Name: _____ Date: _____

## Electric Current and its Effects

Q1. Write an experiment to make an electromagnet.

Ans. _____

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Q2. How does an electric bell work?

Ans. _____

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## Electric Current and its Effects

Q1. Write an experiment to make an electromagnet.

Ans. Take around 75 cm long piece of insulated (plastic or cloth covered or enamelled) flexible wire and an iron nail, say about 6–10 cm long. Wind the wire tightly around the nail in the form of a coil. Connect the free ends of the wire to the terminals of a cell through a switch. Place some pins on or near the end of the nail. Now switch on the current. The pins cling to the end of the nail. The coil in the above activity behaves like a magnet when electric current flows through it. When the electric current is switched off, the coil generally loses its magnetism. Such coils are called electromagnets.

Q2. How does an electric bell work?

Ans. The circuit of an electric bell consists of a coil of wire wound on an iron piece. The coil acts as an electromagnet. An iron strip with a hammer at one end is kept close to the electromagnet. There is a contact screw near the iron strip. When the iron strip is in contact with the screw, the current flows through the coil which becomes an electromagnet. It, then, pulls the iron strip. In the process, the hammer at the end of the strip strikes the gong of the bell to produce a sound. However, when the electromagnet pulls the iron strip, it also breaks the circuit. The current through the coil stops flowing. The coil is no longer an electromagnet. It no longer attracts the iron strip. The iron strip comes back to its original position and touches the contact screw again. This completes the circuit. The current flows in the coil and the hammer strikes the gong again. This process is repeated in quick succession. The hammer strikes the gong every time the circuit is completed. This is how the bell rings.