



Exploration

# STUDENT worksheet

Name \_\_\_\_\_

Date \_\_\_\_\_

## Energy Conversion

### Overview

In this Exploration you will shoot balls toward a paddle wheel connected to an electric generator to observe the conversion of energy.

### Questions

1. What is the relationship between the ball mass, launch force, and the brightness of the light? \_\_\_\_\_
2. Describe the transfer of energy beginning with the ball coming into contact with the paddle wheel. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. A windmill converts mechanical energy into electrical energy. Where does the mechanical energy come from? \_\_\_\_\_  
\_\_\_\_\_

### How to Use This Exploration

1. Read the Introduction and click the Continue button.
2. Identify the Exploration components and read the text.
3. Select a ball mass and launch force and click on the Play button.
4. Watch the animation. Note the speed of the paddle wheel and brightness of the bulb.
5. Continue with all combinations, noting the transfer of energy that takes place.

### Data

---

---

---

---

---

---

---

---