**Name/Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**States of Matter**

1. Go to Phet “States Of Matter” at

<https://phet.colorado.edu/sims/html/states-of-matter/latest/states-of-matter_en.html>

and complete the table below by exploring the “Solid, Liquid, Gas” tab in the simulation. **Test**and record your observations by recording the temperature and illustrations of each substance in the three states of matter.

|  |  |  |  |
| --- | --- | --- | --- |
| **Substances** | **Observations** | | |
|  | **Solid** | **Liquid** | **Gas** |
| **Neon** | Temperature:  Illustration: | Temperature:  Illustration: | Temperature:  Illustration: |
| **Oxygen** | Temperature:  Illustration: | Temperature:  Illustration: | Temperature:  Illustration: |
| **Water** | Temperature:  Illustration: | Temperature:  Illustration: | Temperature:  Illustration: |

1. How does temperature relate to the kinetic energy of molecules?

**Click on the “Phase Changes” Tab and explore and test the outcomes to answer the following questions.**

3. How does increasing pressure affect the kinetic energy of particles?

4. What will happen if the pressure on the particles is increased to quickly?

5. How can an increase in pressure be stabilized?

**Click on the “Phase Changes” Tab and explore and test the outcomes to answer the following question.**

6. What is the relationship between the potential and kinetic energy when particles collide?