

Pressure Inside and Outside

READ ALOUD PASSAGE

Air pressure acts in all directions. When air pressure is equal inside and outside an object, everything stays balanced. But when the inside pressure is greater than the outside, the object pushes outward. When the inside pressure is less than the outside, the outside air pushes inward and can crush the object.

A perfect vacuum would be a space with no air or other matter in it, and no air pressure at all. When you create a partial vacuum, meaning a space with less air than normal, the air pressure around it is greater and pushes inward. This pushing is what we call suction. A vacuum cleaner works by creating a partial vacuum at its nozzle, and the higher pressure in the room pushes dirt toward it.

The atmosphere gets thinner as you go higher. Near the ground, there is a lot of air above pushing down, which creates high pressure. High up in the mountains, there is less air above, so the pressure is lower.

Differences in air pressure also create wind. Air moves from areas of high pressure to areas of low pressure. This movement of air is wind. Weather forecasters use pressure measurements to help predict whether rain or sunshine is coming.

Activity 1: Write the Topic Sentence

Read the details. Write one topic sentence that tells what all of them are about.

DETAILS

- inside pressure higher: pushes out
- inside pressure lower: pushed in
- partial vacuum: suction
- high to low pressure: wind

Your topic sentence:

Activity 2: Sentence Scramble

These words are mixed up. Put them in order to make a sentence. Start with a capital letter and end with a period.

1. in / air / all / acts / pressure / directions

2. is / what / suction / we / call / this / pushing

Activity 3: Sentence or Not?

Read each one out loud. Write S if it is a complete sentence. Write F if it is only part of a sentence. Then fix each F so it is a complete sentence.

☐

1. Air pressure acts in all directions.

☐

2. High up in the mountains.

☐

3. A vacuum cleaner makes suction.

☐

4. From high pressure to low pressure.

First fragment, rewritten:

Second fragment, rewritten:

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 plural noun

5 _____
A noun

FOLD HERE

THE STORY

_____ pumped most of the air out of an empty can. With less air inside,
1
the air outside pushed harder, and the can crumpled with a loud _____!
2

Next, _____ grabbed a vacuum cleaner. It lowers the air pressure at the
1
nozzle, so the higher pressure in the room pushes things in. It sucked up

_____ _____ in seconds. Outside, air rushed from high pressure
3 4
toward low pressure. That's wind! It blew _____'s hat all the way to the
1

_____.
5