

Barnsley Academy – Year 10 Science Energy Curriculum
Scheme of Work – 2023-24

Term 1 Week 3				
	1	2	3	4
Lesson Focus	SHC – Required Practical	SHC – Required Practical – Follow Up	Insulation Required Practical	Using Energy Resources
Prerequisite Knowledge	SHC equation	SHC equation SHC method	Conductors and insulators Energy transfer	Energy stores
Core Knowledge	<ul style="list-style-type: none"> Carry out an investigation to find the specific heat capacity of a metal 	<ul style="list-style-type: none"> Plot a graph of results Calculate the specific heat capacity of block investigated Write a method to determine the specific heat capacity of unknown substances 	<ul style="list-style-type: none"> Explain the steps in a given method to test a hypothesis Collect and display data appropriately Describe and explain patterns in results. 	<ul style="list-style-type: none"> Distinguish between renewable and non-renewable energy resources and state the names of renewable energy resources Interpret data to compare energy usage Explain why energy usage has changed over time
Expert Model /Guided Practice/Agreed Approach (Procedural Knowledge)	Teacher demonstrates how to carry out the practical and students carry it out	Use of the camera to demonstrate graph drawing skills Use of the camera to demonstrate how to find SHC using a graph	Teacher demonstrates how to carry out the practical and students carry it out Use of the camera to demonstrate graph drawing skills	Slides 5 – 10 teacher describes the difference between renewable and none renewable energy sources. Model for ‘compare’ questions is demonstrated
Independent Practice	Exam question Worksheet	<ul style="list-style-type: none"> Drawing of a graph showing results Finding SHC of a substance using a graph 	Plotting a graph using results Writing a conclusion	Exam questions Comparing energy usage question
Assessment (Informal/Formal)	Independent practice tasks – exam question incorporated. Learning checks on WB Students to self- assess all tasks. Teacher to circulate and check for misconceptions.	Independent practice tasks – exam question incorporated. Learning checks on WB Students to self- assess all tasks. Teacher to circulate and check for misconceptions.	Independent practice tasks – exam question incorporated. Learning checks on WB Students to self- assess all tasks. Teacher to circulate and check for misconceptions.	Independent practice tasks – exam question incorporated. Learning checks on WB Students to self- assess all tasks. Teacher to circulate and check for misconceptions.

Resources				
Specific SEN(D)/EAL support	Use of the visualiser to show demonstration	Equation model Use of the visualiser to show graph demonstrations	Equation model Use of the visualiser to show demonstration and graphs	