

L47 — Air as a Mixture of Gases

Read Aloud Passage

A mixture is two or more things simply together, not joined to each other and not changed by each other. Burning requires a gas in the air called oxygen. Cut off the supply and the flame stops even with plenty of fuel left.

Burning also produces carbon dioxide, a gas heavier than air that smothers fire. It is how fire extinguishers work. Oxygen and carbon dioxide behave very differently, which is one clue that air is made of more than one substance.

Air is about 78% nitrogen, 21% oxygen, and 0.04% carbon dioxide.

Activity 1

Match each word from the word box to its definition. Write the word in the blank.

Word Box: *mixture oxygen carbon dioxide nitrogen combustion*

1. ____ — Two or more things simply together, not joined and not changed. Like a bowl of mixed nuts and raisins: pick out one kind and the other is unaffected.
2. ____ — The gas in air that burning requires. About one fifth of the air. Cut off the supply and a flame goes out.
3. ____ — A gas heavier than the rest of the air. It does not burn and will not let anything else burn, so it smothers fire.
4. ____ — The gas making up nearly four fifths of the air. It neither feeds a flame nor puts one out, so simple experiments cannot detect it.
5. ____ — The proper word for burning: fuel combining with oxygen and releasing energy as heat and light.

Activity 2

Each phrase below is a fragment, not a full sentence. Add what is missing to make a complete sentence.

1. *not joined and not changed*

2. *the gas in air that burning requires*

Activity 3

Combine the short sentences below into one smooth sentence.

1.

- Burning requires a gas in the air called oxygen.
- Air is about 78% nitrogen, 21% oxygen, and 0.04% carbon dioxide.

Combined sentence:

2.

- Burning also produces carbon dioxide, a gas heavier than air that smothers fire.
- Oxygen and carbon dioxide behave very differently, which is one clue that air is made of more than one substance.

Combined sentence:

Activity 4

Each sentence below is a run-on. Rewrite it correctly.

1. A mixture is two or more things simply together, not joined to each other and not changed by each other burning requires a gas in the air called oxygen.

Correction:

2. Burning also produces carbon dioxide, a gas heavier than air that smothers fire oxygen and carbon dioxide behave very differently, which is one clue that air is made of more than one substance.

Correction:
