

# 9 Weeks Final Exam Study Guide

## What you need to know and be able to do.

### Standard S8P1a.

- ❖ Do you know the parts of an atom?
- ❖ Do you know what a molecule is?
- ❖ Can you use pictures to tell an atom from a molecule?

### Standard S8P1b.

- ❖ Can you use pictures to identify elements, compounds and mixtures?
- ❖ Given an example, how do you know if the given example is an element, compound or mixture?
- ❖ Can you give 5 everyday examples each of elements, compounds and mixtures?
- ❖ How do you tell the difference between a pure substance and a mixture?

### Standard S8P1c.

- ❖ Given an example, can you tell if it is a solid, liquid, gas or plasma?
- ❖ What is the most common state of matter in the Universe?
- ❖ What are some different analogies you can use to describe how particles move in each state of matter?
- ❖ Can you use pictures to tell the difference between particles in the states of matter?
- ❖ The temperature that things melt and freeze at is the same. The temperature that things boil/vaporize at is the same temperature that they condense at. It's all about whether energy is going into the system or being taken out of the system.

### Standard S8P1d.

- ❖ Properties are descriptions only.
- ❖ Physical properties describe using the senses or measurement. Similar to a person's physical description.
- ❖ Chemical properties describe possible interactions. Use future tense verbs. Similar to a person's personality.
- ❖ Given examples, can you tell if the example is a chemical property or a physical property?
- ❖ Denser things sink while less dense things float.

### Standard S8P1e.

- ❖ Changes use present or past tense verbs.
- ❖ Physical changes do not cause the substance to change identities (become something new). Glass and broken glass are the same substance. Hair that has been cut is still hair.
- ❖ Chemical changes cause a fundamental change in the substance to something new. One thing becomes something else after the change. Be careful! Just because we may call it the same thing does not mean it is. Look for adjectives. Raw chicken vs. Cooked chicken. Both are called chicken but they are different substances. If you compare properties before and after the change, you can see they are very different substances.
- ❖ Given an example, can you identify the change as chemical or physical?

**Can you tell the difference between a property and a change?**

### Standard S8P1f.

- ❖ Do you know where metals, nonmetals and metalloids are on the Periodic Table?
- ❖ How do you tell if two elements are similar?
- ❖ Where are the solids, liquids and gases on the Periodic Table?
- ❖ What is the “Stair Step”?
- ❖ How are metals and nonmetals different from one another?
- ❖ How is a metal described? How is a nonmetal described?
- ❖ Which elements are inert?
- ❖ Which elements are the most reactive?

### Standard S8P1g.

- ❖ Law of Conservation of Matter (Mass) – what you start with is what you end with.

**Go back and review your previous Study Guides and Tests for sample questions.**