

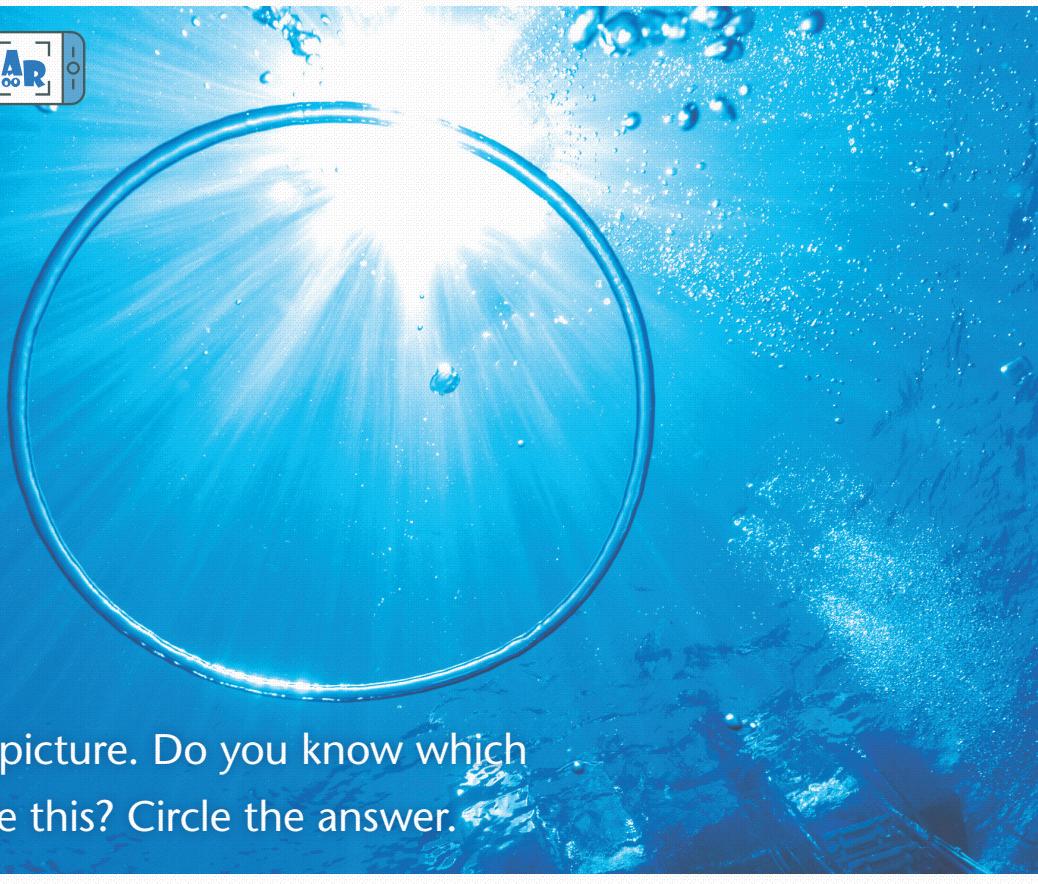
Always Wonder, Always Question, Always Think Science

# LIVE SCIENCE

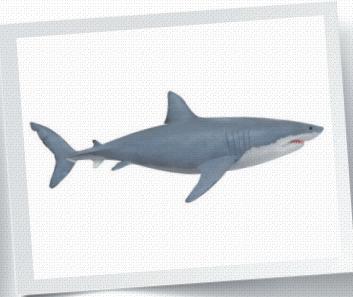
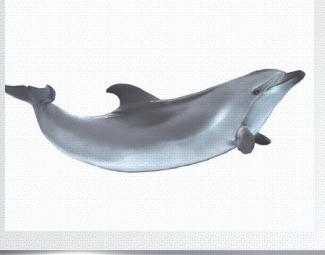


# Air Vortex Cannon

Let's discover it!



Look at the picture. Do you know which animal made this? Circle the answer.



How can this animal make a bubble ring? Discuss with your friends and choose the answer.

It can make a bubble ring by \_\_\_\_\_.

A eating food  B singing songs  C blowing air out of its blowhole



# My Super Air Cannon

## What do you need?

a box cutter

a plastic bottle

a balloon

a pair of scissors

tape

a piece of paper

a lighter

a stick of incense

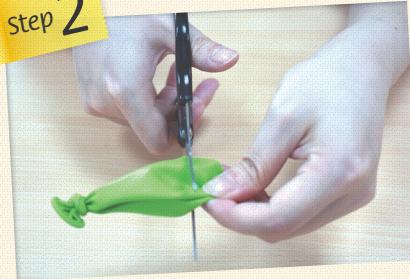
## What do you do?



Step 1



Step 2



Step 3

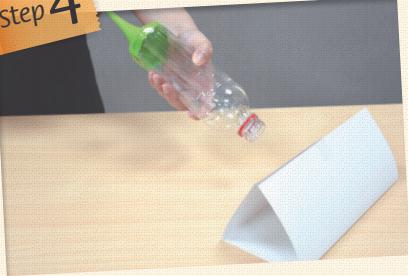


Use a box cutter to cut the bottom off of a plastic bottle.

Tie a knot in the neck of a balloon. Then, use a pair of scissors to cut off the tip of the balloon.

Cover the bottom of the plastic bottle with the balloon. Use tape to stick the balloon tightly onto the plastic bottle.

Step 4



Step 5



Step 6



Fold a piece of paper into a triangle. Pull back on the knot of the balloon and release. What happened?

Use a lighter to burn a stick of incense. Put it into the plastic bottle for ten seconds. Then, take it out.

Now, pull back on the knot of the balloon and release it again. What do you see?

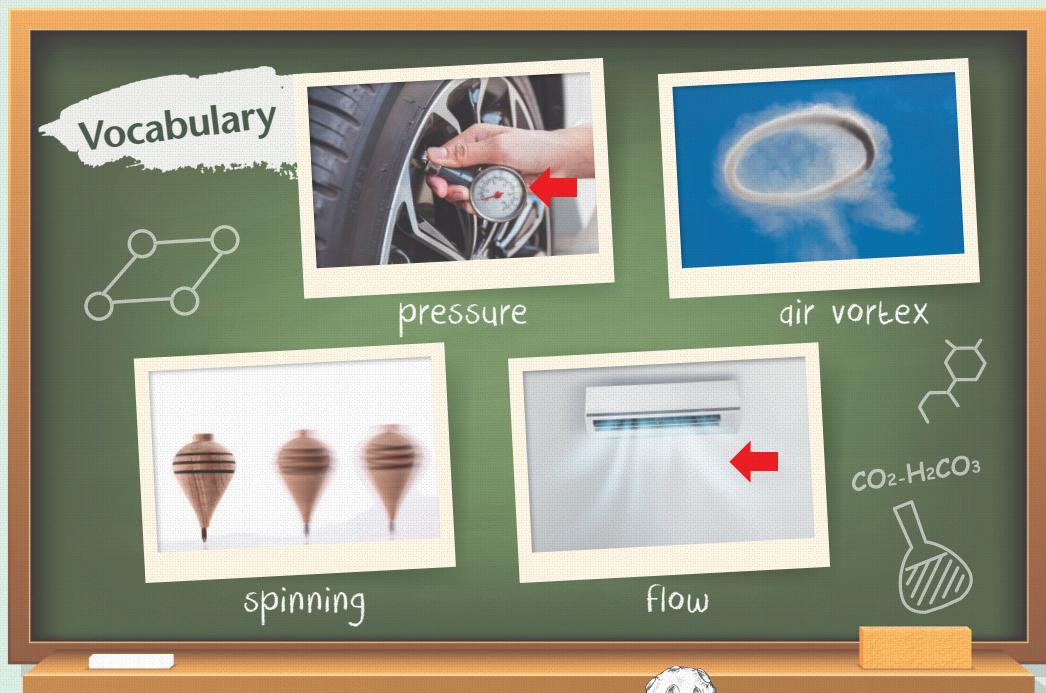


Air is all around us, and we usually can't see it. However, we can feel it and see the effects. For example, when the wind blows, you can see the branches and leaves of a tree move.

Air moves because air **pressure** changes. One type of interesting air movement is called an **air vortex**. But how does it form?

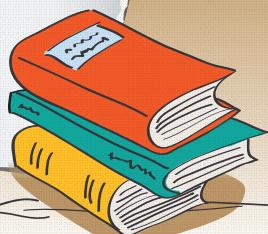
A **vortex** of air is a **spinning flow** of gas in the shape of a doughnut. Air forms this shape because the air leaving a hole is traveling faster than the air at the edge of the hole. Isn't it amazing?

Dr. Wise  
Says...



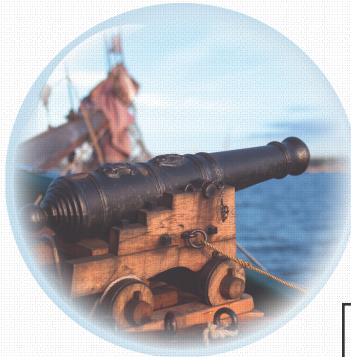
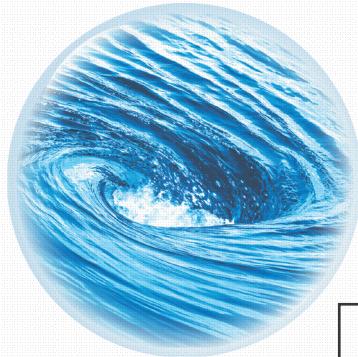
It's your turn!

- Can people see air?
- How does air move?
- What is an air vortex?





**A** Look at the pictures. Which can also make an air vortex? Discuss with your friends and check.



**B** Make my party popper!



1

Cut some colored paper into small pieces.



2

Cut out a big circle at the bottom of a paper cup.

Tie and cut a balloon, the same as our experiment, to cover the bottom of the paper cup.



3

Put the colored paper into the cup. Pull back and release the balloon. Enjoy your party!



4