Balloon Car

Student quiz — Answer sheet

Directions: Circle the best answer for each question below.

1. How can you increase the amount of potential energy initially stored by your balloon car?
   a. Inflate the balloon more
   b. Make the car lighter
   c. Inflate the balloon less
   d. Make the car heavier

2. When the car is coasting after the balloon is completely deflated, the car has:
   a. Kinetic energy only
   b. Potential energy only
   c. Kinetic and potential energy
   d. None of the above

3. Adding a second inflated balloon would increase both the initial potential energy and the resulting kinetic energy of the car.
   a. True
   b. False

4. When the balloon deflates and pushes the car forward, which of the following statements is true?
   a. The car's potential energy is converted to the balloon's kinetic energy.
   b. The car's kinetic energy is converted to the balloon's potential energy.
   c. The balloon's potential energy is converted to the car's kinetic energy.
   d. The balloon's kinetic energy is converted to the car's potential energy.

5. Why is it important to test a design in an engineering project?
   a. Testing allows you to identify flaws in the design that can be improved.
   b. It might be impossible to predict exactly how a design will perform until you actually build and try it.
   c. Getting test data can help you compare different design solutions to see which is the best one.
   d. All of the above.