



Project Instructions

DIY Rain Gauge

Summary

Rain is in the forecast this week! You can use this as a learning opportunity in our distance learning curriculum. Below you will find ideas for kindergarten through sixth grade for a hands-on science and math environmental learning experience.

Make a Rain Gauge: (outside activity)

1. Gather materials - clear plastic container (tall enough to collect rain, measuring 4-8 inches in diameter and flat sides), ruler, permanent marker, handful of gravel.
2. Place the gravel at the bottom of the plastic container to keep it from tipping over outside.
3. Fill the container with water up to the level of the gravel. This will be the “zero” when marking measurements on your container.
4. Using the ruler, place a mark every half inch along the side of your container so you can measure how much rain you capture.
5. Place the container outside in an area that will receive full rainfall.



Before it rains, have your child look at the forecast for the week and discuss what they notice.

Print out the worksheet for your child's grade level and have them fill it out:

[K-3 Worksheet](#)

[4-6 Worksheet](#)



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Add On Activity for K-3 w/Assistance (this is covered on 4-6 Worksheet)

Find the rain harvesting potential from your roof- using these calculations. You will be able to see just how much water you can capture from your roof during the year!

1. Access Google Earth and find your house
2. Use the measuring tool on the left toolbar and measure the area for a part of your roof that would all drain to one area. To do this, click on the starting point, then drag and click along the perimeter of the area.
3. Predict how many gallons of water come off of that part of your roof in one rainy season... 10 gallons? 100 gallons? 1,000 gallons? Or more?
4. Use the drop down to convert the measurement to square feet
5. Calculate the rain harvesting potential by filling in this calculation:
Roof Square Footage X 10”(annual rainfall in Encinitas) X 0.623 (conversion factor to get gallons) = Total volume of rainwater in gallons

$$\text{_____ ft}^2 \times 10 \text{ in.} \times 0.623 = \text{_____ gallons}$$

6. Was the number you came up with close to your prediction?
7. Now start to think of what you could do with all of that water!

Maybe some of you have rain barrels for catching the rain water so that you can water plants throughout the year. If not, this might be a good activity to think about.

Other Ideas for Catching Rainwater:

- The Solana Center in Encinitas has rain barrels that can be purchased with a rebate and picked up at a later date - go to solanacenter.org for more details.
- Use buckets, watering cans, or bowls to collect rainwater that can be used to water plants. Be sure the water is properly protected from mosquitos by covering it.
- Put indoor plants outside to enjoy the rain showers!