

Magnetic Materials

Dia-, Para-, and Ferromagnetism - Curie Temperature

Electromagnets

Bohr Magneton - Hysteresis

Transformers

impedance matching

RC and RL circuits - AC and DC

car coils - Ruhmkorff

LRC circuits - Dissipated Power - Resonance

resonance width - metal detectors

impedance - reactance - tuning of radio

EM Waves - Traveling and Standing Waves

string and wind instruments

resonance frequencies

distance determinations using radar and laser pulses

carrier wave - amplitude modulation

Poynting Vector

Radiation Pressure

comet tails

Polarization of EM Radiation

linear, elliptical and circular

Snell's Law

refraction - total reflection - fiber optics

Index of Refraction

speed of light

Dispersion - Prisms

Huygen's Principle

Illusion of Colors

primary colors - color triangle - Benham top

Edwin Land's famous color experiment