

**Chapter 6**

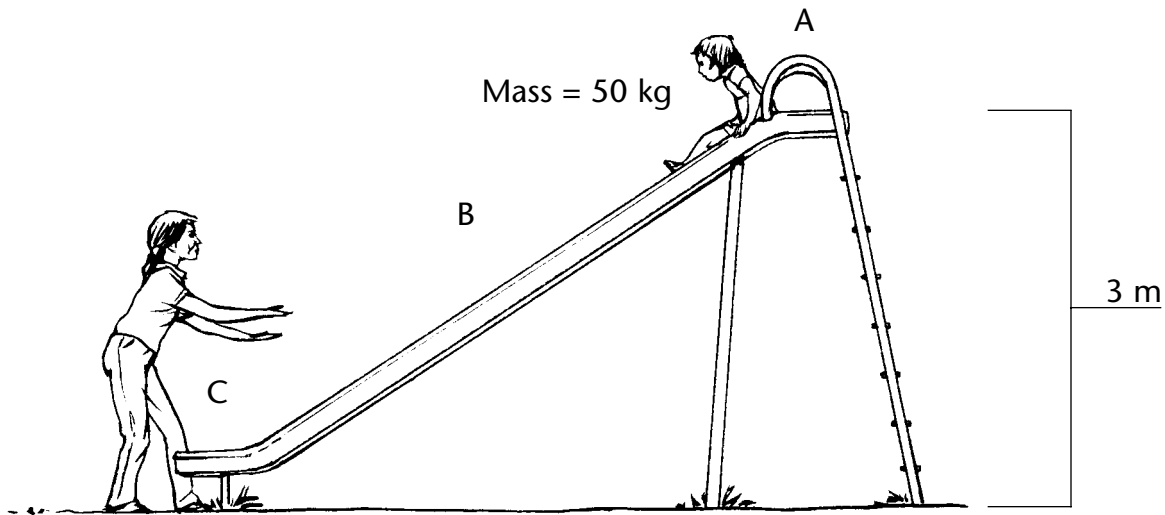
Use with Section 3

**REINFORCEMENT**

**• What is energy?**

*In the following examples, indicate whether kinetic or potential energy is being displayed.*

- \_\_\_\_\_ 1. A book sits on the edge of a desk.
- \_\_\_\_\_ 2. A soccer ball is kicked downfield by several soccer players.
- \_\_\_\_\_ 3. A pendulum swings down and through its range of motion.
- \_\_\_\_\_ 4. A pendulum is held motionless at the top of its range of movement.
- \_\_\_\_\_ 5. A spring is compressed and held in place.
- \_\_\_\_\_ 6. A paper clip moves toward a magnet.
- \_\_\_\_\_ 7. You hold a ball up as you prepare to bounce it on the floor.



*After studying the illustration of the child getting ready to slide down the slide, answer the following questions about kinetic and gravitational potential energy.*

- 8. At what point(s) is kinetic energy the highest? Lowest? \_\_\_\_\_
- 9. At what point(s) is gravitational potential energy the highest? Lowest? \_\_\_\_\_
- 10. Calculate the GPE for the child waiting at the top of the slide to go down. Use the formula  $GPE = mgh$  to calculate the answer. Show your work. (Recall that  $g$  = acceleration due to gravity and equals  $9.8 \text{ m/s}^2$ ) \_\_\_\_\_
- 11. What factors could influence the amount of kinetic energy possible when the child is sliding down the slide? \_\_\_\_\_
- 12. Can you think of another example of an activity that demonstrates both gravitational potential energy and kinetic energy in its range of movement? \_\_\_\_\_  
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