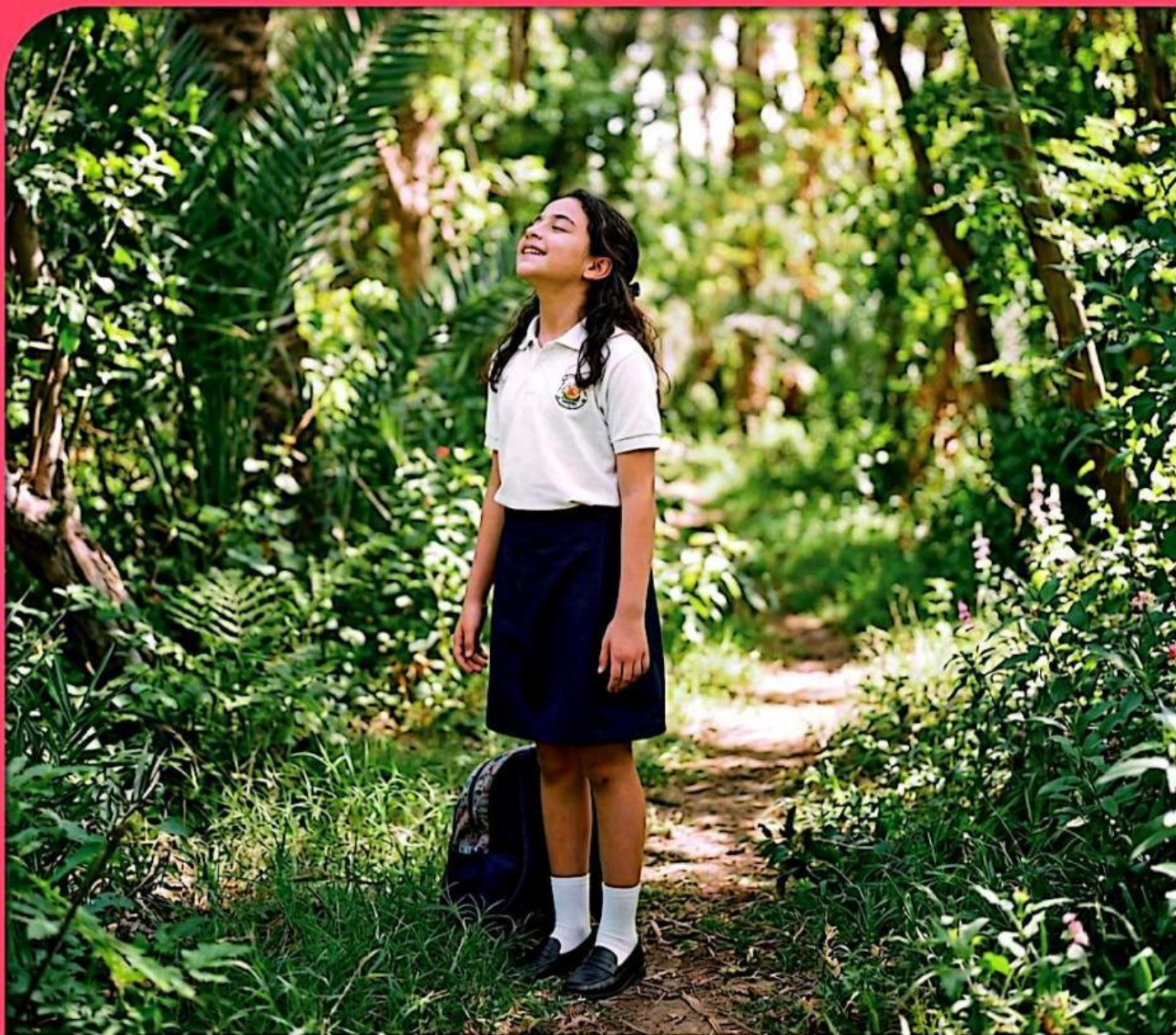




What do we take in from the air and what do we let out when we breathe?

Is the air we breathe in different from the air we breathe out?



I wonder if there is something our body needs in the air.

**Point!****Breathing and How it Works**

- ❗ People breathe in and out to take in some of **the oxygen** from the air and let out **carbon dioxide**.
- ❗ Taking in oxygen and letting out carbon dioxide is called **breathing**. 🗣️

**Warm Up**

Let's check what is in the air we breathe out!

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Let's do an experiment to see what is in our breath.

1 Preparation:

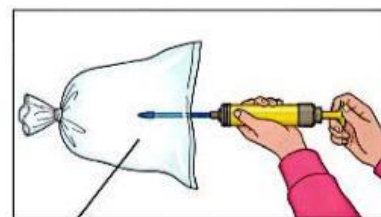
- Plastic bags (Polyethylene bags)
- Limewater
- Gas detector tubes (for carbon dioxide / for oxygen)
- Gas sampling pump
- Safety goggles
- Scissors

2 Test with limewater:

- ❶ Prepare two plastic bags.
- ❷ Breathe into one bag, and fill the other bag with room air.
- ❸ Pour a little limewater into each bag and shake them well.
→ What can you learn from how the limewater changes?

**3 Test with gas detector tubes:**

Just like in step 2, use gas detector tubes to check the amount of oxygen and carbon dioxide in the air inside the bags.



Make a small hole in the bag with scissors.

4 Compare the results:

Compare the amounts of oxygen and carbon dioxide in the air around us and the air we breathe out.