

WHAT YOU WILL NEED:

scissors

Prese

- rubber band
- a jar
- tape
- one balloon
- glue
- sewing needle
- a plastic straw
- pencil
- poster board or card stock



BALLOON BAROMETER

Overview and objective:

A barometer is an instrument that measures air pressure. In this experiment, students will how to make their own barameter to measure changes in air pressure.

Procedure:

- 1. Cut off the neck of your balloon. Make sure the opening you are left with is wide enough to fit around the neck of the jar.
- 2. Stretch the balloon over the neck of the jar
- 3. Pull out any wrinkles or bubbles to make the surface as flat and smooth as possible.
- 4. Use your rubber band around the neck of the jar to keep your balloon on tight.
- 5. If your straw has a bend, cut it off.
- Now tape the needle to the end of your straw. Be careful not to poke yourself or the balloon! We need no blood here.... And a tight seal!
- Glue the *other* end of the straw and then put it in the center of the jar opening. You're gluing the straw onto the balloon. Hold it gently until dry.

This is your barometer. Now let's test it!

- 8. Lay your poster board down horizontally. Write "high" on the top right of the card and "low" on the bottom right of the card.
- Place the jar next to the card stock in front of a window.
 Indicate the point (along the 'high/low' scale that your needle is pointing.









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Procedure:

- 9. Place the jar next to the card stock in front of a window.
- 10. Indicate the point (along the 'high/low' scale) that your needle is pointing with either a "1" or with the time.
- Come back after an hour or two and see where the needle is pointing. Mark it with a "2" or with the time.

How it works:

The needle is changing height because air is trapped in the jar. When air pressure is decreasing outside the jar, the balloon pushes out and the needle goes down. When air pressure is increasing outside the jar, the balloon is pushed in and the needle goes up.

This helps us know the air pressure and better understand and predict weather changes.



Visit us on <u>www.Facebook.com/abc11scienceclub</u> and share the video or picture of your BALLOON BAROMETER.

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