

PREP 3 · LESSONS 5–6

Springs, swings and conservation

Elastic potential energy · conservation of energy · energy dissipated

SCORE
/10

Name _____ Class _____ Due _____

Do Now REMEMBER

From earlier lessons · 1 mark each

1 State the standard unit of spring constant. [1]

2 Name the store of energy associated with changes in height. [1]

3 Name the energy store that increases when an elastic object is stretched or compressed. [1]

Key ideas LESSONS 5–6

Show your working

4 A spring with spring constant 40 N/m is stretched by 0.10 m. Use $E_e = \frac{1}{2} k e^2$
Calculate the energy in the elastic potential store of the spring. [3]

5 A pendulum is pulled to one side and released.
a Describe the energy transfer as the pendulum swings down to its lowest point. [2]

b It never quite reaches its starting height on the other side. Explain why, even though energy is conserved. [2]