Rain Gauge Design Challenge

Rain is something that we experience on a regular basis and probably don't pay much attention to, but it can have a severe impact on our lives. Tracking rain patterns can help us to better understand our environment and climate, as well as give us an idea of how much freshwater we have available for our needs. NASA launched a new satellite this year, called "GPM" (Global Precipitation Measurement) to measure rainfall from above the clouds to allow us to measure precipitation all over the world. We can also measure rainfall from the ground and compare our measurements with those of GPM.

<u>Building your own rain gauge:</u>

1. You first need to find some sort of container that can be used to hold rain. You can choose from a large number of household items such as old cans, water bottles, cups, food containers, and jars.

2. Next, find something that can be used to measure the rainfall. That could be a ruler or a tape measure, or you can develop another system that makes sense to you.

3. Now use your measuring device to make marks on your container so you can tell how much rainfall you received.

Comparing Rain Gauge Designs:

- Look at the various rain gauges that people are making. Which design do you think is the most efficient? Why?
- If you were to redesign your rain gauge, what aspects of your gauge would you change? Why?
- What did you find the most difficult about this design challenge?

Using your rain gauge to measure precipitation:

4. Set your container outside for the allotted period of time. Don't forget to leave the container in an open area so that nothing is blocking the rain from getting in!

5. Every time you take a measurement, record the amount of rain, time of day, and what the weather was like.

Date	**Time of Day**	**Precipitation**	**Weather**

Remember to keep an eye out for the data that the GPM satellite will start to collect soon!
http://pmm.nasa.gov