be 24cm". Do you agree?	30 <b>TRICKY QUESTION:</b> How many minutes in a normal school week?	<p><b>Have fun doing a Maths question a day!</b>  <b>Challenge yourself to talk to the people at home and show off what you know!</b></p>				

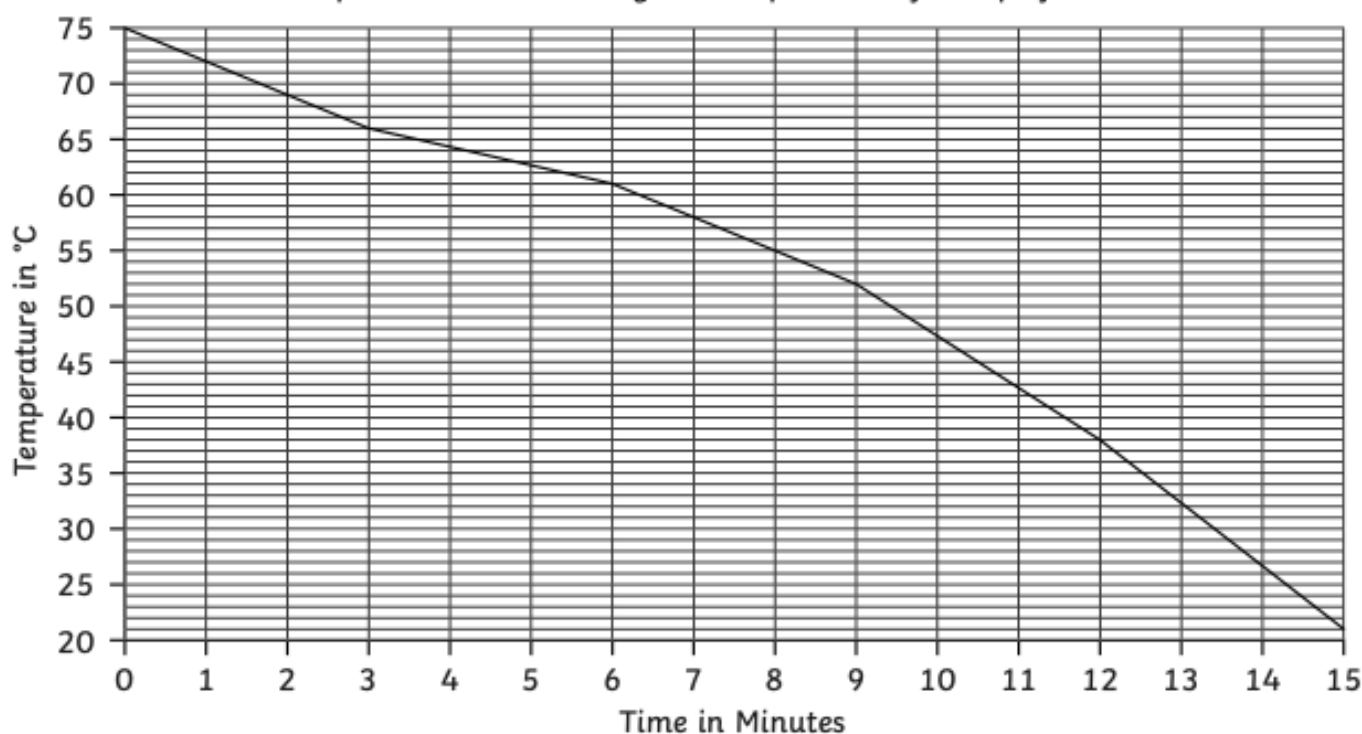
Reasoning & Problem Solving

Try any of the challenges on this website:

<http://www.iseemaths.com/lessons56/>

## Activity 1

A Line Graph to Show the Change in Temperature of a Cup of Hot Chocolate



- 1) What was the temperature of the hot chocolate at the start of the investigation?  
\_\_\_\_\_
  - 2) What was the temperature of the hot chocolate at minute 6?  
\_\_\_\_\_
  - 3) What was the temperature of the hot chocolate at approximately 9 minutes and 30 seconds?  
\_\_\_\_\_
  - 4) During which minute was the temperature 68°C?  
\_\_\_\_\_
  - 5) By how many degrees did the temperature of the hot chocolate cool from minute 3 to minute 6?  
\_\_\_\_\_
  - 6) By how many degrees did the temperature of the hot chocolate cool from minute 7 to minute 10?  
\_\_\_\_\_
  - 7) How long did it take the temperature of the hot chocolate to drop by 20°C?  
\_\_\_\_\_
  - 8) By how many degrees did the temperature of the hot chocolate cool altogether?  
\_\_\_\_\_
  - 9) For approximately how long was the temperature of the hot chocolate between 50°C and 40°C?  
\_\_\_\_\_
- ★

### Challenge:

Draw your own line graph to show a change over time.

Ideas:

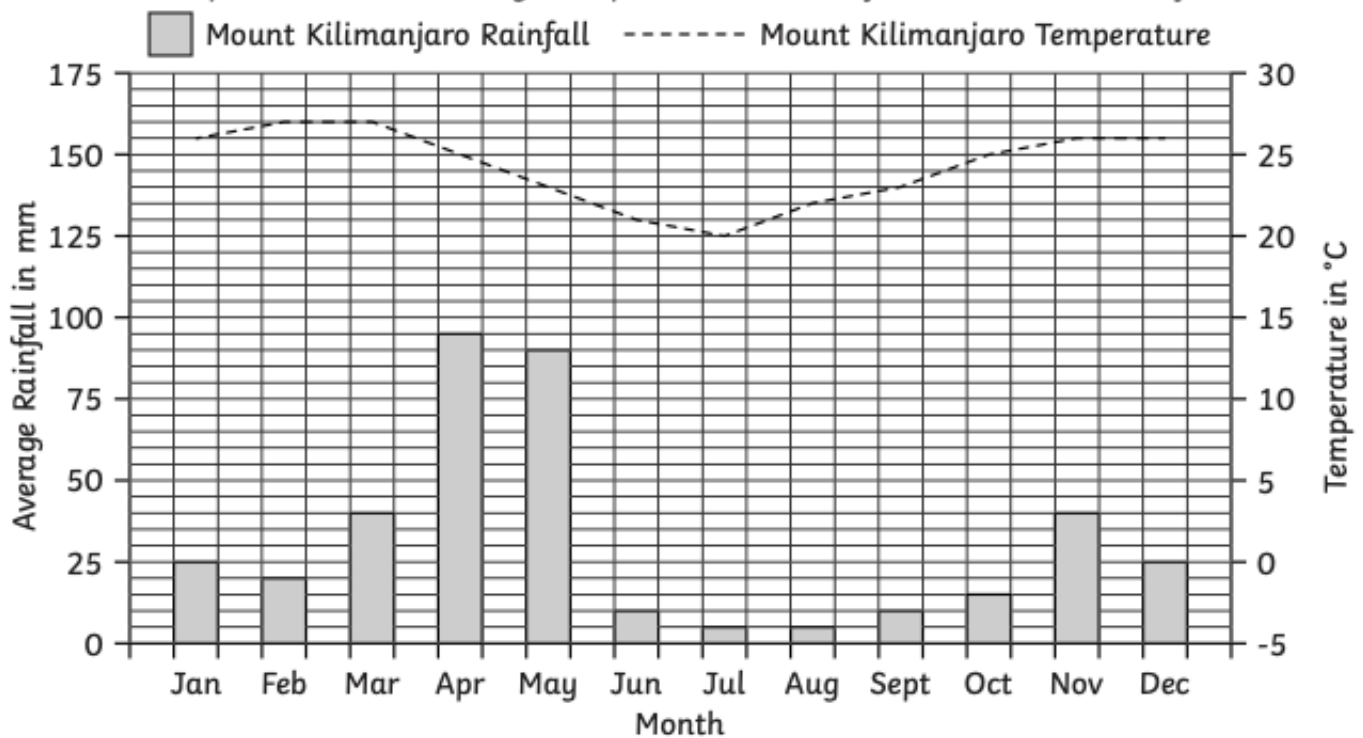
A liquid cooling down

Your heart rate after running on the spot for a minute

Temperature change throughout a day (you could find the temperatures on a website or app)

## Activity 2

A Graph to Show the Average Temperature and Rainfall on Mount Kilimanjaro



- 1) Which months on Mount Kilimanjaro have the lowest average rainfall?  
\_\_\_\_\_
- 2) Which months on Mount Kilimanjaro have the highest average temperature?  
\_\_\_\_\_
- 3) Which months on Mount Kilimanjaro have 10mm of average rain?  
\_\_\_\_\_
- 4) How many mm of rain does Mount Kilimanjaro get on average during May?  
\_\_\_\_\_
- 5) What is the difference in rainfall between March and April?  
\_\_\_\_\_
- 6) How much does the temperature fall on average from March to July?  
\_\_\_\_\_
- 7) How much does the temperature rise on average from July to November?  
\_\_\_\_\_
- 8) How many mm of rain does Mount Kilimanjaro get from September to November?  
\_\_\_\_\_
- 9) How many mm of rain does Mount Kilimanjaro get from January to May?  
\_\_\_\_\_

### Challenge:

Use the data on this website to draw a bar graph and line graph to show the average temperature in Macclesfield over a year with the average rainfall. Write 3 things you know from this data.

<https://en.climate-data.org/europe/united-kingdom/england/macclesfield-8394/>