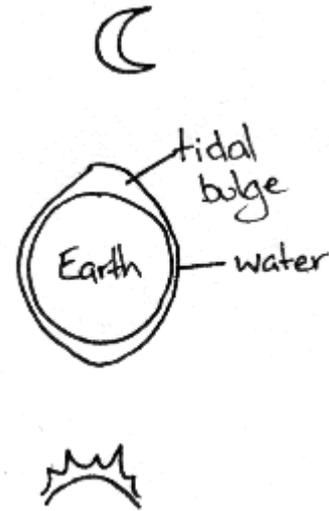


# Suzy's World

## Tides - What makes the tide go in and out?

### Fact

- The gravity of the moon is the main influence on the tides.
- The moon's gravitational attraction or pull on Earth creates tidal bulges in the Earth's oceans.
- When the Earth moves into a bulge the water levels rise, which creates high tide, and when it moves out of the bulge the water level drops, which makes low tide.
- The pattern changes to make this occur nearly an hour later each day.
- See the picture to the side. The moon's gravitational pull is pulling the water towards it to make a bulge. The sun does it too, but only a little bit because it's so far away



### Do you know

- High tide happens every twelve hours.
- Low tides happen between each high tide.
- Scientists believe Earth spins because a meteorite about the size of Mars hit it over 4500 million years ago.
- Most beaches have a high tide mark and a low tide mark and the tide seldom goes higher or lower than these marks.
- You'll find different types of sea creatures at the two tidemarks.
- Creatures at the high tide mark have to be pretty tough because they have to go without water for up to 12 hours.

### Experiments you can do

You can make your own tide simulator by having someone hold a plastic hula hoop around their waste. Tie a piece of cord to the hula hoop and have another person hold the other end of the cord. The person in the hoop is Earth, the hula hoop represents Earth's oceans and the person holding the cord is the moon. When the "moon" pulls on the cord that's its gravitational attraction to earth. What happens to the "Earth's" ocean?

### Other Investigations

Time the tide. Next time you make a day trip to the beach take a note of what stage the tide is at. Is it high or low tide; is the tide coming in or going out? Does it change while you're at the beach? What happens?

### Jokes

What can't get any wetter no matter how much it rains? The ocean.