

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Answer Key: Your Secret Carbon Recipe: A 2nd Grade Chemistry Adventure

Building molecular chains, identifying carbon patterns, and connecting chemistry to nature. These hands-on observations make the tiny world of atoms feel big and exciting.

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**1. Carbon likes to hold hands with other atoms to build long lines. These lines are called:**

**Answer:** B) Carbon chains

In organic chemistry, carbon atoms bond together in long rows called chains to create different materials.

**2. True or False: Carbon atoms are found inside of living things like trees and puppies.**

**Answer:** A) True

Organic chemistry is often called the 'chemistry of life' because carbon is a main building block for all living things.

**3. When carbon atoms join together in a perfect circle shape, scientists call it a \_\_\_\_.**

**Answer:** C) Ring

Carbon atoms can connect in loops or circles, which chemists specifically refer to as ring structures.

**4. Which of these is a common material made by humans using carbon chains?**

**Answer:** A) Plastic toys

Many synthetic materials, like the plastics used in toys, are made of long organic molecules called polymers.

**5. If you add a special group of atoms to a carbon chain, the whole molecule might change its \_\_\_\_.**

**Answer:** B) Smell or behavior

Changing the structure of an organic molecule changes its properties, such as how it smells, tastes, or reacts.

**6. True or False: Every single molecule in the whole world contains carbon.**

**Answer:** B) False

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While carbon is in many things, some items like water (H<sub>2</sub>O) or salt do not contain carbon and are called inorganic.

**7. In the fruit bowl, which chemical helps a banana turn yellow and get soft?**

**Answer:** C) Ethylene gas

Ethylene is a simple organic molecule that acts as a signal for fruit to ripen.

**8. Organic chemists are like \_\_\_\_ because they study how to build new molecules.**

**Answer:** A) Architects

Chemists 'design' and build molecules atom-by-atom, much like an architect designs a building.

**9. True or False: Carbon atoms are very good at sticking to many different types of other atoms.**

**Answer:** A) True

Carbon is famous because it can form four bonds, allowing it to connect to many different elements at once.

**10. Which of these contains 'natural' organic carbon compounds that give us energy?**

**Answer:** B) An apple

Apples contain sugars and fibers, which are organic compounds that our bodies use for fuel.