

PREP 2 · LESSONS 3–4

Lifting and stretching

Gravitational potential energy · stretching springs · spring constant

 SCORE
/10

Name _____ Class _____ Due _____

Do Now REMEMBER

From earlier lessons · 1 mark each

1 State the standard unit of energy. [1]

2 Name the four ways energy is transferred between stores. [1]

3 Name the two quantities that kinetic energy depends on. [1]

Key ideas LESSONS 3–4

Show your working

 4 A 2.0 kg box is lifted onto a shelf 1.5 m high. Use $E_p = mgh$ and $g = 9.8 \text{ N/kg}$.
 Calculate the energy transferred to the gravitational potential store of the box. [3]

 5 A spring is 12.0 cm long. A 3.0 N force stretches it to 18.0 cm. Use $F = ke$
 a Calculate the extension in metres. [1]

 c Up to the limit of proportionality, extension is [1]

directly proportional

inversely proportional

not related

 to force.