

Brontosaurus Learning

Making science fun!



An Experiment about

Air

Funny Funnels

What you will need:

- A large funnel or a rolled up piece of paper
- Tape
- A ping pong ball

What you will do:

- 1 Hold the funnel upright and pop the ping pong ball inside it.
- 2 Keeping the funnel upright, lift it over your head and blow into it, hard but steady. *Your aim is to blow the ping Pong Ball out of the funnel.*

What is going on?

When you blow into the funnel the shape of the funnel makes the air spiral around the ball. This changes the air pressure all around the ball in different amounts, so the ball will probably jump around but there will never be enough pressure behind the ball to push it out of the cone.

Challenge:

- Use paper to make funnels of different sizes and shapes. Big and small, a tight spiral and almost flat. Can you make one that lets you blow the ball out of the funnel?



TEACHING NOTES:

Brontosaurus Learning Experiment:
Air A16

Topic: Air pressure

Key Concepts:

- ♦ Moving air

Resources:

- Investigation Record IR01– one copy per student
- Experiment Description Air A16 – one copy per student
- Large clean funnels or paper and tape to make them, ping pong (table tennis) balls

Lesson Notes:

Remind students to listen carefully to instructions, and to OBSERVE their experiment. As a class discuss the experiment prior to undertaking it, and students should complete the sections of their Investigation Report IR01 from "Title" to "Hypothesis". Allow students some time to experiment with different funnel shapes.

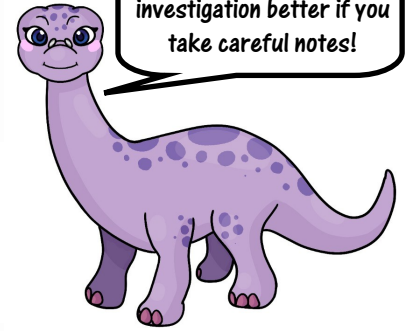
What should happen in this experiment, and why?

The ball should be nearly impossible to blow out of the funnel unless they cheat and tilt the funnel. Some other sized and shaped funnels may be more successful though.

Follow up discussion question:

- What would happen if you balanced a ping pong ball on a straw instead of a funnel and then blew into the straw? Why? [it is the curved shape of the funnel that creates the chaotic air pressure—a direct stream under the ball should lift it.]

Investigation Record



Experiment Title:

Scientist (that's you!):

Materials: What will I need?

Investigation—what am I going to do in this experiment?

Diagrams are a great idea!

Hypothesis: What I think will happen:

Observation: What I SAW happen:

Diagrams are a great idea!

From my investigation I learnt:

Great work scientist!