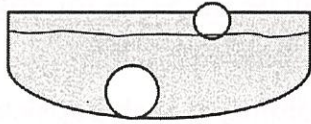


Matter and Energy- 5.5A(R); 5.5B(S); 5.5C(S)

Name _____

1. The picture below shows a golf ball and a ping pong ball in a bowl of water. The golf ball sinks to the bottom of the bowl, but the ping pong ball floats on top of the water.



Which physical property of matter explains why the golf ball sinks and the ping pong ball floats?

- (A) Mass *How much matter*
- (B) Density *Sink/float*
- (C) Texture *How it feels*
- (D) Volume *How much space*

4. A pot of water has been heating on the stove and has a temperature of 58°C. How many more degrees Celsius will the temperature of the water need to increase in order to reach its boiling point? *-100°C*

Record your answer in the boxes. Then fill in the bubbles. Be sure to use the correct place value.

*100°C Boiling Pt
- 58°C Current Temp*

0	0	0	
1	1	1	
2	2	2	
3	3	3	
4	4	4	
5	5	5	
6	6	6	
7	7	7	
8	8	8	
9	9	9	

2. Which is the best conductor of electricity?

- (F) Copper penny *C*
- (G) Cotton glove *I*
- (H) Wooden spoon *I*
- (J) Glass lens *I*

lets electricity flow

5. Inside the glass jar is a mixture of rocks, bolts, and beads. *Mixture*



This mixture would be very easy to separate because all the materials—

- (F) are ~~magnetic~~ and will attract to a magnet. *Not rocks or beads*
- (G) are solids.
- (H) ~~float~~ in water. *rocks & bolts sink*
- (J) have an equal mass. *can not prove this*

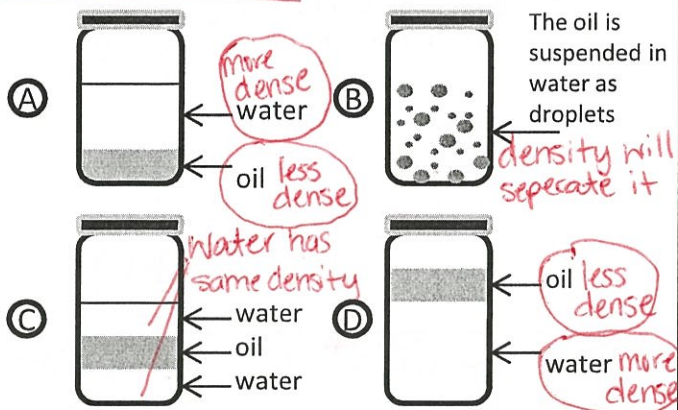
3. A student mixes salt into a beaker of water. After stirring the salt and water for a while, the salt can no longer be seen. Which physical property of the salt is the student demonstrating?

- (A) Density *Sink/float*
- (B) Solubility *dissolve*
- (C) Mass *How much matter*
- (D) Conductivity *Allows flow of energy*

6. Bonnie and her science group discover one of the beakers they are working with cracked while they were doing their experiment. What should Bonnie and her group members do?

- (A) Put the beaker back into the cabinet and get a new one. *Not safe*
- (B) Report it to the teacher. *safe*
- (C) Throw it in the trash. *Not safe*
- (D) Go ahead with the experiment anyway. *Not safe*

7. A teacher pours oil and water into a plastic container and seals the lid shut. She shakes the container vigorously for a few seconds. Which picture depicts what most likely happens after the plastic container sits for 10 minutes on the counter?

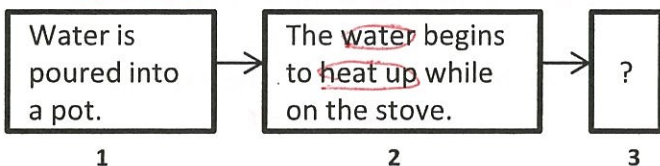


8. A student designs an experiment to test which types of matter are soluble in water. The ingredients include lemon juice, iron filings, sugar, tea powder, and salt. The student repeats the investigation several times for accuracy and concludes all the different types of matter have the ability to dissolve EXCEPT --

Which is non-soluble?

- (F) iron filings *Nonsoluble*
- (G) lemon juice *Soluble*
- (H) tea powder *Soluble*
- (J) salt *Soluble*

9. Look at the diagram below. Determine what change will likely occur in box 3?



- (A) The water will turn into a solid. *Remove heat*
- (B) The water will begin to freeze. *Remove heat*
- (C) The water will start to turn into a gas. *Add heat Evaporate*
- (D) The water will start to melt. *Already a liquid*

10. During an investigation, students have two different popsicles set out on a table. One of the popsicles has a mass of 38 grams and the other has a mass of 68 grams. Which result will be the same for both of the popsicles?

- (F) The volume of each popsicle *How much space*
- (G) The temperature at which the popsicles melt *0°C = melting point*
- (H) The amount of liquid left on the table after they melt
- (J) The amount of time it takes each popsicle to melt entirely

11. Four students create a chart to classify materials by whether or not they are insulators of thermal energy or conductors of thermal energy. Which of the four students classified the insulators and conductors correctly?

Student	Conductor	Insulator of
Joseph	Aluminum foil, cotton	Rubber band, metal spoon
Abigail	Aluminum foil, metal spoon, rubber band	cotton
Maddox	Aluminum foil, metal spoon ✓	Cotton, rubber band ✓
Andy	Aluminum foil	Cotton, rubber band, metal spoon

- (A) Maddox
- (B) Andy
- (C) Abigail
- (D) Joseph