



# Fun Facts about....

## Air

### The Human Body

- You need air to speak – we use our lungs for talking and singing. We have a voice box in our throat that contains our vocal cords, and just like a wind instrument we can change the pitch and volume of the sounds by forcing more or less air through our body.
- If you were to stretch out your lungs and all the air sacs (alveoli) in them on the ground their surface area would be the same size as half a tennis court!
- There can be between 300-700 million alveoli in your lungs. Alveoli are the air sacs in the lungs that exchange oxygen into our bloodstream.
- You can increase your lung capacity with regular exercise – like through active travel! People who have a larger lung capacity can send oxygen around their body faster.
- Controlling your breathing can help to calm you and slow down a fast heart rate, especially during or after exercise like walking, running, cycling and scooting.
- Exercise is good for every part of your body, and especially for your lungs and heart.
- When we breathe, we get energy from air when we breath in oxygen and breath out carbon dioxide. This process is known as respiration.
- Particulate Matter (PM) is air pollution in the form of suspended particles, PM2.5 and PM10 are smaller in diameter than a human hair and can enter our bloodstream through our lungs.

### Did you know...

- There is no air in space! Not only could we not breath up there, but we also couldn't make a sound! In fact, there is no sound at all in space.
- You can live with only one lung. Having just one lung limits your physical ability. However, it doesn't stop you from living a relatively normal life.
- Your left and right lungs aren't exactly the same. The left lung is slightly smaller, allowing room for your heart.
- Snakes only have one functioning lung, the other lung (normally the left), shrivels and is known as a vestigial lung. The lung of the snake is very long!



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### Air Pollution!

- Air Quality is all about how clean our air is, air can become dirty or polluted when we burn things like wood and fossil fuels in engines and power plants.
- One of the major contributors to air pollution is transport like private cars, trucks, and planes. Travelling actively by walking, cycling or scooting and avoiding taking the car can help to reduce air pollution and keep our air clean.
- The best time to run or jog is generally first thing in the morning, before the day's traffic affects air quality. Joggers inhale more pollution than those walking the same distance.
- If you can, try to choose routes when you are walking, cycling and scooting that are in or near green leafy spaces like parks, the air quality will be better thanks to the trees.
- Smog is a type of air pollution in cities that makes it difficult to see outside. Sunshine can cause some pollutants to undergo chemical reactions, resulting in the development of smog.
- Trees and plants are key to air quality as they can filter pollution. Trees take carbon dioxide out of our air and give us oxygen through a process called photosynthesis.

### Did you know...

- Long-term exposure to air pollution has been associated with diseases of the heart and lungs, cancers and other health problems. That's why it's important for us to monitor air pollution.
- You are more at risk to traffic related air pollution when you are sitting inside your car! You can be exposed to almost 8 times as much as a cyclist.
- Children are most vulnerable to air pollution.
- The numbers of vehicles on roads tends to increase during bad weather, which increases the number of traffic-related pollutants entering our air.



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### The Atmosphere

- Air in Earth's atmosphere is made up of only 21% oxygen, and 78% nitrogen. The rest is small amounts of other gases, such as carbon dioxide, neon, and hydrogen.
- Additional greenhouse gases and aerosols created by human beings are altering our atmosphere and our weather systems which is causing the Earth to heat up.
- Air can be found everywhere on earth except where there is water. Air is even located in the surface layer of the earth – in the soil.
- Water vapor in the air is sometimes visible as clouds. Water enters the atmosphere through the water cycle. The water cycle also brings molecules in the air into oceans, lakes, and rivers.
- Wind helps to disperse air pollution, and rain can even help to reduce pollution like particulate matter when the water droplets dampen suspended particles in the air.
- Air is heavy, there is a lot of it pushing down on Earth's surface. This is called air pressure. You experience high air pressure at sea level because the whole atmosphere is pushing down on you. The air pressure is low on top of a mountain because there is less atmosphere pushing down on you. That difference in air pressure can cause your ears to pop when you're taking off in an airplane or driving up a hill. Have you ever experienced this?

### Math Facts

- When resting, the average adult breathes around 12 to 20 times a minutes, how many times do we breathe in a day?
- When you exhale, you also release up to 17.5 milliliters (0.59 fluid ounces) of water per hour.

### Did you know...

- The fastest gust of wind ever recorded on Earth was 407 km/h!
- Water vapor is the most abundant "greenhouse gas" in our atmosphere and makes up between 0-4% of our atmosphere.