**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period\_\_\_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Physical Science: Chapter 3 Review**

|  |  |  |
| --- | --- | --- |
| **Pressure=Force ÷ Area** | **P1V1=P2V2** | **P1T2=P2T1** |
| **0°C=273 K** | **V1T2=V2T1** |  |

1. **What is the difference between a solid and liquid?**
2. **What is the difference between a liquid and gas?**
3. **What is the difference between a gas and plasma?**
4. **Which particles move faster? Heavier or or Lighter?**
5. **Which state of matter has the most kinetic energy? The least?**
6. **Which states of matter can be fluids?**
7. **What do all of the states of matter have in common?**
8. **Temperature is a measure of what kind of energy?**
9. **What does the law of conservation of mass and energy say?**
10. **What is thermal expansion?**
11. **What are the following processes called?:**
	1. **Solid to gas\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
	2. **Solid to liquid\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
	3. **Liquid to solid\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
	4. **Liquid to gas (below boiling point)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
	5. **Liquid to gas (above boiling point)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
	6. **Gas to liquid\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
12. **Label B-F. At point A, the substance is a solid.**

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1. **What is a buoyant force?**
2. **What does Archimedes’ Principle say?**
3. **What does Pascal’s principle say?**
4. **If you decrease the pressure of a fluid, its speed:**
5. **Bernoullis’ principle states that the faster an object is moving, the pressure exerted on it by a fluid:**
6. **Boyle’s Law relates \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
7. **Charles’ Law relates \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
8. **Gay-Lussac’s law relates \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
9. **If you increase pressure, you \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ volume (at constant temperature)**
10. **An object weighs 25N. It displaces a volume of water that weighs 100 N. What is the buoyant force on the object? Does it float or sink? Explain**
11. **What is viscosity? How does temperature affect viscosity?**
12. **A gas occupies a volume of 100 mL at pressure of 200 kPa. Find its volume at a pressure of 300 KPa.**
13. **A gas occupies a volume of 324 cm3 at 400 Kelvin temperature. Find its volume at 450 Kelvin.**
14. **A gas’ pressure is 1.3 atm at 23 degrees Celsius (don’t forget to change to Kelvin). At what temperature will the pressure be 0.75 atm?**