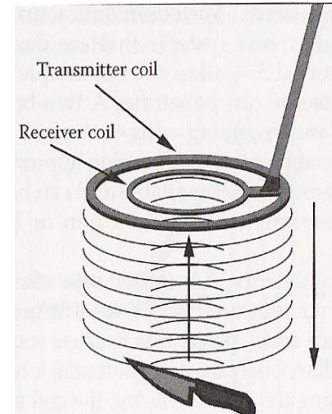


Scientist Name:



Today Science Club are going to be.....

METAL DETECTORS!

Every weekend in the UK, hundreds of people wander around the countryside looking for buried treasure! In the past people buried treasure in times of danger hoping to dig it up again when danger was past but this didn't always happen. They also dropped things of value, rings, coins, etc.

How do we find them again? By using metal detectors! What do **metal detectors** do?

- 1) Detect metal
- 2) Find metal below ground
- 3) Find objects that are conductive

Metal detectors work by pulsing an electro-magnetic field, any conductive object nearby creates its own field in return, which the metal detector then records as an audible beep.

More expensive detectors can tell which kind of object it is, gold for example!

Of course there could be lots of different things causing the beep, usually things less exciting, rusty nails, old bricks, etc.

You also need to dig at the place where it beeps to find out what it was!



The **Staffordshire Hoard** was found by a metal detectorist in a field near Birmingham in 2011. It was declared to be National Treasure and valued at over £3,000,000! It was thought to be buried in the late 9th Century AD. Bought for the nation, it was equally shared between the finder and the landowner.

Activity: We are going to be using metal detectors to look for hidden conductive objects, they may be metal or they may not!

Note to parents: Today we have been looking at metal detectors. They should bring home coins that have been found with a metal detector. Any questions please email: HassellScienceClub@gmail.com

METAL DETECTOR QUIZ



1. **What** do metal detectors **detect**?
Metal, conductive objects or anything!
2. Can metal detectors **detect different types** of metal?
YES/NO
3. **Where** was the **Staffordshire Hoard** found?
Staffordshire? A field? The Potteries Museum?
4. **How much** was the Hoard thought to be worth?
£3,000? £300,000? Or £3,000,000?
5. **How long ago** was the Staffordshire Hoard buried?
500 years, 1,000 years or 1,500 years ago?
6. **What** are the **red crystals** in much of the hoard?
Rubies? Garnets? Or glass?
7. What was the **Midlands kingdom** called at that time?
England? Wessex? Or Mercia?
8. How **many items** were in the hoard?
350, 3,500 or 35,000?
9. How far **below the ground** can we usually detect metal?
25cm? 50cm? or 1m?
10. If **you** were trying to find a knife, when what you **NOT** use a metal detector? In a field? In a garden? Or in a scrapyard?
And why? _____
