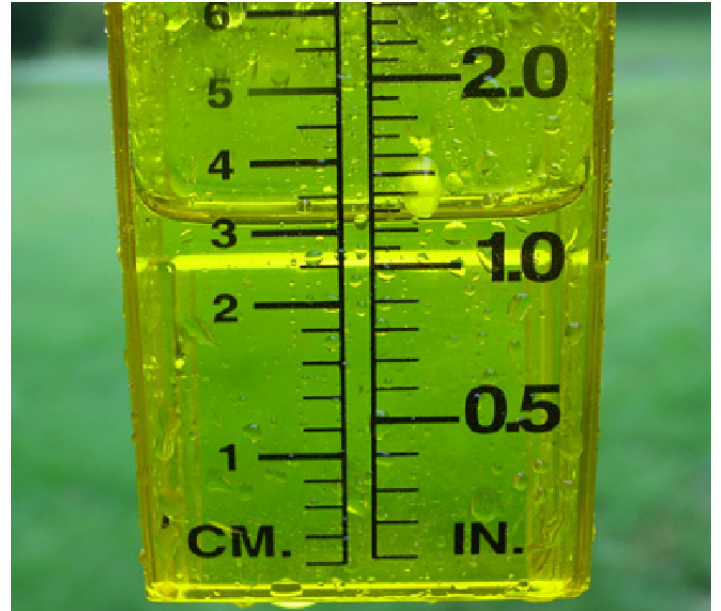


When scientists conduct experiments, they collect data through observation and measurement. There are many different ways to measure data, but they all help ensure that scientists can collect accurate information.



## Key vocabulary

---

### **experiment**

A scientific test to try out a theory or to see the effect of something.

### **observation**

The careful watching of someone or something.

### **length**

The distance from one end of something to the other.

### **mass**

The amount of physical matter an object contains.

### **volume**

The amount of space taken up by a three-dimensional shape such as a box or a room.

### **weight**

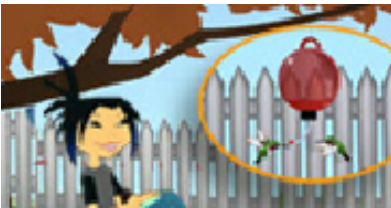
The force of gravity on an object's mass. It is measured in pounds or Newtons (N). An object's weight depends on its location in the universe. However, the object's mass remains the same anywhere in the universe.

## Related articles



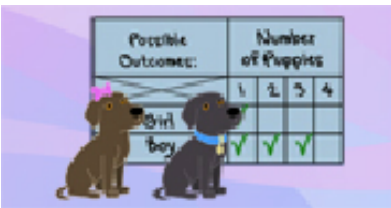
### Scientific Theory & Evidence

Sometimes even scientists have to guess. Scientists make theories, which are sort of like educated guesses, about how things work, and then they test them.



### Scientific Methods

Scientific investigations can get pretty complicated. That is why all scientists use the same method to help them organize their observations and test their theories.



### Identify Outcomes and Make Predictions

Outcomes are the results of an experiment or trial. Identifying possible outcomes is one way to make predictions.