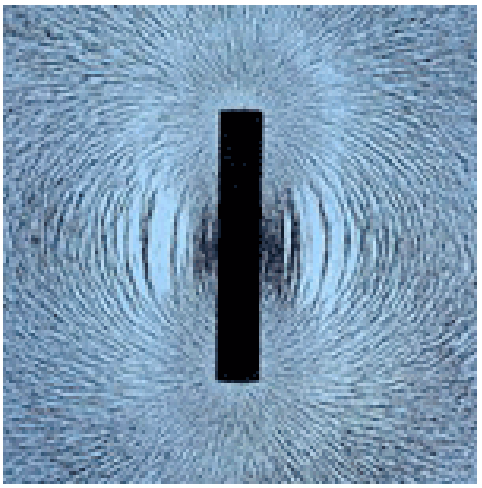
Solar magnetism!

When a solar storm travels through space, it carries part of the Sun's magnetic field with it. The Advanced Composition Explorer (ACE) satellite measures the strength of this field and its polarity (North or South). This polarity information is recorded as a negative (south) or a positive (north) number.

In this exercise, you will learn how to work with negative and positive numbers.



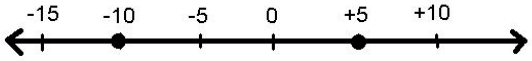
The magnetic field of a toy magnet.

The sign of a number (+ or -) is used by scientists to record information about magnetic polarity (North or South)or the direction of motion (forward or backward).

- Negative and positive numbers can be understood by using a number line.

Here's how to do it!

The ACE satellite measures the solar wind magnetic field on two days and records the value -10.0 on Monday, and +5.0 on Tuesday. By how much did the magnetic field change between the two days?



Answer: (+5) - (-10.0) = +15.0

Now you try!

Draw a number line, and plot the following points. Then answer the questions.

Solar Wind Magnetism Data Series

-15, +5, -2, -15, -20, -8, +4,
+8, +5, +2, +5, -15, +6

a) What is the range of the measurements?

b) What is the smallest value recorded?

c) What is the largest value recorded?

d) What is the median value recorded?

e) What is the average value recorded?

Solar Magnetism:	http://sunearth.gsfc.nasa.gov/sechtml/tut.html