

Yr9 (ALL)	Topic Area	Key knowledge/skills (what <u>has</u> to be learnt)	Examples of required practicals for students	Resources/support at home
P1	Conservation and dissipation of energy	How to work out energy stored in a moving object or when it is lifted or stretched How energy is stored and transferred and what happens after it is used How to compare machines and appliances in terms of their efficiency		Kerboodle Google classroom BBC Bitesize
P2	Energy transfer by heating	How energy is transferred by heating through conduction How to work out the energy needed to heat an object	Determining the heat capacity of a metal Testing sheets of materials as insulators	Kerboodle Google classroom BBC Bitesize
P3	Energy resources	How to compare different renewable and non renewable energy resources How the environment is affected by the use of different energy resources		Kerboodle Google classroom BBC Bitesize

Yr10 SEPARATE	Topic Area	Key knowledge/skills (what <u>has</u> to be learnt)	Examples of key compulsory practicals for students	Resources/support at home
P1	Conservation and dissipation of energy	How to work out energy stored in a moving object or when it is lifted or stretched How energy is stored and transferred and what happens after it is used How to compare machines and appliances in terms of their efficiency		Kerboodle Google classroom BBC Bitesize My GCSE Science
P2	Energy transfer by heating	How energy is transferred by heating through conduction How to work out the energy needed to heat an object	Determining the heat capacity of a metal Testing sheets of materials as insulators	Kerboodle Google classroom BBC Bitesize My GCSE Science

P4	Electric circuits	How to calculate the flow of charge How to work out the resistance and potential difference in an electric circuit	Investigating resistance Investigating different electrical components	Kerboodle Google classroom BBC Bitesize My GCSE Science
P5	Electricity in the home	How mains electricity differs from the electricity supplied by batteries How to calculate the power of an electrical appliance		Kerboodle Google classroom BBC Bitesize My GCSE Science
P7	Radioactivity	How an unstable nucleus changes when it becomes stable and why the radiation it gives out is harmful		Kerboodle Google classroom BBC Bitesize My GCSE Science
P8	Forces in balance	The difference between a vector and a scalar and how to represent a vector How to find the resultant of two forces and to resolve a force into perpendicular components		Kerboodle Google classroom BBC Bitesize My GCSE Science

Yr10 COMBINED	Topic Area	Key knowledge/skills (what <u>has</u> to be learnt)	Examples of key compulsory practicals for students	Resources/support at home
P1	Conservation and dissipation of energy	How to work out energy stored in a moving object or when it is lifted or stretched How energy is stored and transferred and what happens after it is used How to compare machines and appliances in terms of their efficiency		Kerboodle Google classroom BBC Bitesize My GCSE Science
P2	Energy transfer by heating	How energy is transferred by heating through conduction How to work out the energy needed to heat an object	Determining the heat capacity of a metal	Kerboodle Google classroom BBC Bitesize My GCSE Science
P4	Electric circuits	How to calculate the flow of charge How to work out the resistance and potential	Investigating resistance Investigating different electrical	Kerboodle Google classroom

		difference in an electric circuit	components	BBC Bitesize My GCSE Science
P5	Electricity in the home	How mains electricity differs from the electricity supplied by batteries How to calculate the power of an electrical appliance		Kerboodle Google classroom BBC Bitesize My GCSE Science
P7	Radioactivity	How an unstable nucleus changes when it becomes stable and why the radiation it gives out is harmful What nuclear fission and fusion are		Kerboodle Google classroom BBC Bitesize My GCSE Science
P8	Forces in balance	The difference between a vector and a scalar and how to represent a vector How to find the resultant of two forces and to resolve a force into perpendicular components		Kerboodle Google classroom BBC Bitesize My GCSE Science
P9	Motion	The difference between speed and velocity and what is meant by acceleration		Kerboodle Google classroom BBC Bitesize My GCSE Science

Yr11 COMBINED	Topic Area	Key knowledge/skills (what <u>has</u> to be learnt)	Examples of key compulsory practicals for students	Resources/support at home
P8	Forces in balance	The difference between a vector and a scalar and how to represent a vector How to find the resultant of two forces and to resolve a force into perpendicular components		Kerboodle Google classroom BBC Bitesize My GCSE Science
P9	Motion	The difference between speed and velocity and what is meant by acceleration		Kerboodle Google classroom BBC Bitesize My GCSE Science
P10	Forces and motion	What is meant by terminal velocity and why	Stretch tests	Kerboodle

		<p>objects fall through water at a constant velocity</p> <p>What is meant by the conservation of momentum and when we can use the rule</p> <p>How to measure the stiffness of a spring and what is meant by elasticity</p> <p>How to calculate the weight on an object from its mass and the gravitational field strength of where it is</p>	Investigating forces and acceleration	<p>Google classroom</p> <p>BBC Bitesize</p> <p>My GCSE Science</p>
P7	Radioactivity (Review)	How an unstable nucleus changes when it becomes stable and why the radiation it gives out is harmful		<p>Kerboodle</p> <p>Google classroom</p> <p>BBC Bitesize</p> <p>My GCSE Science</p>

Yr11 SEPARATE	Topic Area	Key knowledge/skills (what <u>has</u> to be learnt)	Examples of key compulsory practicals for students	Resources/support at home
P8	Forces in balance	<p>The difference between a vector and a scalar and how to represent a vector</p> <p>How to find the resultant of two forces and to resolve a force into perpendicular components</p>		<p>Kerboodle</p> <p>Google classroom</p> <p>BBC Bitesize</p> <p>My GCSE Science</p>
P9	Motion	The difference between speed and velocity and what is meant by acceleration		<p>Kerboodle</p> <p>Google classroom</p> <p>BBC Bitesize</p> <p>My GCSE Science</p>
P10	Forces and motion	<p>What is meant by terminal velocity and why objects fall through water at a constant velocity</p> <p>What is meant by the conservation of momentum and when we can use the rule.</p> <p>How to measure the stiffness of a spring and what is meant by elasticity.</p>	<p>Stretch tests</p> <p>Investigating forces and acceleration</p>	<p>Kerboodle</p> <p>Google classroom</p> <p>BBC Bitesize</p> <p>My GCSE Science</p>

		How to calculate the weight on an object from its mass and the gravitational field strength of where it is.		
P11	Forces and pressure	How to calculate pressure in different situations and relate this to upthrust.		Kerboodle Google classroom BBC Bitesize My GCSE Science
P16	Space	Life cycles of stars, solar systems and our universe. How satellites stay in their orbit and what we mean by a geostationary satellite		Kerboodle Google classroom BBC Bitesize My GCSE Science
P14	Light	What we mean by refraction of waves when they cross a boundary between different substances.	Investigating the reflection and refraction of light	Kerboodle Google classroom BBC Bitesize My GCSE Science
P15	Electromagnetism	How the strength of a magnetic field is measured and what a solenoid is. How an electric motor and an electric generator work.		Kerboodle Google classroom BBC Bitesize My GCSE Science