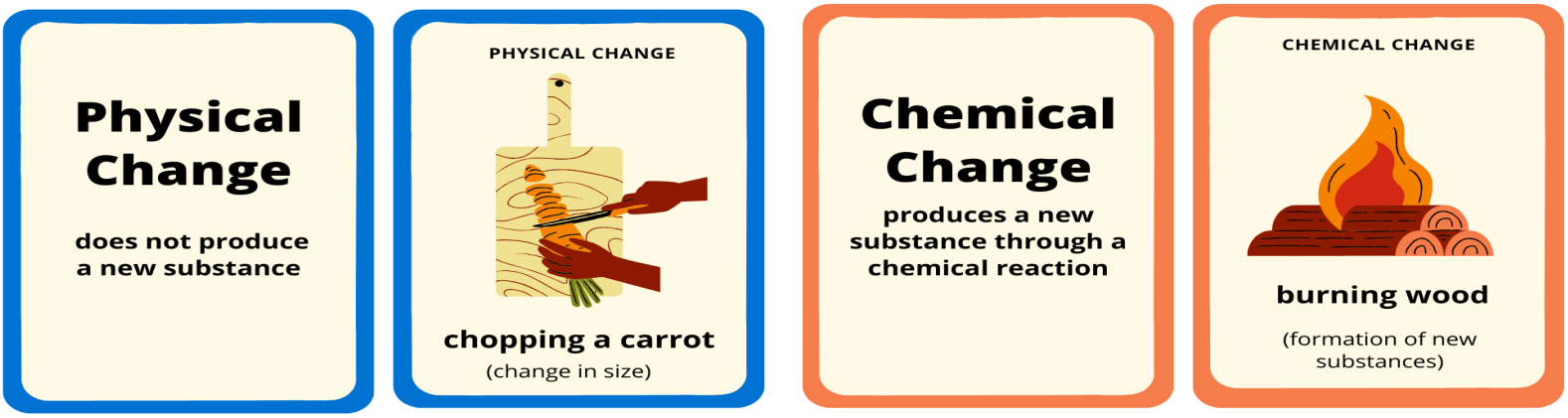


Matter and How It Changes

Comprehension Check

For questions 1-5, match each vocabulary term to the correct definition:

1. Atom	a. one of the basic units of matter
2. Chemical change	b. two or more basic units of matter chemically bonded together
3. Matter	c. a change in which matter changes shape or form
4. Molecule	d. a change in which one substance is converted into one or more substances with different properties
5. Physical change	e. what all things are made of

1. Atom –
2. Chemical change –
3. Matter –
4. Molecule –
5. Physical change –

6. Describe the three main states of matter. How do molecules move in each state?

7. Describe how cooling matter can cause it to change state.

8. Describe the difference between a suspension and a solution.

9. What are superfluids? What is plasma?

10. Who was Marie Curie and what is her claim to fame?

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1. Atom – a
2. Chemical change – d
3. Matter – e
4. Molecule – b
5. Physical change – c

6. Describe the three main states of matter. How do molecules move in each state?
    a. There are three main states of matter: solid, liquid, and gas. The molecules in a solid vibrate and arrange themselves in a repeating, rowlike pattern. The molecules in a liquid move more freely than those in a solid. The molecules in a gas move even faster and more freely than those in a liquid.

7. Describe how cooling matter can cause it to change state.
    a. Matter can change states when it is cooled. Water vapor, a gas can be cooled causing the molecules to pull closer together changing into a liquid. Liquids can also be cooled into solids, such as water freezing into ice.

8. Describe the difference between a suspension and a solution.
    a. We can mix matter together in different ways. One type of mixture is a suspension. A suspension is an uneven mixture of a liquid and a solid in which the solid settles to the bottom if it is left undisturbed. A solution, on the other hand, is a mixture in which one substance is dissolved or mixed completely into another.

9. What are superfluids? What is plasma?
    a. Scientists have discovered other states of matter. Superfluids are created by cooling atoms to extremely low temperatures. They are liquids, but they behave like gasses. Plasma is another state of matter. It is created by heating substances to super hot temperatures.

10. Who was Marie Curie and what is her claim to fame?
    a. Marie Curie was a scientist who studied radiation and how matter can undergo changes that transform one element into another.