

PHYSICS: Curriculum Overview Year 10

| Term | Topic studied | What will I learn? | How will I be assessed? |
|-------------------|-------------------------------|---|--|
| Year 10 Autumn | Electrical Circuits | Electrical charges and fields (static) Current and charge Potential difference and resistance - Required practical Investigating resistance | End of topic test |
| | | Component characteristics - Required practical Investigating electrical components Series circuits Parallel circuits | Mk |
| | Electricity in the home | Alternating current Cables and plugs Electrical power and potential difference Electrical currents and energy transfer Appliances and efficiency | End of topic test |
| | Forces in balance | Vectors and scalars Forces between objects Resultant forces <i>Moments at work</i> <i>More about levers and gears</i> Centre of mass <i>Moments and equilibrium</i> The parallelogram of forces Resolution of forces | End of topic test |
| Year 10 Spring | Motion Force and motion | Speed and distance time graphs Velocity and acceleration More about velocity time graphs Analysing motion graphs Force and acceleration - Required practical Investigate the relationship between force and extension for a spring Weight and terminal velocity Forces and braking Momentum Using conservation of momentum Impact forces Safety first Forces and elasticity Required practical | End of topic tests Year 10 Exam Topics included - Energy and dissipation of energy (year 9) - Energy transfer by heating (year 9) - Energy resources (year 9) - Molecules and matter (year 9) - Radioactivity (year 9) - Electrical circuits (year 10) - Electricity in the home (year 10) |

| Year 10 Summer | Wave Properties | The nature of waves The property of waves Reflection and refraction More about waves - Required practical Investigating plane waves in a ripple tank and waves in a solid Sound waves The uses of ultrasounds Seismic waves |
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| | Electromagnetic Waves | The electromagnetic Spectrum Light, infrared, microwaves and radio waves - Required practical Investigating infrared Radiation Communications Ultraviolet waves, X-rays, and Gamma Rays X-rays in medicine |