

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Water Wheel Design

### Part 1: Preparing to Record Data

1. What is your design criterion?

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

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

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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?

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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.

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

 Celia

 Ray

 Lana

Explain your answer.

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