DATE: NAME: CLASS:

CHAPTERS 7–9

Quiz-Quiz-Trade: Fluids

Activity 9

Goal • Use this quiz-quiz-trade activity to build your understanding of the concepts in Unit 3.

What to Do

1. **Quiz** Each card has a question at the top and an answer at the bottom. Take a card and choose a partner. Ask the question on your card. If your partner answers correctly, move to step 2. If your partner answers incorrectly, or doesn't know, share the answer, then move to step 2.

2. **Quiz** Repeat step 1 using your partner's card.

3. **Trade** Trade cards with your partner. Find a new partner and start the quiz-quiz-trade again.

Question: What term describes any form of matter that flows? **Answer:** Fluid Chapter 7	**Question:** Which of the three states of matter has an indefinite shape and a definite volume? **Answer:** Liquid Chapter 7
Question: Which substance is a fluid? • cement • ice • sand • syrup **Answer:** Syrup Chapter 7	**Question:** What term describes the measure of a liquid's resistance to flow? **Answer:** Viscosity Chapter 7
Question: Which substance has greater friction among its particles: water or ketchup? Why? **Answer:** Ketchup; it is more viscous. Chapter 7	**Question:** What term describes the speed at which a fluid flows from one point to another? **Answer:** Flow rate Chapter 7

Question: The flow rates for 4 substances are: Substance A 1 cm/s Substance B 2 cm/s Substance C 4 cm/s Substance D 6 cm/s Which substance has the greatest viscosity? **Answer:** Substance A Chapter 7	**Question:** Which changes will increase a liquid's viscosity? • Decreased concentration, decreased temperature • Decreased concentration, increased temperature • Increased concentration, decreased temperature • Increased concentration, increased temperature **Answer:** Increased concentration, decreased temperature Chapter 7
Question: When honey is heated, how does friction among the particles and honey's viscosity change? **Answer:** Friction decreases and viscosity decreases. Chapter 7	**Question:** What term describes the amount of matter an object has? **Answer:** Mass Chapter 8
Question: What term describes the amount of space taken up by a substance? **Answer:** Volume Chapter 8	**Question:** What term describes the amount of mass in a certain volume of a substance? **Answer:** Density Chapter 8

Question: A property of a substance is measured and recorded to be 12 g/cm^3. What property was measured? **Answer:** Density Chapter 8	**Question:** Which class of substances generally has the lowest densities: solids, liquids, or gases? **Answer:** Gases Chapter 8
Question: Balsam fir is commonly used as firewood. Most people dry the wood before burning it. How does drying balsam fir affect its density? **Answer:** Drying balsam fir lowers its density. Chapter 8	**Question:** What term is used to describe a push or pull on an object? **Answer:** Force Chapter 9
Question: What unit is used to measure force? **Answer:** Newton Chapter 9	**Question:** What term is used to describe the measure of the force of gravity acting on an object? **Answer:** Weight Chapter 9

Question: Two people are having a tug of war competition. One pulls on the rope with a force of 300 N left. If the forces on the rope are balanced, what force must the other person exert on the rope? **Answer:** 300 N right Chapter 9	**Question:** What term is used to describe the upward force on objects submerged in a fluid? **Answer:** Buoyancy or buoyant force Chapter 9
Question: An object with a weight of 30 N sinks when placed in a container of water. How does the buoyant force compare to the object's weight? • Buoyant force is equal to the weight. • Buoyant force is greater than the weight. • Buoyant force is less than the weight. **Answer:** Buoyant force is less than the weight. Chapter 9	**Question:** When an inflated beach ball is forced to the bottom of a pool and released, it quickly rises to the water's surface. How does the buoyant force compare to the ball's weight? • Buoyant force is equal to the weight. • Buoyant force is greater than the weight. • Buoyant force is less than the weight. **Answer:** Buoyant force is greater than the weight. Chapter 9
Question: Melted butter floats on the top of water. Which property of these materials can be used to explain this observation? • Density • Mass • State • Weight **Answer:** Density Chapter 9	**Question:** What term is used to describe the force acting on a certain area of a surface? **Answer:** Pressure Chapter 9

Question: A property of a substance is measured and recorded to be 102 Pa. What property was measured? **Answer:** Pressure Chapter 9	**Question:** What is the main difference between a hydraulic system and a pneumatic system? **Answer:** Hydraulic systems use liquids; pneumatic systems use gases. Chapter 9
Question: The pressure applied to an enclosed fluid is transmitted with equal force throughout the entire container. What is this statement called? **Answer:** Pascal's law Chapter 9	**Question:** 16 mL of water is heated from 20°C to 90°C. At 90°C its volume is again measured. How would you compare this measurement to 16 mL? • Equal to 16 mL • Greater than 16 mL • Less than 16 mL **Answer:** Greater than 16 mL Chapter 9
Question: In order to inflate a car tire, how must the pressure and volume of an amount of air be changed? **Answer:** The volume of air must be decreased, leading to an increase in air pressure. Chapter 9	**Question:** Hot water boilers have a safety relief valve in case the water inside the boiler overheats. What problem results from the overheating of the water? **Answer:** The pressure inside the tank can increase to the point where the tank may explode. Chapter 9