



# SP8 Energy — forces doing work

## Personal learning checklist | 1 of 1

GCSE Edexcel Separate Sciences | Physics Paper 2

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

Tick one box for each statement. Red: need help. Amber: partly confident.  
Green: can do independently.

| I can                                                                                                       | Red                      | Amber                    | Green                    |
|-------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|
| <b>Mechanical work</b>                                                                                      |                          |                          |                          |
| Explain work as energy transfer, calculate force-distance work and use displacement in the force direction. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Explain zero work for stationary objects or perpendicular forces and describe practical work measurements.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Explain frictional work and distinguish useful braking from unwanted heating.                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Stores and conservation</b>                                                                              |                          |                          |                          |
| Describe changing stores and transfer pathways in lifting, falling and electrical equipment.                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Explain conservation and dissipation and balance quantitative energy-flow diagrams.                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Mechanical energy calculations</b>                                                                       |                          |                          |                          |
| Calculate gravitational and kinetic energy changes and rearrange for height, mass or speed.                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Apply energy conservation to falling and lifting, including vertical height and drag losses.                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Explain mass and squared-speed effects and relate braking work to initial kinetic energy.                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Power investigations</b>                                                                                 |                          |                          |                          |
| Calculate and rearrange power, energy and time, using watts and consistent units.                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Describe stair-climbing or lifting power measurements and distinguish useful power from total input.        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Efficiency</b>                                                                                           |                          |                          |                          |
| Calculate energy or power efficiency and rearrange for useful output or input.                              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Explain task-dependent useful transfers and methods of reducing unwanted energy transfers.                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

My next revision priority \_\_\_\_\_