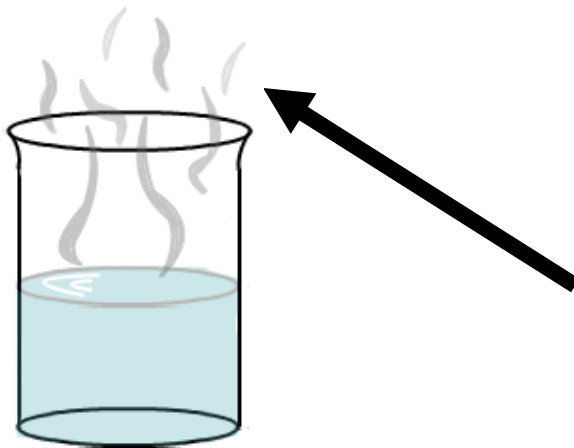


Name: _____

Matter Test ☺

Part 1: **Directions:** Circle the best answer for each question.

1. A word that means to become absorbed in a liquid is _____?
 - a. Drip
 - b. Dissolve
 - c. Mix
 - d. Separate
2. Which dissolves best in water? (go to the front table to look at the labelled items on the table)
 - a. Milk
 - b. Salt
 - c. Oil
 - d. Vinegar
3. Look at the arrow. Which state of matter is at the arrow's point?
 - a. Solid
 - b. Liquid
 - c. Gas
 - d. None



4. When a rock goes into water it _____.
- a. Dissolves
 - b. Settles
 - c. Floats
 - d. Jumps out

Directions: For the following sentences, circle YES if it is true or choose NO if it is false.

5. When something dissolves in water, it means that you can see the particles in the water.

YES or NO

6. **Oil** dissolves in water.

YES or NO

7. In the class labs **water** was the solvent we used the most.



YES or NO

8. Place the correct items in one column or the other: baking soda, sand, sugar, salt, oil, powdered drink mix, pebbles

Will dissolve in water	Will NOT dissolve in water

Directions: Look at the chart and circle the best option to describe the results.

9. The cup in **column A** has _____ water compared to the cup in **column B**
- a. More
 - b. Less
 - c. Equal to

Column A	Column B
<p data-bbox="402 737 597 779">Almost full</p> 	<p data-bbox="1036 737 1198 779">No water</p> 

10. What happens when sugar is mixed into water?
- a. I can see all the sugar particles in the water.
 - b. I can see some of the sugar particles in the water.
 - c. I cannot see any of the sugar particles in the water
 - d. There are no particles in water

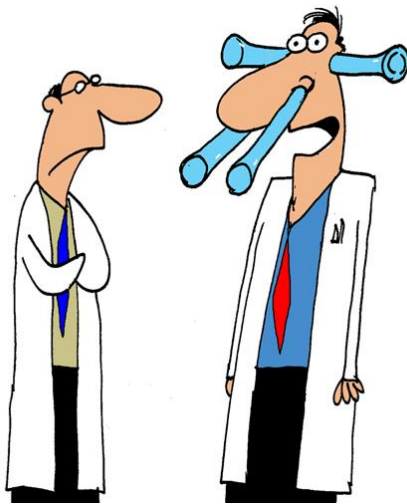
11. Pick picture shows a safe action. Then circle the answer you think shows the safe action. Think of our "Lab Rules" from class.



a. (Team A, 2010)



c. (USDA, 2007)



b. (King, Jerry 2010)



d. © Ron Leishman * www.ClipartOf.com/1046802

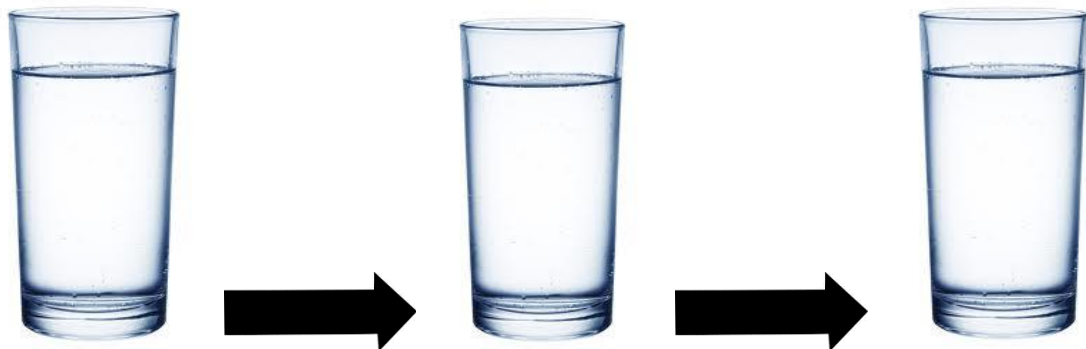
Directions: **MATCHING**- draw an arrow to the correct water temperature

- | | | |
|-----|------------------------------------|---------------|
| 12. | Dissolves salt slowly | a. Cold water |
| 13. | Dissolves salt at an average speed | b. Hot water |
| 14. | Dissolves salt quickly | c. Warm water |

Part 2: Directions: **Short Answer**- write a couple sentences for each question. Please use complete sentences with all of the correct parts like you know how to do 😊

15. List an example of an item that dissolves in water

16. In the cups of water below, use an **orange** crayon to **draw** a picture of how orange powdered drink mix **dissolves** when it is stirred into water.



Draw: Adding drink mix **Draw:** Stirring drink mix **Draw:** After stirred
(Hint: What do you use to stir?)

(Barr, 2014)

17. What can make something dissolve faster? Why?

Handwriting practice lines consisting of solid top and bottom lines with a dashed midline.

Answer Key:

Multiple Choice:

1. B: Dissolve
2. B: Salt
3. C: Gas
4. B: Settles
5. NO
6. NO
7. YES

8. Will dissolve in water	Will NOT dissolve in water
baking soda, sand, sugar, salt, , powdered drink mix,	Pebbles, oil

9. A: More

10. C: I cannot see any of the sugar particles in the water



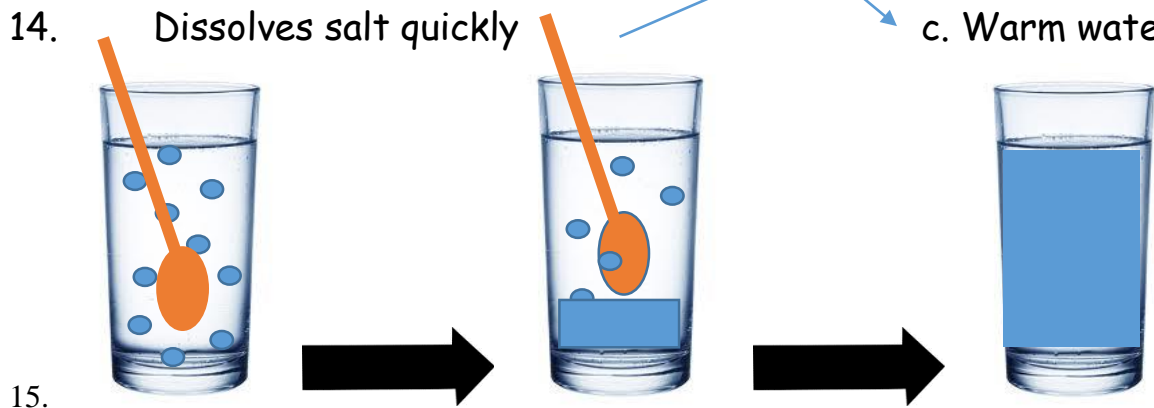
(USDA, 2007)

11. C:

12. Dissolves salt slowly \longrightarrow a. Cold water

13. Dissolves salt at an average speed $\begin{matrix} \nearrow \\ \searrow \end{matrix}$ b. Hot water

14. Dissolves salt quickly $\begin{matrix} \nearrow \\ \searrow \end{matrix}$ c. Warm water



15.

Draw: Adding drink mix **Draw:** Stirring drink mix **Draw:** After stirred

{show some sort of process happening}

Essay:

ILO: Infer that some substances will dissolve more easily in hot water than in cold water. Also classify liquids and solids into those that will dissolve in water and those that will not.

Supply response Item: What can make something dissolve faster? Why?

[Verbally tell the students to explain the differences using complete, grammatically correct sentences to complete the answer].

High response answer: Some solids can dissolve faster than liquids.

Temperature like hot water can also make a solid dissolve faster. Salt dissolves very fast in hot water because it is a good solute. It dissolves so well that you cannot see the particles after you mix it.

Rationale: Qualifying that some can dissolve faster makes the first statement a true and fair statement since not all liquids dissolve. Then the answer talks about the role temperature plays as well as the temperature which often speeds up the time it takes for a solute to dissolve. Then the answer gives an example of a solid which dissolves well, the rationale, as well as using an advanced term from class lectures. Classroom discussions briefly went over solvent, solute, and solutions which is an advanced idea and this answer acknowledged that information from class.

Acceptable response answer: Solids can dissolve faster than liquids. Hot water can make sugar dissolve faster. Because the parts move away.

Rationale: These statements do hold true however they are listed in absolutes which is not a best practice or way to express an idea in science according to the Nature of Science (NOS) standards (source). This answer does include key terms and temperature having a role in dissolving as well as a direct example of a solid (sugar). There is rationale included although the sentence is not written in the most desired form. There are some spelling errors which is acceptable for the grade and depending on the writing level of the student.

Rubric:

Activity	😊	😐	☹️
Including strong beginning sentence	The student provides a complete sentence with little to no errors which strongly introduces the answer.	The student provides a complete or mostly complete first sentence which fairly introduces the answer. There are little to no errors in the sentence.	The student provides a partially complete answer which may or may not strongly introduce the answer. There may be some grammatical errors in the answer.
Including at least one example of something that is a good solute	The student provides one or more correct examples of good solutes.	The student provides one or more examples, of which one at least is correct examples of good solutes.	The student either does not include an example or the example(s) included are incorrect examples of good solutes.
Demonstrates applied understanding of the term dissolve	The student understands the term dissolve and applies his/her knowledge well	The student has a fair understanding of the term dissolve and applies some correct knowledge in the answer.	The student may or may not demonstrate understanding of the term dissolve and may need additional support to answer the question.
Includes the role of temperature of water in the answer	The student includes the role of water temperature properly in relation to solutes fully.	The student includes the role of water temperature but it may be incorrectly or not fully explained.	The student may or may not include the role of water temperature or may do so with a partially correct answer.
Provides rationale for the example	The student fully explains the reasoning discussed in class for certain items to dissolve faster than others.	The student may partially explain the reasoning discussed in class for certain items to dissolve faster than others.	The student may or may not include the reasoning discussed in class for why certain items dissolve faster than others.
Overall grammar: (spelling, capitalization, punctuation)	The student includes 2 or less grammatical errors.	The student includes 2-4 or less grammatical errors.	The student includes more than 4 grammatical errors.
Sentence structure	The student uses complete sentences throughout the answer.	The student primarily uses complete sentences throughout the answer.	The student may or may not use correct sentences throughout the answer.
Key vocabulary	The student incorporates key vocabulary terms appropriately in the answer.	The student includes key vocabulary terms however, some of them may be used incorrectly.	The student may or may not use key vocabulary terms in the answer, some of which may or may not be used correctly.

