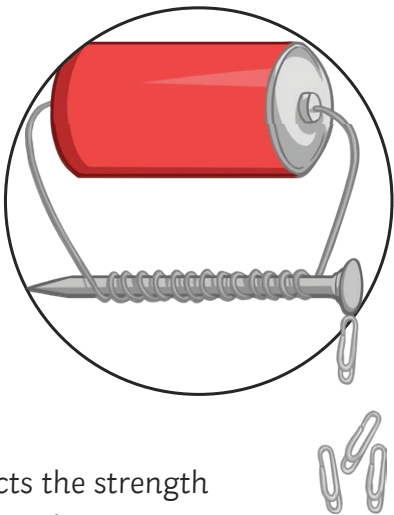


Electromagnets

When electrical charges flow in a wire, a magnetic field is formed around the wire. The larger the current, the stronger the magnetic field will be. When a current stops flowing, there is no magnetic field.

An electromagnet can be made by wrapping coils of wire around an iron nail and allowing an electrical current to flow in the wire. When the electrical charges flow through the wire, a magnetic field is formed.



1. Luna and Thea are investigating how the number of coils of a wire affects the strength of the electromagnet. They are going to test a different number of coils, each time to see how many paperclips it will hold.



What are the variables in this investigation?

Independent – What are they changing?	
Dependent – What are they measuring?	
Control – What must they keep the same?	

2. When writing a method, you must remember to make each step as clear as possible. Imagine that you are writing a method for someone who has no idea what to do.

Write a method for making a cup of tea.

Equipment

Method



Electromagnets Answers

1. Luna and Thea are investigating how the number of coils of a wire affects the strength of the electromagnet. They are going to test a different number of coils, each time to see how many paperclips it will hold.

What are the variables in this investigation?

Independent – What are they changing?	The number of coils.
Dependent – What are they measuring?	The number of paperclips picked up.
Control – What must they keep the same?	The same method and equipment.

2. When writing a method, you must remember to make each step as clear as possible. Imagine that you are writing a method for someone who has no idea what to do.

Write a method for making a cup of tea.

Equipment

kettle, water, cup, tea bag, teaspoon, milk

Method

Step 1 – Gather the equipment.

Step 2 – Fill the kettle with 200ml of water. Switch the kettle on to boil.

Step 3 – Place the tea bag in the cup. Once the kettle has boiled, pour the water into the cup. Do not allow the water to overflow and do not fill the cup too much as you will need to allow some space for the milk.

Step 4 – Press the teabag against the side of the cup using the back of the teaspoon. Use the teaspoon to scoop the teabag out of the cup and place the teabag in the bin.

Step 5 – Add milk to the cup to your taste; as you add the milk, the tea will begin to change colour. When it has reached a golden brown, stop and taste. Add more if required.

