

Matter's Tiny Builders

Read for evidence that all matter is made of atoms.

5.7.a "matter is composed of atoms;"

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each sentence that says matter or a material is made of atoms. Circle each name of a kind of atom.

Tiny Parts, Real Materials

- ① Pick up a steel paper clip and a drop of water. They look and act differently, yet both are matter. Matter is anything that has mass and takes up space. All matter is made of tiny particles called atoms. An atom is so small that no classroom microscope can show one clearly. Scientists use evidence and tools to learn about atoms.
- ② Atoms are not all alike. A paper clip contains mostly iron atoms. Water contains hydrogen atoms and oxygen atoms joined in groups. Each water group has two hydrogen atoms and one oxygen atom, written H_2O . The atoms in a material help determine its properties, such as hardness or whether it can flow. When materials change shape, their atoms are still present.
- ③ Suppose you tear a sheet of aluminum foil into smaller pieces. Each piece is still aluminum because it contains aluminum atoms. Crushing a sugar cube also changes its size and shape, not the fact that it is made of atoms. Atoms can join in different ways to form many kinds of matter, from the air in a balloon to a wooden pencil.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 What tiny particles make up all matter?

2 What kind of atoms are found mostly in a paper clip? What kinds are found in water?

3 How many hydrogen atoms and oxygen atoms are in one water group?

4 Why is a small piece of torn aluminum foil still aluminum?

3 YOUR TURN _____ Your own words

Choose an object not named in the reading. Write exactly two sentences. Explain why it is matter, then state what it is made of.

PART 1 • READ AND MARK

Underline each sentence that says matter or a material is made of atoms. Circle each name of a kind of atom. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What tiny particles make up all matter?	Atoms make up all matter.
2	What kind of atoms are found mostly in a paper clip? What kinds are found in water?	A paper clip contains mostly iron atoms. Water contains hydrogen atoms and oxygen atoms.
3	How many hydrogen atoms and oxygen atoms are in one water group?	One water group has two hydrogen atoms and one oxygen atom.
4	Why is a small piece of torn aluminum foil still aluminum?	It is still aluminum because it contains aluminum atoms.

PART 3 • YOUR TURN (SAMPLE ANSWER)

A glass marble is matter because it has mass and takes up space. Like all matter, it is made of atoms.

Accept any object not named in the passage if the student correctly explains that it has mass and takes up space and is made of atoms. Students do not need to name the types of atoms in their chosen object.