

<b>P3 – energy resources</b>	<b>Answer</b>
<b>1. How does solar power work?</b>	The solar cell takes in solar radiation and directly converts this into electrical energy.
<b>2. How does a solar tower work?</b>	The tower has thousands of mirrors to reflect sunlight onto a water tank to heat the water to produce steam.
<b>3. How does geothermal power work? (3 stages)</b>	<ol style="list-style-type: none"> <li>1. The heat from radioactive decay in the centre of the earth is used to heat up water to steam.</li> <li>2. The steam turns a turbine and</li> <li>3. The turbine turns a generator.</li> </ol>
<b>4. Name the fuel used in nuclear power stations</b>	Uranium (or plutonium)
<b>5. Name the process by which uranium release heat energy.</b>	Nuclear fission
<b>6. What is the main disadvantage of nuclear energy</b>	It produces radioactive waste that remains harmful for thousands of years and damages cells, causing cancer.
<b>7. What is a biofuel?</b>	A biofuel is any fuel obtained from a living or recently living organism.
<b>8. What does a wind turbine do?</b>	The wind turns a turbine and the turbine turns a generator.
<b>9. Why is wind power NOT reliable?</b>	It is not always windy
<b>10. How does wave energy work?</b>	As the wave bobs up and down the movement is used to turn a turbine, which turns a generator.
<b>11. Why are wave and wind generators switched off during a storm</b>	To avoid damage to the equipment
<b>12. How does tidal power work?</b>	As the tide goes in or out it passes through a barrage. As it passes through the water turns a turbine and the turbine turns the generator.
<b>13. Where are tidal barrages built?</b>	Across estuaries
<b>14. Why is tidal power predictable?</b>	The tides will always change and we can predict when high and low tide will be.
<b>15. How does a hydroelectric power station work?</b>	The water is collected in a reservoir. As it falls down a pipe it turns a turbine and the turbine turns a generator.
<b>16. Give 2 disadvantages of hydroelectric power</b>	<ol style="list-style-type: none"> <li>1. Often farmland in valleys has been flooded to form a lower reservoir – animals lose habitats</li> <li>2. Energy has to be put into the system to pump the water back up to the higher reservoir</li> </ol>
<b>17. Name 3 fossil fuels.</b>	Coal, oil and natural gas.
<b>18. Name 3 environmental caused by burning fossil fuels</b>	<ol style="list-style-type: none"> <li>1. Global warming - caused by increased CO<sub>2</sub></li> <li>2. Acid rain – caused by sulphur dioxide and nitrogen oxides</li> <li>3. Global dimming – caused by carbon particulates.</li> </ol>



