

Subject	Year 8 Physics content – Summer Term	<ul style="list-style-type: none"> <li>How to support students' learning</li> </ul>
Energy Transfers	<p><u>Heat and Temperature</u></p> <ul style="list-style-type: none"> <li>Describe the difference between heat energy and temperature</li> <li>Explain the direction heat energy flows</li> </ul> <p><u>Heat transfer in solids</u></p> <ul style="list-style-type: none"> <li>Explain how heat energy is transferred through solid objects</li> <li>Investigate conduction in different materials</li> <li>Evaluate risks in an experiment</li> </ul> <p><u>Alternative heat transfer methods</u></p> <ul style="list-style-type: none"> <li>Describe the process of convection in fluids</li> <li>Describe examples of where convection is seen in everyday life</li> <li>Explain how heat energy is transferred using radiation</li> </ul> <p><u>The cost of energy</u></p> <ul style="list-style-type: none"> <li>Compare power ratings of appliances and how this links to the cost of using that appliance</li> <li>Relate the power of an appliance to the amount of energy transferred</li> <li>Calculate the cost of using an appliance</li> </ul>	<p>Read this revision website to check your understanding of heat energy and temperature.  <a href="#">Heating and cooling - Energy - KS3 Physics - BBC Bitesize - BBC Bitesize</a></p> <p>Work through this online lesson on conduction.  <a href="#">Lesson: Conduction   Teacher Hub   Oak National Academy (thenational.academy)</a></p> <p>Watch the video and complete the quiz from this lesson on convection.  <a href="#">Lesson: Convection   Teacher Hub   Oak National Academy (thenational.academy)</a></p> <p>Have a look at the appliances in your home. Can you find an appliance that has a high power rating and a different appliance that has a low power rating?</p>
Practical Skills	<p><u>Planning an experiment</u></p> <ul style="list-style-type: none"> <li>Make scientific predictions using scientific knowledge and understanding</li> <li>Understanding of variables in an experiment</li> <li>Evaluate risks and create a risk assessment</li> </ul>	<p>You can have a go at planning and carrying out your own experiment at home. There are lots of ideas in this resource.</p>

	<ul style="list-style-type: none"> <li>• Construct a suitable method in order to safely carry out experimental work</li> </ul> <p><u>Collecting data</u></p> <ul style="list-style-type: none"> <li>• Safely carry out an experiment</li> <li>• Record results correctly in a table</li> <li>• Use the correct apparatus to record accurate measurements</li> </ul> <p><u>Graph drawing and analysing data</u></p> <ul style="list-style-type: none"> <li>• Present observations and data using appropriate methods including graphs</li> <li>• Where appropriate using mathematical concepts such as mean calculations</li> </ul> <p><u>Conclusions and Evaluation</u></p> <ul style="list-style-type: none"> <li>• Interpret data in order to draw a conclusion</li> <li>• Identify patterns in data</li> <li>• Present reasoned explanations to explain data in relation to a prediction and hypothesis</li> <li>• Evaluate the results to identify potential sources of random and systematic errors</li> </ul>	<p><a href="#">BSA BSW secondary full 1121v16.pdf (britishscienceweek.org)</a></p> <p>The information on this page will help you plan how to collect your data correctly.</p> <p><a href="#">Observation and measurement skills - Working scientifically - KS3 Science - BBC Bitesize - BBC Bitesize</a></p> <p>Watch this video to remind you how to draw graphs correctly in science.</p> <p><a href="#">How to Draw a Graph - WORKED EXAMPLE - GCSE Physics - YouTube</a></p> <p>If you are not sure exactly what goes in a conclusion or evaluation this guide will help you.</p> <p><a href="#">Conclude and evaluate - Working scientifically - KS3 Science - BBC Bitesize - BBC Bitesize</a></p>
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