



THE BUILDING BLOCKS OF MATTER

This week, we uncover the tiny building blocks that make up everything around us as we learn all about atoms and elements! All matter is made up of these tiny particles. We will explore how these infinitesimally small parts combine to form everything you see and discover the even smaller parts that form them!

Recommended Reading

- ✿ *How Do Molecules Stay Together? A Book About Chemistry*, by Madeline J. Hayes
- ✿ *Let's Get Tiny!* by Chris Ferrie
- ✿ *The Illustrated Encyclopedia of the Elements*, by Lisa Congdon, pp. 9-11
- ✿ *Chemistry for Curious Kids*, by Lynn Huggins-Cooper, pp. 20-21

ACTIVITY Atomic Model Challenge!

Get ready to unleash your creativity in the Atomic Model Challenge! Choose an element and build a 3D model using household materials. Assemble your atom by representing protons, neutrons, and electrons, then share your masterpiece with family and friends. Let's see your atomic artistry in action!

SUPPLIES

 Various household items

INSTRUCTIONS

1. Build an atomic model of one of the following elements:
 - Helium: 2 protons, 2 neutrons, 2 electrons
 - Oxygen: 8 protons, 8, neutrons, 8 electrons
 - Aluminum: 13 protons, 14 neutrons, 13 electrons
 - Chlorine: 17 protons, 18 neutrons, 17 electrons
2. Gather the materials you want to use to build your atom model. Think creatively! You can use different items to represent different parts of the atom.
3. Assemble your model being sure to include each of the parts of the atom.
4. Draw a picture of your model in the box on the next page, being sure to label each of the parts.
5. Show off your model! Share the model with your family and friends telling them about the different parts of an atom. Be sure to have your parents email us a picture or tag us on social media with a picture too!

MODEL: _____
name of the element

QUESTION:

What are atoms?

ANSWER:

Atoms are the basic building blocks of everything in the world.

LESSON 3

QUESTION:

What are the three parts of an atom and where are they located?

ANSWER:

Protons and neutrons are found in the nucleus of an atom. Electrons are found moving around outside the nucleus.

LESSON 3

QUESTION:

What is an element?

ANSWER:

A pure substance made of a single type of atom

LESSON 3

LESSON 3: ALBERT EINSTEIN

In the atom, we have the basic building block
of matter, and its study unlocks the mysteries
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LESSON 3: ALBERT EINSTEIN

Handwriting practice lines consisting of 10 sets of three horizontal lines (top solid, middle dashed, bottom solid).



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Lesson 3 Quiz

1. What is an element?

- A) A mixture of substances
- B) A pure substance made of a single type of atom
- C) Something that is always solid
- D) A type of gas only

2. What do elements combine to create?

- A) More elements
- B) Just gases
- C) Only liquids
- D) New substances

3. What is the smallest piece of an element called?

- A) An atom
- B) A molecule
- C) A proton
- D) An electron

4. What are the tiny particles that make up an atom called?

- A) Cells, tissues, and organs
- B) Atoms and molecules
- C) Elements and compounds
- D) Protons, neutrons, and electrons

5. What gives an atom its identity?

- A) The number of electrons
- B) The size of the atom
- C) The number of protons
- D) The color of the atom



6. The nucleus of an atom is made up of:

- A) electrons
- B) protons and neutrons
- C) different types of elements
- D) molecules

7. The tiny particles inside an atom can not be divided into any smaller parts.

- A) True
- B) False

8. Where are electrons found?

- A) Inside the nucleus
 - B) In a fixed position in the atom
 - C) Whizzing around the outside of the nucleus
 - D) Only in larger atoms
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