

List of topics for the safe's physics concept

Physics Syllabus
Basic phenomena of light - how the path of light is demonstrated by rays
The concept of a 'Model', the role of a Model, the particulate Model of light
Mechanical and Electromagnetic Waves
An Introduction to Quantum Theory – the Dual Nature of Light
Structure of the Atom
An Introduction to Quantum Theory – the Duality of Matter
The Nucleus and an Introduction to Elementary Particles

Mechanics
Kinematics – everything about motion
Dynamics – everything about forces, Newton's laws
Momentum and how it is maintained – collisions
Mechanical energy and how it is conserved
The model of the ideal gas
Simple harmonic motion
Gravity – the motion of satellites and planets

Electromagnetics
Coulomb's law and electromagnetic fields
Electric potential, capacity and capacitors
Direct current circuits
The magnetic field
Electromagnetic induction