

## Lesson #51

### What structures do organisms have for breathing?

Animals have external structures for taking in air. Air contains oxygen, and all animals need oxygen to survive. Many land animals, including humans, breathe in through a nose. Fish and other water animals take in oxygen through gills.

Insects need oxygen too, but they do not have noses or gills. Insects take in oxygen through openings on their bodies, called spiracles. A **spiracle** is a structure that allows air to enter an organism.

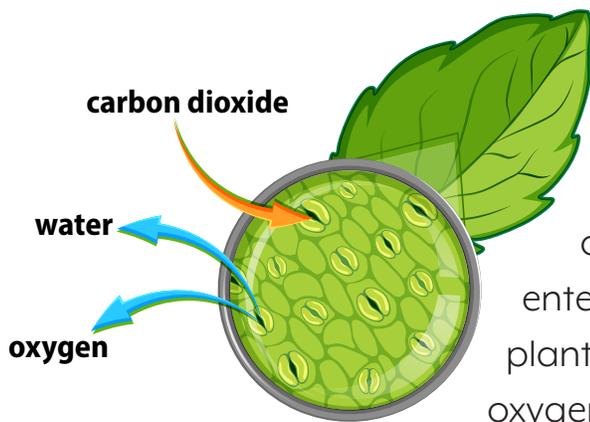
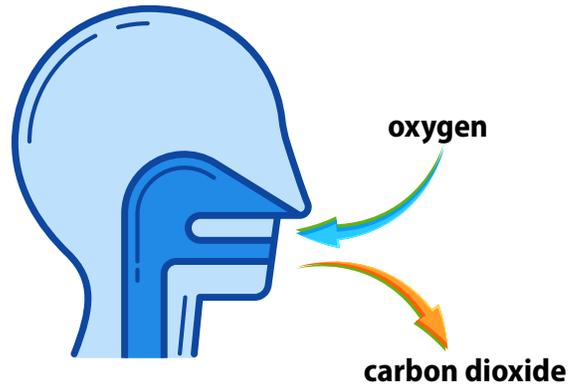
All animals must eliminate carbon dioxide. They breathe it out through the same openings they use for taking it in—noses, gills, or spiracles.

Plants also need air. Air contains carbon dioxide, and all plants need

carbon dioxide to survive. But plants do not have noses, gills, or spiracles. They have structures called stomata. **Stomata** are

openings on the surface of a leaf. (A single opening is called a stoma.) Carbon dioxide enters the leaf through stomata. Like animals,

plants must eliminate waste. They eliminate oxygen and lose water through their stomata.



1. (Animals / Plants) take in oxygen and eliminate carbon dioxide.

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2. Which two structures are most similar?

A) flowers and noses

C) lungs and beaks

B) stomata and spiracles

D) roots and gills

3. Choose the sentence that best explains your answer to item 2.
- A) Both stomata and spiracles are openings that let air pass in and out.
  - B) The roots of plants and gills of fish are both for taking in water.
  - C) Lungs and beaks are both internal structures.
  - D) Both flowers and noses are for breathing.

4. Plants and animals have structures that help them survive and be healthy. Match each structure with its function.

_____ leaf	A) supports and protects an animal's body
_____ outer ear	B) moves water from roots to the rest of the plant
_____ stem	C) carries signals from the retina to the brain
_____ skeleton	D) produces food for the plant
_____ optic nerve	E) takes in sound waves; allows hearing

5. Match each structure with its clue.

_____ stomata	A) insects use these to take in oxygen
_____ nose	B) fish use these to take in oxygen
_____ gills	C) plants use these to take in carbon dioxide
_____ spiracles	D) serves as a mouth for some insects
_____ proboscis	E) structure a land animal uses to take in oxygen

6. The place or environment where an organism naturally lives is its \_\_\_\_\_.

species                  structure                  pattern                  habitat

7. To \_\_\_\_\_ means to remove waste from the body.

hibernate                  germinate                  eliminate                  dilate