












SP3 Conservation of Energy






SP3a Energy stores and transfers

Step	Learning outcome	Had a look	Nearly there	Nailed it!
 6 th	Explain, using examples, that energy is conserved.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 5 th	Give examples of energy being moved between different stores.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 6 th	Interpret diagrams that represent energy transfers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 7 th	Represent energy transfers using diagrams.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 7 th	Describe what happens to wasted energy in energy transfers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>





SP3b Energy efficiency

Step	Learning outcome	Had a look	Nearly there	Nailed it!
 8 th	Explain some ways in which energy is transferred wastefully by mechanical processes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 7 th	Explain some ways of reducing unwanted energy transfers in mechanical processes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 6 th	Define what efficiency means.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 7 th	 Explain how efficiency can be increased.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 9 th	Recall and use the formula for calculating energy efficiency.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>





SP3c Keeping warm

Step	Learning outcome	Had a look	Nearly there	Nailed it!
 5 th	Describe the ways in which energy can be transferred by heating.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 7 th	Describe ways of reducing unwanted energy transfers using thermal insulation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 5 th	Explain how different ways of reducing energy transfer by heating work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 5 th	Define the meaning of thermal conductivity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 6 th	Describe the effects of the thickness and thermal conductivity of the walls of a building on its rate of cooling.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>






SP3d Stored energies

Step	Learning outcome	Had a look	Nearly there	Nailed it!
	Describe how different factors affect the gravitational potential energy stored in an object.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Recall and use the equation for gravitational potential energy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Describe how different factors affect the kinetic energy stored in an object.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Recall and use the equation for kinetic energy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SP3e Non-renewable resources

Step	Learning outcome	Had a look	Nearly there	Nailed it!
	List the non-renewable energy resources in use today.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Describe the advantages and disadvantages of non-renewable energy resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Compare the advantages and disadvantages of non-renewable energy resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Explain how the use of non-renewable energy resources is changing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SP3f Renewable resources

Step	Learning outcome	Had a look	Nearly there	Nailed it!
	List the renewable energy resources in use today.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Describe the source of energy for different renewable resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Describe the ways in which the different energy resources are used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Explain why we cannot use only renewable energy resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Explain how the use of renewable energy resources is changing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>