

Power and wasted energy

Power as the rate of energy transfer · wasted energy · reducing it

SCORE

/ 10

Name

Class

Due

Do Now

REMEMBER

From earlier lessons · 1 mark each

1

State the law of conservation of energy.

[1]

2

Describe how to find the spring constant from a graph of force (y-axis) against extension (x-axis).

[1]

3

Name the store of energy associated with extending and compressing objects.

[1]

Key ideas

LESSONS 7–8

Show your working

4

A student climbs the stairs. They transfer 1500 J to their gravitational potential store in 6.0 s. Use $P = \frac{E}{t}$
Calculate the student's power.

[3]

5

A 2000 W kettle is switched on for 120 s. Calculate the energy transferred.

[2]

6

Where does most wasted energy end up?

[1]

the kinetic store of the device

the thermal store of the surroundings

the chemical store of the fuel

7

Explain how oiling a bicycle chain reduces wasted energy.

[1]