

Name: _____ Date: _____

Answer Key: Carbon Critters: 5th Grade Chemistry Cupcake Challenge

Beyond simple memorization — learners identify carbon's role in living things and common household items. Perfect for an engaging science center or quick bell-ringer.

1. Carbon is so special because it acts like a 'Lego brick' that can build huge structures. What is the most common shape carbon atoms form in a long row?

Answer: B) A long chain

Carbon atoms are famous for their ability to link together in long, sturdy chains to build different materials.

2. True or False: Living things, like trees and humans, are made of organic carbon molecules.

Answer: A) True

Organic chemistry is often called the 'chemistry of life' because carbon is found in every living thing on Earth.

3. Which of these is a common 'organic' material we use every day that is made of carbon and hydrogen?

Answer: C) Plastic bottles

Plastics are made of long chains of carbon atoms, making them a major part of organic chemistry.

4. If you look at the 'spine' of an organic molecule, which element will you always find there?

Answer: B) Carbon

Carbon is the 'backbone' or spine element that holds organic molecules together.

5. True or False: Diamonds are made of the same element (carbon) as the graphite in your pencil.

Answer: A) True

Even though they look different, both diamonds and pencil lead are made of carbon atoms arranged in different ways.

6. Organic molecules often contain carbon and what other common gas element?

Answer: B) Hydrogen

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Hydrogen is the most common partner for carbon in organic molecules; together they form hydrocarbons.

7. What is the name for a molecule that is shaped like a closed circle instead of a straight line?

Answer: B) A ring

In organic chemistry, carbon atoms can loop around and connect to themselves to form 'rings'.

8. True or False: Organic chemistry only studies things that are found in a science lab.

Answer: B) False

Organic chemistry is all around us, from the food we eat to the clothes we wear!

9. Which of these is a natural source of carbon compounds used for energy?

Answer: B) Crude oil

Crude oil and gasoline are made of ancient organic matter that contains many carbon chains.

10. Why is carbon considered the 'friendly' element in organic chemistry?

Answer: A) It can bond with many other atoms at once

Carbon is versatile because each atom can form four bonds, allowing it to connect to many other elements easily.