



## 2020 Cub Scout Backyard Challenge



### Make a Rain Gauge

Category: STEM

Difficulty: Easy

### Description:

They say that when it rains in New Jersey, it pours! So, how do those weather scientists (meteorologist) measure how much water falls from the clouds onto our yards? They use a rain gauge. Today you get to make your very own rain gauge to track how much rain falls on your yard.



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### Items Needed:

- Two-liter bottle (Empty and clean)
- Inch ruler
- Box knife
- Scissors
- Black permanent marker
- Clear tape
- Rocks for bottom

1. Remove label and mark the bottle where the tapered bottom meets the side wall. Draw a line all the way around the bottle at this level. This is the bottom line.
2. Use ruler to mark off 6 one-inch divisions from the bottom line. Mark each division, from the bottom up, as 1, 2 3,4, 5 inches ("is the symbol for inches).
3. The sixth mark is the top line. Where we are going to cut the bottle. Draw a line all the way around the bottle at this level. Be sure to make this even.
4. Have a parent use the box knife to start the cut on the top line. Then you can use scissors to complete the cut, removing the bottle top.
5. Stand the bottle bottom on its feet and add rocks to the level of the bottom line. What job is done by the rocks?
6. Turn the bottle top upside down and place inside the bottle bottom. What is the inverted bottle tops job?
7. Tape the rims of the bottle top and bottom so they do not slip.
8. Place outside in the open air and wait for it to rain.

