GCSE Science Fold & Solve – *Energy Stores & Transfers*

Fold the answers and work through the questions below.

AO1

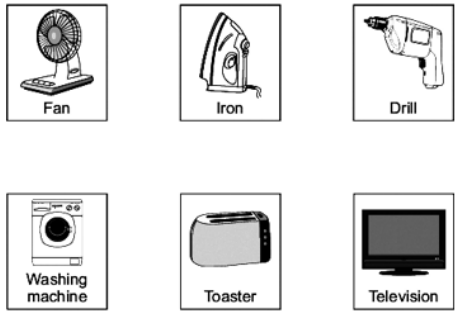
1. List 2 examples of stores of energy.

2. State 2 energy transfers.

3. As the cyclist accelerates, the _____ energy store in the cyclist's body decreases and the _____ energy of the cyclist increases.

Chemical	Elastic	Gravitational	Kinetic

4. Three more of the appliances are also designed to transfer electrical energy to kinetic energy. Which three? Draw a ring around each correct appliance.

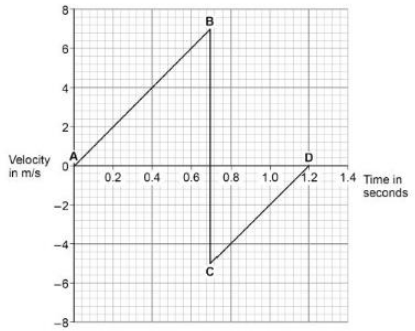


AO2

1. The total power input to the leaf blower is 750 W. The useful power output of the leaf blower is 360 W. Calculate the efficiency of the leaf blower.

2. The mass of the student is 50.0 kg. The gravitational field strength is 9.8 N / kg. Calculate the change in gravitational potential energy from the position where the student jumps to the point 20.0 m below.

AO3



1. When the ball hits the ground, energy is transferred from the ball to the Earth.
Explain how the data in the graph above shows this energy transfer.

Answers – Fold this over!

AO1

1. Chemical/Gravitational/Elastic/Magnetic/Kinetic/
2. Heat/Light/Sound/Kinetic/Electrical
3. Chemical/Kinetic
4. Fan/Drill/Washing Machine

AO2

1. 48% or 0.48
2. $E_p = 50 \times 9.8 \times 20$
9800 (J)

AO3

1.
- Velocity just after bounce is less than just before bounce
- The height at the top of the bounce is less than the height from which it was dropped
- So the ball has lost energy
- Correct reference to (loss of) ke or (reduced) gpe
- Total energy of ball and Earth / ground is constant