

# How Much Rain Falls?

#FLOODED  
Worksheet



## Volume of Water

It is important to be able to understand how much water is falling during a rain event. The weather might tell you the amount in mm, but what is the volume of that rainfall.

To calculate the volume, first measure the area you want to focus on. This might be the area of your school's roof or yard. This can be done using Google Maps and right-clicking to access the 'Measure distance' tool. Alternatively, using a tape measure your class can go outside and calculate the area. Multiply the given area by the depth of rainfall provided either by a weather forecast or your own measurements (e.g. using a rain gauge). Be careful to use equivalent units.

## Relevant Formula

Area ( $m^2$ ) = length x width

Volume ( $m^3$ ) = length x width x depth

### Conversion:

1,000 litres of water =  $1m^3$  water

Depth of rain = 1 mm = 0.1 cm = .001 m of rain

## Sample Data

Depth of rain	Typical rain event	10 mm = 1 cm = .01 m
Area of focus of interest	School yard	20m X 100m = 2,000 m <sup>2</sup>
Total volume of water		2,000 X .01 = 20 m <sup>3</sup> = 20,000 litres

## Your Data

Depth of rain		
Area of focus of interest		
Total volume of water		