

Make a Rain Gauge to Study Precipitation

Name: _____

Date: _____

Student worksheet

Word Bank

(when appropriate, use these words in your short answers)

- Precipitation
- Rain gauge
- Weather

DIRECTIONS: Design a Rain Gauge.

1. Discuss ideas for your rain gauge in your group. List any extra information you need to make a good design.

2. Draw your best design in the space below. Label all parts.

Note: Your group member(s) may prefer a different idea. That is fine! You can each draw your own design on your own worksheet.

Make sure:

- ☐ The gauge can catch precipitation such as rain
- ☐ You can measure the precipitation
- ☐ All parts are labeled
- ☐ You used only materials provided

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DIRECTIONS: Evaluate Your Design.

3. Check off the criteria your design meets:

- ☐ It can measure precipitation:
 - It can collect rain
 - You can measure the level of collected water
- ☐ It can be emptied so that it is reusable
- ☐ It stays upright when windy so that it is usable in windy conditions.

If your design doesn't meet these criteria, redesign and change the drawing in step 3, or draw a new one on another page.

4. With your group member(s), select one design your group will build together.

DIRECTIONS: Build and Install Your Rain Gauge.

DIRECTIONS: Test Your Rain Gauge.

5. Record your test data in Table 1.

- Remember to fill in the unit (mm or inches) in which you measure precipitation in the second column.
- Make an extra table on a different sheet if you have more test data!

Table 1 : Test Data	
Precipitation type	Precipitation [_____]
Light rain	
Heavy rain	

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DIRECTIONS: Use Your Rain Gauge.

6. Put your rain gauge outside. Check it regularly (e.g., daily at the same time of day). Record your measurement data in Table 2. Empty the gauge each time.

Remember to fill in the time at which you measure and the unit (mm or inches) in which you measure precipitation.

Rain Gauge Data	
Date & time	Precipitation [_____]

DIRECTIONS: Improve Your Rain Gauge.

7. If you could make a new rain gauge or alter your rain gauge, what improvements would you make? What would the new gauge look like?

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8. Draw your ideas in the space below. Make sure to label the drawing.



9. Is this design better than your previous one? Briefly explain why or why not.