States of Matter Practice Name _____

How Do the Particles Move?

All matter is made of tiny particles. How they move tells you the state of matter.

Part A. Write the word that fits each description.

Word bank Condensation Evaporation Freezing Gas Liquid Melting Particles Solid

1. Particles are packed close together and vibrate in place. _____
2. Particles are close together but slide past each other. _____
3. Particles are far apart and move quickly in every direction. _____
4. Heat is added, and the particles of a solid begin to slide past each other. _____
5. Heat is removed, and the particles of a liquid settle into fixed places. _____
6. Particles at the top of a liquid gain energy and escape into the air. _____
7. A gas loses heat, and its particles move close together again. _____
8. The tiny bits that all matter is made of. _____

Part B. Answer the questions.

1. **When ice melts, do the water particles themselves change? What does change?**

2. **Why can you pour a liquid but not a solid block of wood?**

3. **Which state has particles that spread out to fill any container?**
   - ◯ Solid
   - ◯ Liquid
   - ◯ Gas

States of Matter Practice

How Do the Particles Move? Answer Key

Answers are in green. Written answers will vary; these are examples.

Part A. Write the word that fits each description.

Word bank Condensation Evaporation Freezing Gas Liquid Melting Particles Solid

1.	Particles are packed close together and vibrate in place.	**Solid**
2.	Particles are close together but slide past each other.	**Liquid**
3.	Particles are far apart and move quickly in every direction.	**Gas**
4.	Heat is added, and the particles of a solid begin to slide past each other.	**Melting**
5.	Heat is removed, and the particles of a liquid settle into fixed places.	**Freezing**
6.	Particles at the top of a liquid gain energy and escape into the air.	**Evaporation**
7.	A gas loses heat, and its particles move close together again.	**Condensation**
8.	The tiny bits that all matter is made of.	**Particles**

Part B. Answer the questions.

1. **When ice melts, do the water particles themselves change? What does change?**

   No, the particles stay the same. They move faster and slide past each other.

2. **Why can you pour a liquid but not a solid block of wood?**

   The particles in a liquid slide past each other, so it flows. The particles in a solid are held in place.

3. **Which state has particles that spread out to fill any container?**

   - ○ Solid
   - ○ Liquid
   - ● **Gas**