



Scottish physicist James Clerk Maxwell may not be very well known, but lots of the technology we use today depends on his ideas.

Who was he?

James was **born** in **Edinburgh** on June 13th, **1831** and brought up in **Kirkcudbrightshire**.

He was inquisitive and often asked "**What's the go' o' that?**" ("How does that work?").

He loved **geometry** (the maths of shapes) and published his first scientific paper on **oval curves** at the age of **14**.

Most of his work was done on **electricity, light** and **electromagnetism** (a force that explains how magnetic and electric fields are connected, and how anything with a + or - charge reacts to them).

He **died** in **England** on November 5th, **1879**.

Maxwell's colour wheel

Maxwell made his *colour wheel* to experiment with mixing colours. He could change the amount of each colour on the wheel and then spin it fast to mix the colours. Different amounts of red, green and blue would result in different colours.

What is electromagnetism?

Maxwell's most important work was showing that electricity and magnets are linked.

In the past people thought that **electricity** and **magnets** were completely different things.

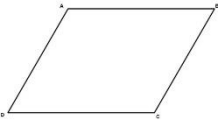
Michael Faraday discovered that they were **linked**. He worked out that a moving magnet could make electricity flow through a wire. This is the basis for how all the electricity we use every day is generated.

James Clerk Maxwell showed that electricity and magnetism create **waves of electromagnetic energy**. This includes light, x-rays, radio waves, microwaves and other types of energy we rely on.

Maxwell figured out the **maths** behind **electromagnetism** (creating its *theory* in **1865**) - other people then used his ideas to invent a wide range of things we use today, including mobile phones.



TEST YOUR MATHS KNOWLEDGE!!

1. How many degrees are in a right angle?
2. What is the approximate number of π , to 2 decimal places?
3. What is the sum of the angles inside a triangle?
4. Calculate 1 to the power of 10 without a calculator.
5. What is 73×0 ?
6. Calculate $14 - 6 \times 2$.
7. What is the name of this shape? 
8. Calculate the area of a square with side length 7 cm.
9. Calculate the value(s) of x when x squared = 16.
10. If it takes 4 farmers 3 days to plough a field, how long would it take 6 farmers?

All completed correct answers will be entered into a prize draw to win a bag of The Great Tapestry of Scotland goodies. Good Luck !

Name.....

Address.....

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