

Our Heart and Lungs

How Do They Work?

Heart Have students put their index finger and middle finger on their neck or wrist to find their pulse. Explain to the students that this is their heartbeat. Note that all living people have a pulse. Explain that the heartbeat is blood being pumped through the veins. The blood carries oxygen to the rest of the body.

Lungs Have students take note that their lungs breathe for them without them thinking about it. Have students put their hands on their rib cage and take a deep breath in, and then out. Students will notice that their ribcage expands and contracts when they breathe. Identify that this is their two lungs filling with oxygen which allows them to breathe, and live.

Refer to the background information pages on:

- Harmful Effects of Smoking
- The Heart
- The Lungs

Activity

1. Have the students take their pulse. Have them document how many resting beats they count in 30 seconds.
2. Have students stand up and run on the spot for 30 seconds.
 - Ask them to explain how they are feeling and describe the changes in their body (breathing heavier/faster, heart is beating faster, increased temperature, increased colour to face, etc.).
 - Have them take their pulse after 30 seconds of running. Have students compare their pulse after running for 30 seconds to their resting heartbeat. (Subtract resting heartbeat from their pulse after 30 seconds of running.) Ask them to explain why these changes occur in their bodies.

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3. When the students' breathing have returned to normal, have them sit down. While sitting, ask students for 30 seconds to breathe in and out of a straw while plugging their nose.

Note: Instruct students to remove the straw and unplug their nose if at any time they feel that they cannot catch enough air to breathe.

- Ask students to imagine and describe how difficult it would be if they had to breathe like this all the time, every day. How would their lives be different if this was how they had to live and breathe?
 - Reiterate how smoking prevents a person's lungs from getting enough oxygen. Explain that lung disease is often described as feeling as if you are breathing through a straw. This will allow students to have a better understanding of what illness and disease feels like. (e.g., COPD - chronic obstructive pulmonary disease, formerly known as chronic bronchitis and emphysema). Reiterate how smoking negatively affects the function of the lungs, heart, and body which may also lead to illness and disease.
4. Ask students to brainstorm what their favourite physical activity is and how it would make them feel if they could no longer participate in that activity.
- Have students illustrate/communicate their favourite activity and describe ways that they can keep their heart and lungs healthy so they can participate in these activities for a long time.