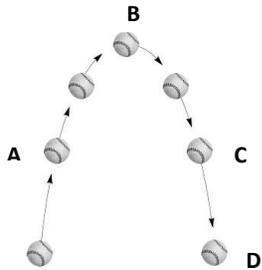


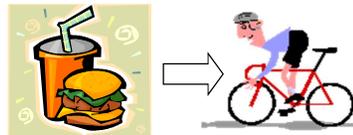
1. Niagara Falls (waterfall) is an example of
  - a. Kinetic energy being converted to potential energy.
  - b. Potential energy being converted to kinetic energy.
  - c. Thermal energy being converted to potential energy.
  - d. Thermal energy being converted to kinetic energy.
2. When you rub your hands together on a cold day, you use friction to convert
  - a. Thermal energy to chemical energy.
  - b. Thermal energy to mechanical energy.
  - c. Mechanical energy to chemical energy.
  - d. Mechanical energy to thermal energy.

Use the picture below to answer questions 3 & 4.

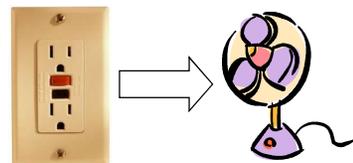
3. At what point does the ball have the greatest potential energy? \_\_\_\_\_
4. At what point does the ball have the greatest kinetic energy? \_\_\_\_\_



5. Riding a bicycle demonstrates what kind of energy transformation?  
\_\_\_\_\_ to \_\_\_\_\_

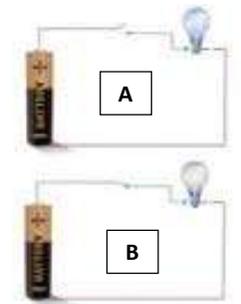


6. Using a fan demonstrates what kind of energy transformation?  
\_\_\_\_\_ to \_\_\_\_\_



7. Explain what is needed with a circuit to get a bulb to light.  
\_\_\_\_\_  
\_\_\_\_\_

8. Which picture to the right demonstrates a closed circuit? Explain how you know this.  
\_\_\_\_\_  
\_\_\_\_\_



Use the following words to complete the blanks in the story.

*Energy / Energy Transformation / Kinetic / Mechanical / Potential / Circuit / Current / Electrical Energy*

Lightening McQueen was storing **9.** \_\_\_\_\_ energy before he participated in the Route 66 auto race. Luigi checked all the wiring in his engine to make sure there was a complete **10.** \_\_\_\_\_ to allow the electrical **11.** \_\_\_\_\_ to flow uninterrupted. Luigi told McQueen that if he wanted to be "Green" he could change his car to be a hybrid so he could run off gas and **12.** \_\_\_\_\_. This conversion would save money and allow Lightening McQueen to conserve **13.** \_\_\_\_\_. Luigi explained to McQueen that converting to a hybrid would still allow Lightening to drive just as quickly as he did before, demonstrating maximum **14.** \_\_\_\_\_ or **15.** \_\_\_\_\_ energy. During the race, Lightening McQueen will demonstrate several different **16.** \_\_\_\_\_, such as chemical to electrical to thermal to electromagnetic. All of Lightening McQueen's friends are rooting for him to place first in the race!

- |           |           |
|-----------|-----------|
| 9. _____  | 10. _____ |
| 11. _____ | 12. _____ |
| 13. _____ | 14. _____ |
| 15. _____ | 16. _____ |

