

TBAT	Outcomes	Skills	Assessment
<p>1. Temperature changes</p> <p>Explain how energy is transferred in different situations</p>	<p>Recall that energy can be transferred by heating in conduction, radiation and convection.</p> <p>Describe how energy is transferred in conduction, convection and radiation.</p> <p>Explain why particular materials are used for given purposes.</p>	<p>Demonstrate a convection current in water using a potassium manganite (VII) crystal, a tube, a beaker of water and a Bunsen burner.</p>	<p>Self-assess</p>
<p>2. Conduction- Transferring energy</p> <p>Explain which material is the best conductor</p>	<p>Identify how conduction happens</p> <p>Explain why particular materials are better conductors than others</p>	<p>Students measure how fast heat travels along a metal rod, using a clamp and temperature sensors at equal intervals along it.</p>	<p>Self-assess</p>
<p>3. Controlling transfers- Insulators</p> <p>Explain which material is the best insulator</p>	<p>Recall ways of reducing energy transfer by conduction, convection and evaporation.</p> <p>Apply the idea of different colours being good or poor emitters or absorbers.</p> <p>Evaluate ways of increasing or decreasing energy transfer by conduction, convection, radiation and evaporation.</p>	<p>Students plan and carry out an investigation of the factors that affect insulation, such as thickness of material, type of material, shiny/dull material, etc.</p>	<p>Self-assess</p>
<p>4. Power and efficiency</p> <p>Calculate the efficiency of different appliances</p>	<p>State the meaning of efficiency and recall some advantages of efficient appliances.</p> <p>Identify useful and wasted energies by using the formula relating power, energy and time (in W, J and s).</p>	<p>Students examine various items of domestic electrical equipment to find their power ratings.</p> <p>Use a joule meter to demonstrate the amount of</p>	<p>Self-assess</p>

	Describe whether one machine is more efficient than another.	energy used in a fixed time by different pieces of equipment. The results should be linked to the power ratings of the equipment.	
5. Therapy lesson	Students to reflect on their collective feedback		Mid-point assessment- Teacher assessed
6. Electrical appliances Explain how to choose the most efficient appliance	Identify everyday electrical appliances Describe how electricity is formed Compare energy uses in electrical appliances		Self-assess
7. Paying for energy Evaluate the use of low energy appliances	Recall that electricity and mains gas are charged for on the basis of the energy transferred. Recall some advantages of low-energy appliances. Use data to evaluate methods of reducing carbon emissions.		Self-assess
8. Eco Home Explain how to reduce energy waste in the home	Recall what global warming is Explain the effects of global warming Evaluate different ways of keeping something warm.	Design a Eco home	Self-assess
9. Consolidate the learning of the topic	Students to complete the revision activities in preparation for their assessment.		Self-assess
10. Assessment	End of unit assessment	Exam technique.	Peer assessed
11. Reflection Lesson	Students reflect on their assessment using the knowledge organiser.		