



## AIR PRESSURE

*Air pressure is the weight of air pushing down on the earth and everything on it. Air pressure can affect our weather conditions, creating snowfalls, thunderstorms and tornadoes. In the following activities, see how air pressure can affect water and balloons.*

### This week's activities: Upside Down Water – Balloon Bump

## Upside Down Water

### Suggested materials:

- Small glass
- Water
- Index card or cardstock (10x15 cm)

### Directions:

1. Fill the glass with water right to the top, so that it runs over a little and wets the rim.
2. Place the index card over the full glass and use your hand to press the card down so it creates a seal around the wet rim of the glass.
3. Hold the card in place with your hand and slowly turn the glass over.
4. Carefully let go of the card; the card will not move, and the water will stay in the glass.



**The Science Behind It:** Sometimes air pressure is stronger than gravity (like in this experiment). The force the air pressure puts on the index card is stronger than the force gravity puts on the water in the glass — even when the glass is turned upside down!

## Balloon Bump

### Suggested materials:

- 2 balloons
- String

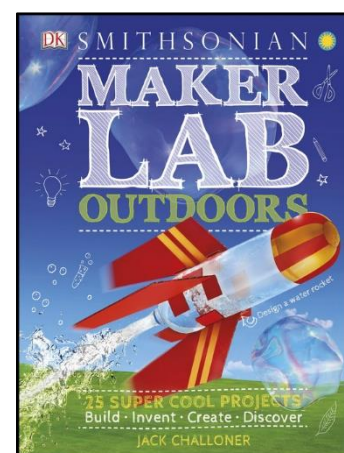
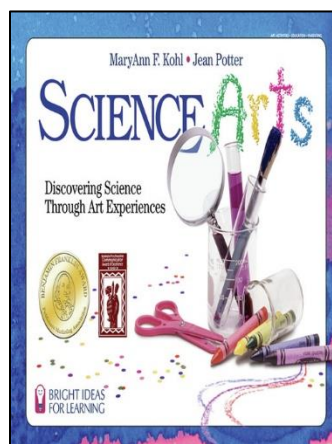
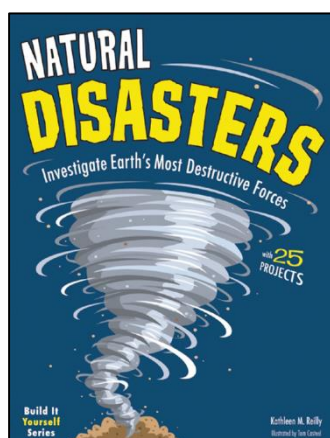
### Directions:

1. Blow up two balloons.
2. Cut two pieces of string or ribbon approximately 30 cm in length. Attach one to each of the balloons.
3. Hold one balloon in each hand by the strings at nose level, about 15 cm apart.
4. Blow hard into the space between the balloons. This should bump the balloons together.

**The Science Behind It:** When you blow air into the space between the balloons, it lowers the air pressure. The air surrounding the balloons is higher and forces the balloons to move closer together.

## Links to eResources:

Check out our [eBooks](#) on these topics:



### [Science](#) | [Weather](#)

Search **air pressure** on Hoopla Kids. Check out *Pop! Air and Water Pressure* by Stephanie Paris, and *Gasses, Pressure, and Wind* by Paul Fleisher. For more related experiments, look at *Air and Water: Simple Science Experiments* by Chris Oxlade.

On Kanopy Kids, watch *Nucleation Fountain*, Episode 13 from the series Science Max (Season 3). Watch how air pressure affects mints in diet cola, marshmallows, eggs and pickle juice.

You can get a library card at [hpl.ca/online-registration](http://hpl.ca/online-registration).

*If you would like to share one or all your creations, please take a picture and post it to social media using the hashtag, #HPLmakesomething.*



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