# **Chemistry Everywhere Comprehension Check**

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

|  |  |
| --- | --- |
| 1. Bond | a. the act or process of burning |
| 2. Combustion | b. to turn from a liquid to a solid |
| 3. Condense | c. to break apart a substance, especially by putting it into a liquid |
| 4. Dissolve | d. a change from a gas to a liquid |
| 5. Freeze | e. the attraction that holds atoms together in groups of two or more |

1. Bond –
2. Combustion –
3. Condense –
4. Dissolve –
5. Freeze –
6. How do chemical reactions relate to baking and cooking?
7. How does chemistry help us smell and taste?
8. Why is the freezing point of ocean water lower than that of pure water?
9. What conditions must be true of the environments in which minerals typically form?
10. Describe at least one way in which volcanic explosions affect the chemistry of living things around them.

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1. Bond – e
2. Combustion – a
3. Condense – d
4. Dissolve – c
5. Freeze – b
6. How do chemical reactions relate to baking and cooking?
   1. Students’ answers will vary but may include information about the irreversible chemical reactions that occur when heat is applied to food. Students may also discuss combustion, the act or process of burning.
7. How does chemistry help us smell and taste?
   1. Chemistry is involved in both smell and taste. In order to smell something, special receptor cells in our nose must be stimulated. Molecules of gas carrying odors stimulate these cells deep in our noses, allowing us to smell. Our tongue works to taste in similar ways! We also have receptor cells on our tongues that identify certain chemical compounds in food which we experience as different flavors.
8. Why is the freezing point of ocean water lower than that of pure water?
   1. The freezing point of pure water is 32 degrees Fahrenheit, but the freezing point of ocean water is about 28 degrees Fahrenheit. This difference is because ocean water has dissolved sodium chloride as well as other compounds that make it harder for water molecules to bond to one another.
9. What conditions must be true of the environments in which minerals typically form?
   1. A mineral is a natural crystal that has the same chemical makeup wherever it is found. Minerals usually form in places with intense temperature and pressure, such as deep under Earth’s surface or at the base of volcanoes.
10. Describe at least one way in which volcanic explosions affect the chemistry of living things around them.
    1. Volcanic eruptions have released carbon dioxide into Earth’s atmosphere for millions of years. Over time, this carbon dioxide has built up to keep Earth warm enough to sustain life. Volcanic eruptions also affect the chemistry of living things around them more directly. Ash, tiny particles of lava that solidify in the air, can block sunlight, interrupting the chemical process of photosynthesis.