

Respiration, Photosynthesis, and Air

READ ALOUD PASSAGE

A plant's bulk does not come from soil. Van Helmont's willow gained 164 pounds while the soil lost a quarter of a pound. A plant is built largely from carbon taken out of carbon dioxide in the air, through pores in its leaves called stomata.

Photosynthesis and respiration are roughly opposite reactions. Plants use light to build carbon links; animals break them for energy. Carbon atoms cycle over and over between air, plants, and animals. That is why the air keeps its oxygen instead of running out.

The cycle is powered mainly by sunlight. Without light, nothing rebuilds the links and the whole system winds down.

Activity 1: Word Builder

Answer each question with your own words.

1. List four nouns that are part of the carbon cycle.

1. _____

2. _____

3. _____

4. _____

2. Plants build sugars. List three better verbs for make.

1. _____

2. _____

3. _____

4. _____

Activity 2: Sentence Scramble

These words are mixed up. Put them in order to make a sentence. Start with a capital letter and end with a period.

1. photosynthesis / reactions / and / respiration / opposite / roughly / are

Activity 3: Match the Endings

Draw a line from each sentence start to the ending that makes sense.

- | | | |
|--|---|--|
| 1. The air keeps its oxygen because | ● | ● A. plants keep making more. |
| 2. Animals breathe out carbon dioxide, but | ● | ● B. photosynthesis slows in the dark. |
| 3. Plants need light, so | ● | ● C. plants take it in. |

Activity 4: Sentence Scramble

These words are mixed up. Put them in order to make a sentence. Start with a capital letter and end with a period.

1. plant's / not / bulk / from / soil / come / a / does

2. cycle / mainly / by / the / powered / is / sunlight

3. air, / carbon / over / between / and / plants, / atoms / and / cycle / animals / over

Activity 5: Shrink the Sentence

These sentences are long. Rewrite each one in eight words or fewer. Keep only the main idea.

1. Van Helmont's willow gained 164 pounds while the soil lost a quarter of a pound.

Shorter sentence:

2. A plant is built largely from carbon taken out of carbon dioxide in the air, through pores in its leaves called stomata.

Shorter sentence:

3. Plants use light to build carbon links; animals break them for energy.

Shorter sentence:
