Air Pressure and Weather Forecasts

Air pressure and the way it is changing helps you predict how the weather will change in the next few hours and days.

**What to do:** Cover the wide mouth of the funnel with the piece of balloon and tape it on tightly.
Suck some air from the narrow end of the funnel and notice what happens to the rubber.
Turn the funnel upside down and suck the air in again. Then turn the funnel sideways and suck in the air.

**What happens:** When you suck in the air, the rubber is pulled in, whatever the direction of the funnel.

**Why:** When you suck in the air, you are removing it from the inside of the funnel. When you do that, the push of air outside the funnel is greater than the push of the air from inside, even when you hold the funnel upside down or sideways. Air pushes—presses—equally in all directions.
You already know that the air over each square inch of the earth's surface, pulled by the earth's gravity, weighs 14.7 pounds (6.6 kg). This weight is known as air pressure.
When cool, dense air presses down on the earth, the air pressure is usually high. Warm, dense air rises away from the earth, and so, when it's warm, we generally have low air pressure.
High pressure usually brings clear weather while low pressure brings bad weather and strong winds. Changing pressure also brings winds.
When there are big differences in air pressure, air rushes out of the high pressure area to fill the low pressure area. Then there are strong, sometimes savage winds. If the difference in pressure is small, air gently drifts toward the low pressure area and we have gentle breezes.

**YOU NEED**
- piece of torn balloon
- funnel
- tape