

3 GOOD HEALTH AND WELL-BEING



Goal 3: Good health and well-being

Ensure healthy lives and promote well-being for all ages.

Our environment plays a very important role in our health and well-being. A healthy environment will provide us with healthy soils, healthy waters and healthy air. It will also provide us with a place to play and be active.

World leaders are taking action to ensure that everyone will be able to live healthy and active lives.

We are now going to explore the importance of trees in providing us with the healthy air that we breathe, and explore how leaves breathe.

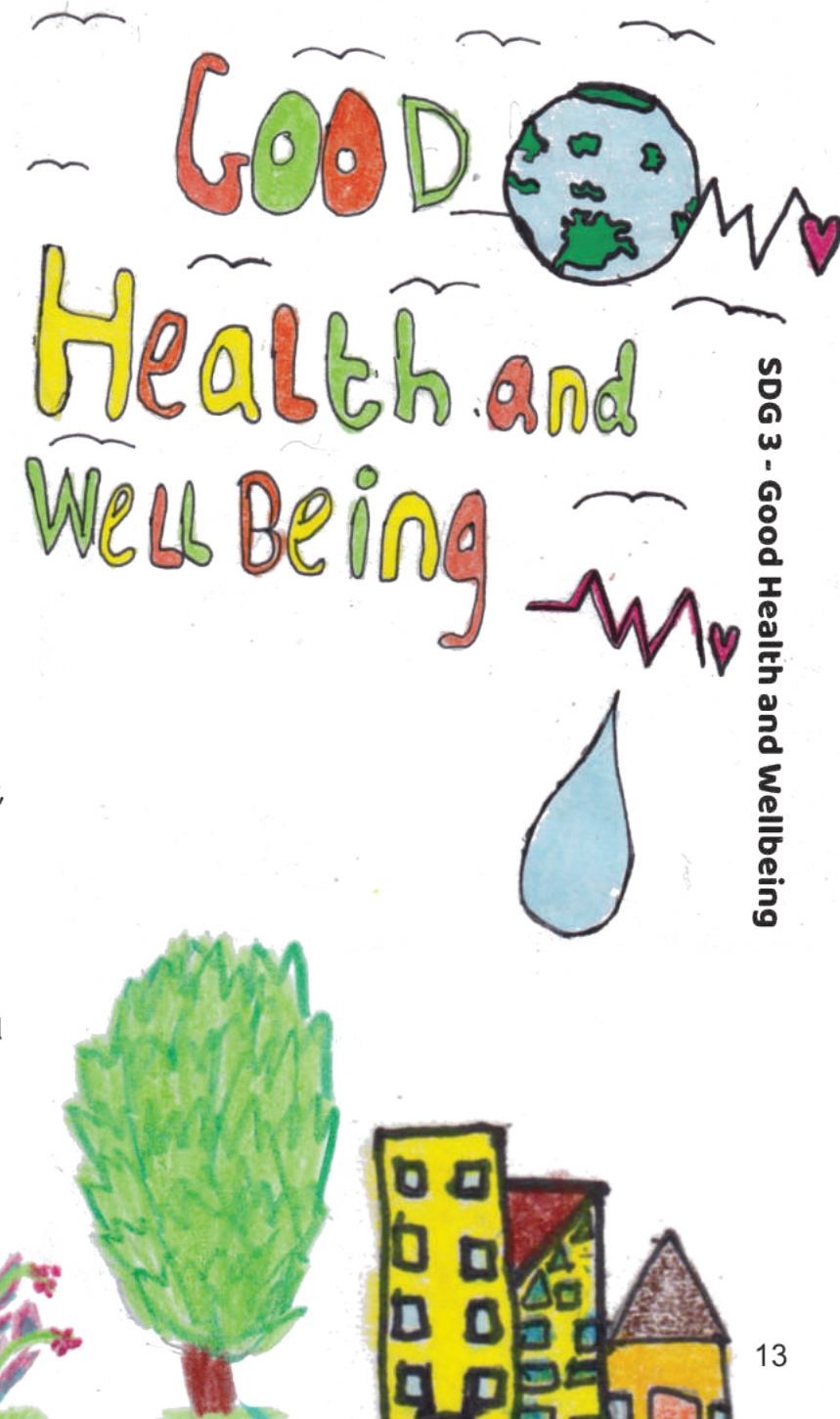
How do trees help us breathe?

Trees and plants provide humans with oxygen to breathe through a process called photosynthesis. This is the way that plants make food and requires three elements: sunlight, water, and carbon dioxide.

Trees and plants capture energy from sunlight using a compound called chlorophyll. Trees and plants get water and carbon dioxide from the environment, through the soil and air. Using the captured energy, they combine water and carbon dioxide and make a special kind of sugar called glucose. This is done in parts of cells called chloroplasts. Oxygen is produced during the process and is released into the air for us to breathe.

So, trees and plants are not just pretty, they're pretty important and help us all stay alive!

1. Chlorophyll is responsible for the green colour of many plants and helps them use the sun to make their food.



Experiment - Photosynthesis in Action



What you need:

- A bowl
- Lukewarm water
- A fresh leaf from a tree
- A small stone



1. Fill the bowl with lukewarm water.



2. Put the leaf into the bowl.



3. Place the stone on top to keep it under the water.

Check back after an hour and write down or draw what you see. It may help to use a magnifying glass.

Try this activity with a variety of different leaves.

What are your thoughts?

Have you learned something new about trees?

What would you do to achieve good health and well-being?

What Do We Learn From This Experiment?

Photosynthesis in Action

Photosynthesis requires sunlight, water, and carbon dioxide to produce glucose and oxygen.

When you inspect the leaves, you should notice tiny bubbles of oxygen have formed. You may need a magnifying glass to see them. Did you see any bubbles?

If you did not see bubbles then you can explore the experiment further by answering the following questions.

- Was the bowl placed in a good spot to capture sunlight?
- Was too much water added to the bowl?
- Was the leaf healthy or was it decaying?

Try the experiment again with different leaves and place the bowl in a different place.

Did you know that our oceans are home to many plants that provide us with the air we breathe. Actually, more than half of the oxygen we breathe comes from marine photosynthesisers including tiny microorganisms such as cyanobacteria and diatoms, and they play a large role in our planet's health.

Cyanobacteria are so tiny that you could have more than 20,000 in one drop of water, and diatoms are so small that you could line up 5,000 diatoms side by side in 1 cm.

These microorganisms demonstrate that even the tiniest creatures can have a huge impact on our Earth's health, and our health.

