

CLASS 8

SCIENCE

REVISION NOTES

Revision Notes: Class 8 Science Chapter 4 Electricity Magnetic and Heating Effects

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Class 8 Science Chapter 4: Electricity: Magnetic and Heating Effects — Quick Revision Notes

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Magnetic effect of current: discovered by Hans Christian Oersted (1820) — a current-carrying wire produces a magnetic field around it, deflecting a nearby compass needle.

Electromagnet: a coil of wire that behaves like a magnet only while current flows through it; has North and South poles like a bar magnet, but is temporary and its poles reverse if the current direction is reversed.

Electromagnet strength increases with more current (more cells), more coil turns, and adding an iron core.

Heating effect of current: current flowing through a conductor's resistance converts some electrical energy into heat.

Nichrome has higher resistance than copper (for the same size), so it heats up more for the same current — used as the heating element in irons, heaters, kettles and toasters.

Voltaic (chemical) cell: generates current via a chemical reaction between two different metal electrodes and an electrolyte (e.g., lemon juice, salt solution).

Dry cells are single-use/disposable; **rechargeable batteries** can be recharged and reused many times.

Every current-carrying conductor shows both the magnetic effect and the heating effect simultaneously, regardless of the conducting material.

Everyday applications: magnetic effect — electric bells, cranes, motors, speakers; heating effect — irons, heaters, toasters, kettles.