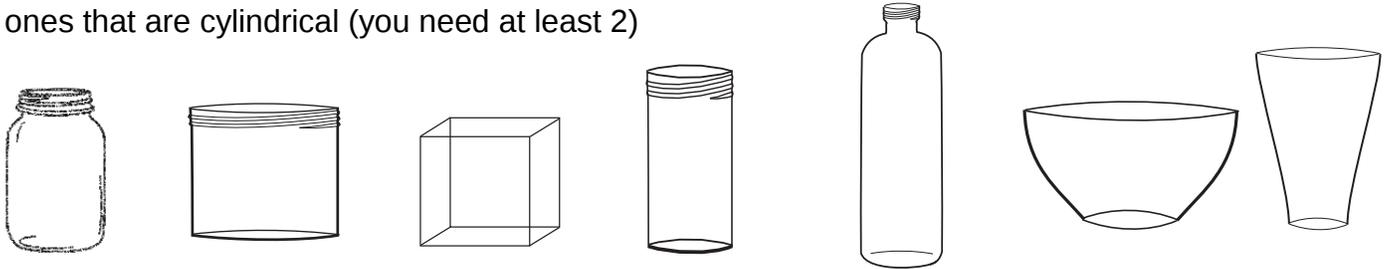


## Measuring Rainfall: Using Non-Standard Containers

### Activity (modify to suit age of students)

Gather containers of different sizes and shapes, preferably clear or semi-opaque.

Use a variety of containers, including some with openings a different size to the base, as well as ones that are cylindrical (you need at least 2)



#### 1. Discuss the most recent rain event

Discuss the effects of rain on families and on the school.

#### 2. Ask how we can determine how much rain has fallen

Note that this information, or data, is used by meteorologists to warn us of possible flooding. Discuss who else is very interested in how much rain falls, such as farmers and local authorities.

#### 3. When it is raining, place counters outside

Catch the rain over a certain period. Make sure the containers don't blow over.

#### 4. Once there is an amount of rain collected that can be measured, bring the containers inside

Place the containers with the collected rainwater on display for students to see and compare. (You will need sufficient rain to be able to see the differences in the water levels)

#### 5. Compare the water levels in the containers

Students will notice that there is more water in some containers than in others.

The jars with a wider opening than the base, such as a bowl, will have a higher water level in it than a bottle, which has a smaller opening than its base.

Discuss why this is so (more rain can get in and when it pools in the bottom it is deeper than those that have a smaller opening than the base).

## Measuring Rainfall: Using Non-Standard Containers

### 6. Point out that the shape of a container used to collect rainfall affects the way that rainfall is measured.

When rainfall is measured, scientists simply put out a container and catch the water that falls.

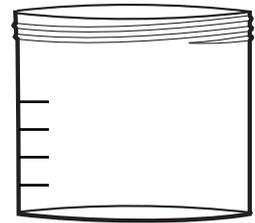
Point to the side and show students that, using a ruler, the water level can be measured. However they have to be careful to use the right container so that the water level is correct every time.

If there is a proper rain gauge available, show it to students. Discuss the gauge's design and how its shape makes measuring rainfall easier and more accurate. This includes features to "multiply" the depth of rain, making it easier to measure.

### 7. Ask students to find any containers that have the same level of water in them.

Point out the containers that have the same sized opening as the base (and completely straight sides). Talk about the name for these objects: "cylinders".

These are the type of containers that a scientist would use. Usually they have marks already on the sides.



### 8. Show students that all that is needed is to carefully place marks on the sides of a container to measure the depth of rainwater in it.

Once measured it is emptied out. Rainfall is always measured in linear (length) measures, such as mm (or inches).

### 9. Discuss predicting future rain events

Discuss how predicting the likely amount of rain in the future, and knowing the amount of rain that has actually fallen, allow authorities to manage safety and water supplies for people living in an area.

### 10. Discuss connections between our uses of rainwater and the environment

Discuss what we can do to conserve water for human use, while protecting the environment from unnecessary development.