

Year 8 Learning Map

P3 – Heating, Cooling and Work				
Prior Learning This topic builds on P3 from the Year 7. In this you will have learned about energy transfers in different objects. You will also have learned how electricity is generated.		Current Learning In this topic, you will learn how levers and pulleys are used as force multipliers to make work easier. You will also learn the different methods of energy transfer through heating. You will investigate ways to reduce heat energy transfer.		
Subsequent Learning This topic will prepare you the for GCSE Physics P1 topic. In this you will apply your knowledge of energy transfers to calculations of energy transfers. You will also apply your knowledge to look at how to reduce the loss of heat energy through insulating the home.				
Lesson Sequencing		Tier 3 Vocabulary	Wider Reading Opportunities	
Ways in which parents/carers can support				
Lesson 1	Work done	Thermal conductor Thermal insulator Conduction Convection Radiation Displacement Deformation Work	'KS3 CPG Science Revision Guide' contains useful revision materials for the science course. Machines: Gears * Levers * Pulleys * Engines (Exploring Science): With 20 Easy-To-Do Experiments and 300 Exciting Pictures by Chris Oxlade 507 Mechanical Movements: Mechanisms and Devices by Henry T. Brown	Encourage students to use their course home learning booklets to revise and practice key information after each lesson. Ensure students are accessing Microsoft Teams to complete work directed by their teachers.
Lesson 2	Levers and pulleys			
Lesson 3	Thermal energy transfer			
Lesson 4	Conduction			
Lesson 5	Convection			
Lesson 6	Radiation			
Lesson 7	Reducing heat loss part 1			
Lesson 8	Reducing heat loss part 2			
Lesson 9	Directed improvement and reflection time			