

Name: _____

Date: _____

Water Wheel Design

Part 1: Preparing to Record Data

1. What is your design criterion?

2. How will you be able to tell which group's washer had the greatest increase in potential energy (stored the most energy)?

3. What data do you need to record to determine if your water wheel meets the design criterion?

4. What data do you need to record to determine which group's washer had the greatest increase in potential energy (stored the most energy)?

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Water Wheel Design (continued)

Part 2: Recording and Analyzing Data from Water Wheel Tests

Create a table to record data that will help you determine:

- whether or not your water wheel met the design criterion.
- which group's washer had the greatest increase in potential energy.

5. Did your team's water wheel meet the design criterion? What is your evidence?

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Water Wheel Design (continued)

6. Where did the energy come from that eventually led to the washer being lifted?

7. Which group's washer had the greatest increase in potential energy? How can you tell?

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Water Wheel Design (continued)

Part 3: Applying Ideas

Celia tries to push a heavy box up a hill. She pushes and pushes but the box does not move. Her brother and sister come to help her. Her brother, Ray, is able to push the box 2 meters up the hill. Her sister, Lana, is able to push the box 5 meters up the hill.

8. Who was able to change the energy of the box? Check all that are correct.

Celia

Ray

Lana

Explain your answer.

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Water Wheel Design (continued)

9. Who was able to do work on the box? Check all that are correct.

Celia

Ray

Lana

Explain your answer.

10. Who was able to do the most work on the box? Check one.

Celia

Ray

Lana

Explain your answer.
