



PETA KONSEP CONCEPT MAP

ELEKTRIK ELECTRICITY

Arus elektrik dan Beza keupayaan
Electric current and Potential difference

$$I = \frac{Q}{t}$$

$$V = \frac{W}{Q}$$

Medan elektrik
Electric field

Konduktor Ohm dan konduktor bukan Ohm
Ohmic conductor and non-ohmic conductor

Sambungan litar kombinasi bersiri dan selari
Circuit connection combination of series and parallel

Kesan medan elektrik pada nyalaan lilin dan zarah bercas
Effect of electric field on candle flame and charged particle

Kekuatan medan elektrik
Electric field strength
$$E = \frac{F}{Q} = \frac{V}{d}$$

Rintangan
Resistance

$$R = \frac{V}{I}$$

Kerintangan
Resistivity

Aplikasi kerintangan dawai dalam kehidupan
Application of resistivity of wire in daily life

Faktor-faktor mempengaruhi rintangan
Factors affecting resistance
$$R = \rho \frac{l}{A}$$

Menyelesaikan masalah melibatkan rumus rintangan
Solving problems involving formula resistance
$$R = \rho \frac{l}{A}$$

Daya gerak elektrik (d.g.e.)
Electromotive force (e.m.f.)

dan / and

Rintangan dalam / Internal resistance

$$\mathcal{E} = V + Ir$$

Eksperimen menentukan daya gerak elektrik dan rintangan dalam
Experiment to determine electromotive force and internal resistance

Menyelesaikan masalah melibatkan d.g.e. dan rintangan dalam sel kering
Solving problems involving e.m.f. and internal resistance of dry cell

Nilai kerintangan bahan konduktor, bukan konduktor, semikonduktor dan superkonduktor
Resistivity of conductor, non-conductor, semiconductor and superconductor.

Tenaga elektrik
Electrical energy

$$E = VIt$$

$$E = I^2Rt$$

$$E = \frac{V^2t}{R}$$

Kuasa

Power

$$P = VI$$

$$P = I^2R$$

$$P = \frac{V^2}{R}$$

Membandingkan kuasa dan kadar penggunaan tenaga pelbagai alatan elektrik
To compare power and rate of energy consumption of various electrical appliances

Langkah penjimatan penggunaan tenaga elektrik di rumah
Steps to save home electrical energy consumption