

Subject Knowledge Audit – PHYSICS

Please decide on your ability to teach the content/skills listed below at KS3/KS4	
KEY:	
4	No knowledge – Currently a gap in my subject area
3	Limited knowledge – Would not feel confident to teach this content
2	Good knowledge – Confident in ability to teach with some guidance
1	Expert knowledge - Confident to teach
The completed subject audit will be used by your Mentor to create your Individual Training Plan. Your progress will be reviewed on a fortnightly basis.	
You should review and record your progress at each review window below (and share this with your Mentor)	

Subject Area: Physics	Content	Baseline (4 -1)	Dec. (3 -1)	May (3 -1)	Target for NQT year if applicable
Fuel uses and costs	Comparing energy values of different foods				
	Comparing power ratings				
	Comparing amounts of energy transferred				
	Domestic fuel bills, fuel use and costs				
	Fuels and energy resources				
Energy changes and transfers	Simple machines and products of force and displacement				
	Heating and thermal equilibrium; conduction, radiation, use of insulators				
	Other processes that involve energy transfer; changing motion, electrical circuits, stretching a spring, burning fuels				
	Energy as a quantity, total energy has the same value before and after a change				
Describing motion	Speed and the relationship between speed, distance, time				

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	The representation of a journey on a distance-time graph				
	Relative motion				
Forces	Forces as pushes or pulls, arising from the interaction between two objects				
	Using force arrows in diagrams, adding forces, balanced and unbalanced forces				
	Moment as the turning effect of a force				
	Forces associated with deforming objects and with resistance to motion				
	Force-extension relation and Hooke's law				
	Work done and energy changes on deformation				
	Non-contact forces; gravity, magnetism, electricity				
Pressure in fluids	Atmospheric pressure and changes with height				
	Pressure in liquids and changes with depth, upthrust effects, floating and sinking				
	Pressure measured by ratio of force over area				
Waves	Waves on water				
	Sound waves, the need for a medium, echoes, absorption of sound				
	Production of sound, auditory range in humans and animals				
	Similarities and differences between light and sound waves				
	Use of ray models; reflection, refraction, lenses, pinhole cameras				
	Colours and the different frequencies of light, absorption and diffuse reflection				

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Electricity and electromagnetism	Measurement of current, potential difference, resistance				
	Static electricity and the idea of electric field				
	Magnetic poles, attraction and repulsion, magnetic fields				
	Earth's magnetism and navigation				
	The magnetic effect of a current, electromagnets, motors				
Matter	Conservation of material, particle arrangement, changes of state				
	Similarities and differences between solids, liquids, gases				
	Brownian motion in gases, diffusion in liquids and gases				
	The difference between chemical and physical change				
	Internal energy stored in materials				
Space physics	Gravity force, weight, differences on other planets and stars, gravity forces between Earth and Moon and between Earth and sun				
	Our sun as a star, other stars, other galaxies				
	The seasons and the Earth's tilt, day length at different times of year				
	The light year as a unit of astronomical distance				



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Evidence of subject knowledge development

Record below the things you have **read and researched** to improve your subject knowledge in the boxes below.

Term 1	September/ October	November/ December
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Term 2	January/ February	March/ April
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Term 3	May/ June	June/ July
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Please sign this sheet off at the end of the training year:

Signed: _____ (Trainee) Date: _____

Signed: _____ (Mentor) Date: _____