

Physics
Form 4
(2018 - 2019)

| Week | Topic / Content Area |
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| 1-4 | <u>Position and Movement</u> Position, distance and displacement Speed and velocity Uniform motion Acceleration Equations of uniformly accelerated motion Vertical motion under gravity |
| 5-8 | <u>Force and Motion</u> Newton's first law of motion Action of forces Addition and resolution of forces Newton's second law of motion Free body diagrams Newton's third law of motion Mass and weight |
| 9-10 | <u>Work, Energy and Power</u> Mechanical work Potential energy (PE) Kinetic energy (KE) Law of conservation of energy Power |
| 11-12 | <u>Momentum</u> Momentum Change in momentum and net force Law of conservation of momentum Elastic and inelastic collisions |
| 13-14 | <u>Temperature, Heat and Internal Energy</u> Temperature and thermometers Heat and internal energy Heat capacity and specific heat capacity |
| 15 | <u>Transfer of Heat</u> Structure of matter Conduction Convection Radiation |
| | First term Exam |
| 16-17 | <u>Change of State</u> |

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| | Three states of matter Evaporation Energy transfer during the change of state Specific latent heat of fusion Specific latent heat of vaporization |
| 18-20 | <u>Nature of Wave</u> Nature of wave Transverse and longitudinal waves Description of wave Particle motion in transverse and longitudinal waves |
| 21-22 | <u>Properties of Wave</u> Ripple tank Stroboscope Reflection, refraction and diffraction of wave Interference of wave |
| 23-24 | <u>Wave Nature of Light</u> Evidence for wave nature of light Wave nature of light |
| 25-26 | <u>Reflection and Refraction of Light</u> Light Reflection of light Refraction of light Total internal reflection |
| 27-28 | <u>Lenses</u> Convex and concave lenses Construction rules for image formed by lenses Image formation by lenses |
| 29 | <u>Sound</u> Wave nature of sound Properties of sound Audible sound and ultrasound Musical note Noise |
| 30 | Revision |
| | Final Exam |

Assignment:

1. Chapter test
2. Experiment or demonstration
3. Diary Exercise per day

Continuous Assessment:
20% Uniform test