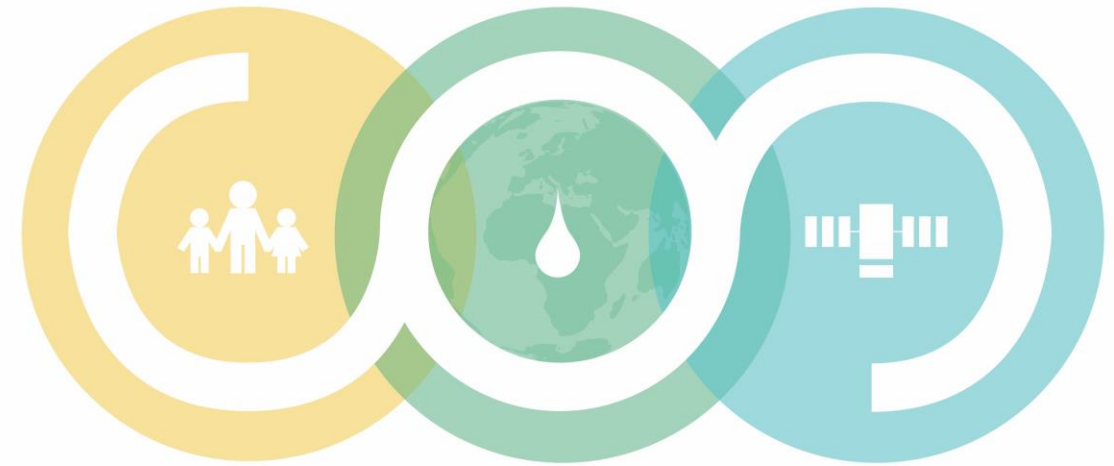


Manual:  
Building your  
own Rain  
Gauge

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Schools and Satellites

# In this manual you will learn how to make a rain gauge

This rain gauge will be used to take measurements for the project Schools and Satellites.

The rain gauge is low cost and can be made with only little material.

The method we use is the method developed by Smartphones4Water.

Watch also the following video before you start, by scanning the QR code:



# What do you need

- An empty 1.5 L **Fanta** bottle
- A ruler
- PVC glue
- Scissors
- A Stanley knife
- A black permanent marker
- A nail
- A hammer or stone
- A measuring cup and stirrer



## What do you need

- Sand:Cement:Water
- Ratio 1:1:3



## Step 1

- Remove the label from the Fanta Bottle
- Mark the upper part of the bottle to cut it with the marker and the ruler
- Use some painting tape to mark it clearly.



## Step 2

- Cut the Fanta bottle using the Stanley knife and scissors, on the locations as shown in the picture.
- It is important that the cut is straight!



## Step 3

- Mix cement and sand in the measuring cup



## Step 4

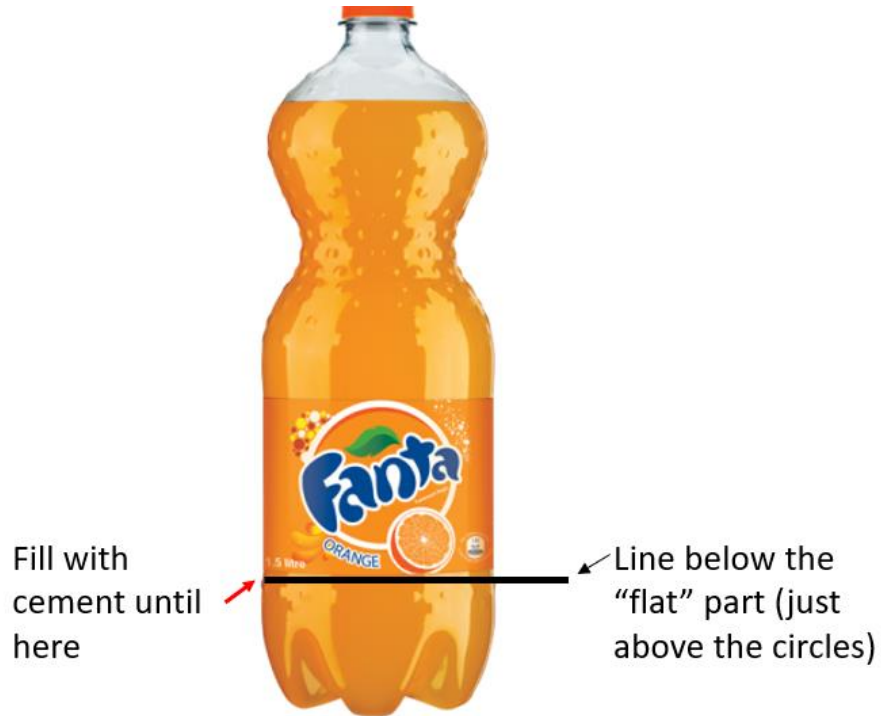
- Add water, until the cement mixture is of a good viscosity





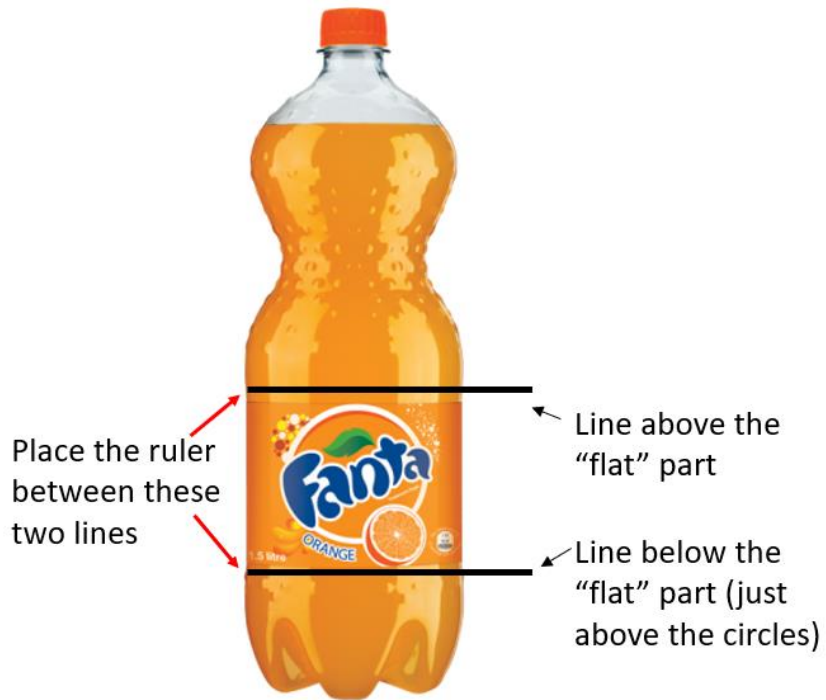
## Step 5

- Then use the upper part of the bottle as a funnel and pore the cement mixture in the bottle. The cement mixture needs to dry for some time now.
- Then clean the upper part of the bottle with water.



## Step 6

- When the cement mixture is dry, you can continue this step
- Cut the ruler for the length of your bottle (10 cm) using the Stanley knife. When you have made a first good cut, snap the ruler at the cut.
- Use the glue to glue it on the bottle. The 0 cm line should be placed at the top of the cement level, as shown in the picture between the two lines.





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## Step 7

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- Make a hole in the cap of the bottle using the nail and hammer/stone. Don't forget to put a piece of wood below the cap. And have the inner part of the cap upwards.
- Screw the cap on the upper part of the bottle.
- Put the upper part of the bottle upside down in the bottle,
- Your S4W rain gauge is now finished!

Now you are ready to take  
measurements! Good luck  
and have fun!

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See the Rainfall Measurement Syllabus of Schools and Satellites to know how to take  
your measurements