

Air Pressure

READ ALOUD PASSAGE

Even though air seems like nothing, it pushes on everything around it. This pushing force is called air pressure. Air pressure happens because the tiny particles that make up air are always moving around and bumping into surfaces. Billions of these tiny bumps every second add up to a real and powerful force.

You can prove that air pressure is real. If you push a pump into a tire or basketball and pump in more air, you can feel more and more resistance. That is because you are adding more air particles into the same space, and those particles push outward harder and harder.

Air can be compressed, which means it can be squeezed into a smaller space. When you compress air, the particles are pushed closer together, and the pressure they create is greater. This is how tires, basketballs, and bicycle tubes are inflated.

Air pressure acts in all directions at once, pushing up, down, and sideways equally. When the pressure inside and outside an object is equal, everything stays balanced. When the pressure is unequal, interesting things happen, which we will explore in the next lesson.

Activity 1: Grow a Sentence

This sentence is very short. Answer each question to add more information. Then put your answers together into one longer sentence.

START WITH THIS SENTENCE

The tire inflated.

When?

Where?

How?

Why?

Write your expanded sentence:

Activity 2: Because, But, So

Finish the sentence three ways. After because, tell why. After but, tell something different or surprising. After so, tell what happened next.

Air can be compressed because

Air can be compressed, but

Air can be compressed, so

Science Mad Lib

Fold the page on the dashed line so the story is hidden. Write a word for each blank. Then unfold the page, copy your words into the story, and read it aloud.

1 _____
A name

2 _____
A noun

3 _____
A number

4 _____
A noun

5 _____
A noun

----- FOLD HERE -----

THE STORY

_____ pumped air into their _____. With every pump, it got harder
1 2
to squeeze. More air particles were crammed into the same space, and they
pushed outward harder and harder. That push is air pressure. _____
1
pumped _____ more times. The ball got harder... and harder... and then
3
it went _____. Their pet _____ hid under the couch for the rest of
4 5
the day.