

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. Two gases with opposite behaviors cannot be the same substance, so air must be a mixture.

Air is about 78% nitrogen, 21% oxygen, and 0.04% carbon dioxide. The nitrogen was found by bookkeeping, not by any single experiment.

Activity 1: Word Builder

Answer each question with your own words.

1. List four nouns that are mixtures.

1. _____

2. _____

3. _____

4. _____

2. List three adjectives that describe a candle flame.

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. burning / called / gas / the / in / air / a / oxygen / requires

Activity 3: Sentence or Not?

Read each one out loud. Write S if it is a complete sentence. Write F if it is only part of a sentence. Then fix each F so it is a complete sentence.

☐

1. Air is a mixture of gases.

☐

2. About 78% nitrogen.

☐

3. Burning needs oxygen.

☐

4. Heavier than air.

First fragment, rewritten:

Second fragment, rewritten:

Activity 4: Write the Topic Sentence

Read the details. Write one topic sentence that tells what all of them are about.

DETAILS

- 78% nitrogen
- 21% oxygen
- 0.04% carbon dioxide
- gases not joined together

Your topic sentence:

Activity 5: 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. it / extinguishers / is / how / fire / work

2. about / oxygen, / is / air / 78% / 0 / and / 21% / nitrogen,
