OBHS Core Questions:

Subject: Science

Year and Term: Year 9 Autumn Term

Topic: P1 Energy

Learn these questions to build a strong foundation of knowledge for this half-term. Ask family or friends to test you regularly, or practise on your own using the 'Look, Say, Cover, Write' method.

Question	Answer
1. What is the unit of energy?	Joule
2. What type of energy is stored in moving objects?	Kinetic
3. What type of energy is stored in objects raised off the ground?	Gravitational
4. What type of energy is stored in stretched or compressed objects?	Elastic potential
5. Which law states that as force doubles, extension doubles?	Hooke's law
6. What is the energy store in food or fuel called?	Chemical
7. What is the energy store in hot objects called?	Thermal
8. What is the formula for calculating the kinetic energy of an object?	$\frac{1}{2}mv^2$ Or 0.5 x mass x (speed)^2
9. What is the formula for gravitational potential energy?	mgh mass x gravitational field strength x (extension)^2
10. What is the formula for work done?	Force × distance
11. What is the unit of power?	Watt
12. What is the formula for power (using energy)?	Energy ÷ time
13. What is the formula for power (using work done)?	Work ÷ time
14. What is the formula for efficiency (energy)?	(Useful energy output ÷ total energy input) x 100
15. What is wasted energy usually transferred as?	Heat
16. What is the main way to reduce energy waste in machines?	Lubrication
17. What is the main way to reduce energy loss in buildings?	Insulation
18. What is the name of the rate at which energy is transferred?	Power
19. What type of energy transfer happens through solids?	Conduction
20. What type of energy transfer happens in fluids?	Convection
21. What type of energy transfer travels as waves?	Radiation

22. What is the name of the energy transfer diagram used in devices?	Sankey diagram
23. What is the energy source that won't run out?	Renewable
24. What is the fossil fuel with the lowest carbon emissions?	Natural gas
25. Name two sources of renewable energy.	Hydroelectric, wave, biogas, solar, wind, geothermal
26. What does finite mean?	The resource will run out one day