

Conservation of Energy

Name:

Date:

INQUIRY

Energy cannot be created or destroyed — only transferred. So where does 'lost' energy actually go?

Discuss with your partner. Write your initial ideas below:

Key Vocabulary

Term	Definition
Conservation of energy	Energy cannot be created or destroyed, only transferred between stores.
Dissipation	Energy spreading out into the surroundings as heat.

Part A — Understanding

1. State the law of conservation of energy in your own words. [2 marks]

2. A ball dropped from a Nanjing high-rise: GPE at top = 100 J. At ground: KE = 85 J. Where did the other 15 J go? [2 marks]

Part B — Calculating

3. A roller coaster car at the top has 50,000 J of GPE. At the bottom it has 42,000 J of KE. How much energy was dissipated? [2 marks]

Show your working:

4. A pendulum in a clock swings with 2 J of energy. After 100 swings it has 1.5 J. Energy lost per swing? [2 marks]

Show your working: