



## Electricity and magnetism and electromagnetism set

SCN-F005A

### Function

Intended for the study of: Electricity. Associations of lamps in series and parallel. Electrical resistance and resistor. Series association. Association in parallel. Assembling a circuit with lamps in series. Assembling a circuit with lamps in parallel. Some comparisons between series and parallel associations with lamps. Ohms law. Differentiating the specific property of electrical resistance of electrical resistor device. Table and graph. Determining ohmic electrical resistance, ohmic resistance. Ohmic resistors and non-ohmic resistors. Series, parallel, and mixed resistor associations. The potentiometer, a variable resistor. Measurements in mixed circuits, electric power, direct current. Kirchhoffs mesh laws and knot law. The series RC circuit, direct current. The capacitor. The charge time constant. Determining the charging time of the capacitor. Determining the capacitor discharge time. Magnetism. The lines of force and the magnetic field of the magnet, magnetism. What is meant by magnet. Magnetism, lodestone and compass. Identifying the north and south poles of a magnet. The magnetic field, something invisible to the eye. The magnetic lines of force, their properties and what they tell about the magnetic field vector. Magnets and their magnetic poles. Identifying the magnetic poles of a magnet with the compass. What is meant by magnetization. Contact magnetization. Friction magnetization. The inseparability of a magnetic pole from a magnet. The repulsion between magnetic poles of the same name. The attraction between magnetic poles of different names. The spectrum between magnetic poles of different names. The spectrum between equal magnetic poles, etc.

### Knowledge areas

**Level**

High school - Elementary school

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