



KS4 Physics – Year 10

	Key content (knowledge)	Key skills	Assessments	Challenge and enrichment
Autumn half term 1	Alternating current Domestic electricity Power, current, energy and pd, efficiency Particle model of matter Internal energy Specific latent heat	Use and rearrangement of equations Practical skills: Measuring density Practical skills: Measuring specific heat capacity Relating graphs to an equation	End of topic test on the particle model of matter	Explore why specific heat capacity is important to life: Why is the High Specific Heat of Water Important for Life on Earth? (studysmarter.co.uk) Find out about different temperature scales Temperature Scales (nasa.gov)
Autumn half term 2	Gas pressure, volume and temperature Atomic structure Nuclear radiation, activity and half life Fission Fusion Hazards and benefits Use in medicine	Use and rearrangement of equations Interpreting graphs Evaluating risks and benefits Drawing scale diagrams	End of topic test on radioactivity	Explore ideas about the future of nuclear fusion power: Nuclear Fusion Power - World Nuclear Association (world-nuclear.org) Do a virtual tour of a nuclear power plant: Watch the latest virtual tour of Hinkley Point C EDF (edfenergy.com) Find out about careers in nuclear medicine: Nuclear medicine Health Careers

Spring half term 1	Vectors and scalars Moments Levers and gears Resultant forces Resolving forces	Use and rearrangement of equations Drawing scale diagrams	End of topic test on forces and motion	Find out more about levers and gears: Levers and Gears — Isaac Physics Explore motion by watching slow motion: BBC One - Richard Hammond's Invisible Worlds, Speed Limits - Clips
Spring half term 2	Motion Motion graphs Forces and acceleration Weight Momentum	Drawing and interpreting graphs Use and rearrangement of equations Practical skills: Investigating the link between force and acceleration	End of topic test: more forces	Investigate different car safety features and the Physics behind them. Find out about careers in forensic science, e.g. collision investigator: nationalcareers.service.gov.uk/job-profiles/road-traffic-accident-investigator
Summer half term 1	Forces and impulse Forces and elasticity Pressure in solids, liquids and gases	Practical skills: Investigating the relationship between force and extension of a spring Use and rearrangement of equations	End of Year exam	Explore the Physics of scuba diving: The Physics of Scuba Diving WIRED
Summer half term 2	Upthrust and flotation Nature and properties of waves Reflection and refraction Sound Ultrasound Seismic waves	Use and rearrangement of equations Practical skills: Investigating reflection and refraction. Drawing ray diagrams	End of topic test: on waves	Find out how different lenses are used in prescription glasses: The Science of Eyeglasses Williams Eye Works Find out about becoming an optometrist: nationalcareers.service.gov.uk/job-profiles/optometrist