7

DepED
DEPARTMENT OF EDUCATION

Lesson Exemplar for Science

Quarter 1

Week
8

DepED MATATAG
BAGONG PILIPINAS
ONE NCR STRONGER TOGETHER

Lesson Exemplar for Science Grade 7
Quarter 1: Week 8

This material is intended exclusively for the use of teachers in the implementation of the MATATAG K to 10 Curriculum. It aims to assist in delivering the curriculum content, standards, and lesson competencies.

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MATATAG **K to 10 Curriculum** **Weekly Lesson Log**	School		Grade Level	
	Name of Teacher		Learning Area	
	Teaching Dates and Time		Quarter	

	DAY 1	**DAY 2**	**DAY 3**	**DAY 4**
I. CURRICULUM CONTENT, STANDARDS, AND LESSON COMPETENCIES				
A. *Content Standards*	The properties of solutions such as solubility and reaction to litmus determine their use.			
B. *Performance Standards*	By the end of the Quarter, learners recognize that scientists use models to describe the particle model of matter. They use diagrams and illustrations to explain the motion and arrangement of particles during changes of state. They demonstrate an understanding of the role of solute and solvent in solutions and the factors that affect solubility. They demonstrate skills to plan and conduct a scientific investigation making accurate measurements and using standard units.			
C. *Learning Competencies*	Identify solutions which can be found at home and in school and that react with litmus indicator, such as acids, bases, and salts.	Demonstrate how varied factors affect the solubility of a solute in a given solvent such as heat.	Identify solutions, which can be found at home and in school that react with litmus indicator, as acids, bases, and salts;	The learners should be able to demonstrate proper use and handling of science equipment
D. *Learning Objectives*	At the end of the lesson, the learners shall be able to: a. identify the factors that affect solubility; b. explain how these factors affect the solubility of substances; and c. give examples from everyday life that illustrate how factors such as temperature, pressure, and solute-solvent interactions impact solubility.	At the end of the lesson, the learners shall be able to: a. conduct a controlled experiment to investigate the impact of one specific factor on the solubility of a substance; b. collect and record data during the experiment; c. explain solubility based on a scenario given	At the end of the lesson, the learners shall be able to: a. identify the general properties of acids and bases, b. differentiate acids from bases based on their reaction with litmus paper, c. cite the significance of classifying acids and bases in real-life situations, d. explain how pH is related to acids and bases.	At the end of the lesson, the learners shall be able to: a. apply safety procedures when using science equipment; and, b. demonstrate proper use and handling of science equipment.

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Instructional Design Framework	Collaboration, Creativity, Experience, Integrative	Collaboration, Creativity, Experience, Integrative	Collaboration, Creativity, Experience, Integrative	Collaboration, Creativity, Experience, Integrative
21st Century Skills	Communication skills, interactive communication, innovative skills, critical, reflecting, creativity, future orientation, resiliency, self-discipline, future orientation	Communication Skills. Teamwork, Collaboration, Interactive collaboration. Communication diverse environment, Media literacy, communication skills, Future orientation, Informed Decision Making	Innovative skills, creativity, Technology literacy, media literacy, Communication skills, Critical thinking, innovation skills, reflective thinking, problem-solving skills	Communication skills, collaboration, problem-solving skills, creativity, critical thinking, resiliency
II. CONTENT	Solutions, Solubility, and Concentration	Investigation of Factors Affecting Solubility	Acids, Bases and Salts	Proper Use and Handling of Science Equipment
III. LEARNING RESOURCES				
A. References	Chemistry: Exploring Life Through Science Second Edition pp: 250-258	CLMD4A_ScienceG7.pdf Pivot Material	Chemistry: Exploring Life Through Science Second Edition pp: 250-258	CLMD4A_ScienceG7.pdf Pivot Material
B. Other Learning Resources	Theodore Brown et al Chemistry: The Central Science (14th ed 2017) pp 520-570	Ralph H. Petrucci et al General Chemistry: Principles and Modern Applications (11th ed 2016) pp565-610	https://youtube.com/watch?v=o_Oxutnx-sI https://www.youtube.com/watch?v=-nPAZBY8U9c&t=133s https://sciencenotes.org/facts-about-acids-and-bases/	https://www.merriam-webster.com/ LabSafetyWorksheetShortAnswerandMultipleChoice-1.pdf
IV. TEACHING AND LEARNING PROCEDURES				
Before/Pre-Lesson Proper				
Activating Prior Knowledge	Fill out the given table	The teacher will ask the students to observe the following images:	Encircle the picture that is an example of a base and box if it is an acid.	**Pre-Assessment** Based on the previous lesson, the teacher will

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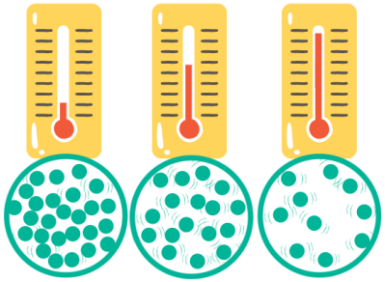
Solubility of (grams solute per 100 mL solvent) at 40°C	Solution at ___	Type of solution
40	40 grams in 100 mL solvent at 40°C	Saturated
80	80 grams in 100 mL solvent at 40°C	Saturated
20	40 grams in 100 mL solvent at 40°C	Unsaturated
100	40 grams in 100 mL solvent at 80°C	Unsaturated
50	150 grams in 100 mL solvent at 40°C	Supersaturated

1. Based on the table, what variables are manipulated or independent? What variables are controlled? **Mass of the solute is the manipulated variable, while temperature and volume of solvent are controlled variable**

2. What factor/s plays an impact on each type of solution, namely saturated, unsaturated, and supersaturated? **Temperature, concentration, and polarity**



The teacher will ask:

- What can you say about the following images?
- How are these images connected to one another?

1. 

2. 

3. 

4. 

5. 

post the phrase and ask the students the following:

PARTICLE MODEL THEORY"

Q1. How did scientists come up with this idea?

Q2. What did they do to get information about matter and its particles?

Q3. Does something make you curious on how the particle model theory was developed?

Q4. Does something seem strange to you on this particle model theory of materials?

Q5. Do you wonder what causes something or why something happens on different materials with respect to the particle model theory?

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			6.  7.  8.  9.  10. 	

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Lesson Purpose/Intention	Present and explain the lesson objectives to the learners. • I can define solubility. • I can identify the factors that affect solubility. • I can explain how these factors affect the solubility of substances.	The students will read and embody the statement: Today, I am a Scientist, and I will…. *Investigate the factors affecting solubility.* *Collect and gather data from the experiment.* *Analyze and share the results from the experiments.*	Present and explain the lesson objectives to the learners. I am able…. • identify the general properties of acids and bases. • differentiate acids from bases based on their reaction with litmus paper. • explain how pH is related to acids and bases. • cite the significance of classifying acids and bases in real-life situations.	Present and explain the lesson objectives to the learners. • I can apply safety procedures when using science equipment; • I can demonstrate proper use and handling of science equipment
Lesson Language Practice	Direction: Give the opposite term/s of the underlined word based on its definition 1. Solute: _____ **solvent** (It is not the substance that is being dissolved because it is the one that dissolves the substance). 2. Solution: _____ **suspension/mixture** (A heterogenous substance wherein more than one substance can be seen in a mixture)	Direction: State the definition of the underlined word/s by matching the terms/s in Column A with its description in Column B. **COLUMN A** 1. polar **E** 2. soluble **C** 3. miscible **B** 4. insoluble **A** 5. immiscible **D**	**Activity 3.1 WORDS TO REMEMBER** Match the terms in Column A with their meanings in Column B. **COLUMN A** 1. acids **D** 2. bases **C** **3.** salts **A** 4. pH scale **E** **5.** litmus paper **B**	**Activity 4.1 Road Signs & Its Meaning** Understanding the different types of traffic signs and their meanings is key for safety on the road, both as a pedestrian and a driver. There is a large variety of road signs you might encounter while driving, and familiarizing yourself with the differences between them will help you make good decisions faster and with

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	3. Stirring : _____ **still** (not mixing) 4. Factor : _____ **nonfactor** (Something that does not contribute to a result or situation)	**COLUMN B** A. a substance that does not dissolve B. ability of two or more substances to mix together uniformly C. a solute able to dissolve in a liquid such as salt and sugar D. liquids that cannot be mixed together in any proportion and will form separate layers E. chemical compounds like water	**COLUMN B** A. Produced by the reaction of acid with a base. B. A type of paper which changes color according to acidity and basicity. C. Substance that can neutralize acid. D. Substance which contains hydrogen and has pH less than 7 E. Measure of how acidic Use the words above in a sentence.	ease. Whether you are an experienced driver or studying for your driver's education exam, we encourage everyone to take a few moments and know the basic types of traffic signs. Look into the following terms: 1. *Pedestrian* – of, relating to, or designed for walking 2. *Variety* – a number of collections of different things, especially of a particular class; assortment 3. *Decisions* – the act or process of deciding Are you familiar with road signs? Let's check your knowledge of this by identifying correctly each road sign.  1. ***Answer: No left turn***

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				 2. ***Answer: No parking***  3. ***Answer: No overtaking***  4. ***Answer: Merge***  5. ***Answer: Slippery road***

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				Why do we need to be aware of the road signs and symbols? Each type of sign you encounter on the road serves a purpose. And this is also TRUE when we enter the Science Laboratory. We have to observe Safety Rules and Regulations to prevent us from committing any accidents as well as errors in our experimentation.
During/Lesson Proper				
Reading the Key Idea/ Stem	The learners will be given a reading passage about solubility. **Activity 1.1: Factors Affecting Solubility** Solubility is one property of substances. It refers to the amount of solute that can dissolve in a specific amount of solvent at a given temperature. A substance may be described as very soluble, slightly soluble, or insoluble depending on the amount that will be	Let the learners read the following story. **Activity 2.1:** **"Life of a Scientist"** In a bustling chemistry lab, Mia, a young scientist, was assigned an experiment by heating a mixture of substances. Aware of the risks, she prepared carefully. Mia reviewed the procedure, gathered safety gear, and set up her workspace. Double-checking chemical labels, Mia measured the	Ask the learners to read the texts below. **Activity 3.2 Chemistry Around Us** Chemistry surrounds us in every facet of our daily lives, often in ways we may not even notice. One captivating realm of chemistry is the study of acids and bases, two fundamental categories of substances that play crucial roles in our day-to-day lives. There are substances that exhibit certain color in an	**Activity 4.2 Lab Safety** Below is an activity on Laboratory Safety and Precaution. Do the activity quietly.

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dissolved to form a solution. The solubility of substances is affected by many factors, such as:

1. the nature of the solute and the solvent;
2. the temperature of the mixture;
3. the rate of stirring;
4. the particle size;
5. the pressure, in the case of gases.

When heat is applied to a solution more solute dissolve.

The general rule for solubility is "like dissolves like," which means a solvent will dissolve solute particles of a type similar to it.

substances precisely. She heated them gradually, monitoring closely for the right temperature. With caution, she mixed the solutions using a stirring rod, staying alert for any changes.

Afterward, Mia turned off the heat, let everything cool, and cleaned up. She disposed of waste properly and washed her hands. Mia reflected on her experiment, satisfied that her precautions ensured safety and success, proving the importance of lab safety.

Guide questions:

1. Does Mia exhibit the right process to be safe in the laboratory? Explain how Mia exhibited safety in the laboratory.
2. What is the most important thing to remember when handling hot objects?

Activity 2.2 Investigating Factors Affecting Solubility

Procedure for the Group Activity: Given the following materials per group, mix the materials and observe what happens after mixing.

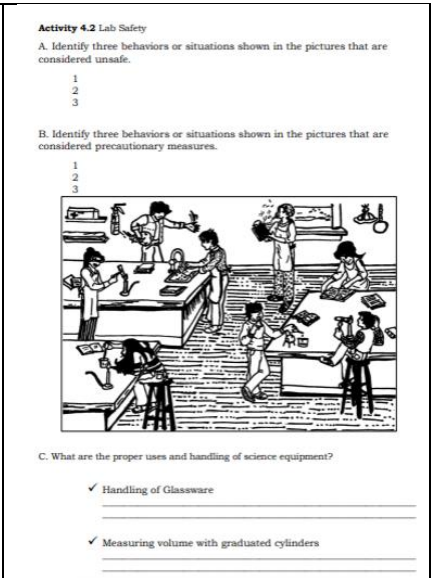
acidic medium and another color in a basic medium. They are called acid-base indicators.

Litmus paper is one of the indicators being used in studying acids and bases. It turns blue to red color in acidic solutions and red to blue color in basic solutions. Other indicators include phenolphthalein and methyl orange.

Quantitatively, pH is used to determine the strength of acidity and basicity. Acids have a pH value less than 7, pure water is neutral with a pH of 7, and bases have a pH greater than 7.

Here is a summary of useful and interesting facts about acids and bases.

Characteristic	Acids	Bases	Salts
Definition	Acid is a substance which gives H^+ ion in water solution	Base is a substance which gives OH^- ion in water solution	combination of an acid and a base through a chemical reaction known as neutralization.
Taste	sour	bitter	Salty and sometimes bitter
Touch	Can be corrosive and cause burns	Slippery or soapy	Rough/coarse, fine crystals
pH range	Less than 7	More than 7	7
Reaction with Litmus paper	Blue litmus to pink	Pink litmus to blue	No effect
Examples	Hydrochloric acid, sulfuric acid	Sodium hydroxide, ammonia	Sodium chloride
Common Household uses	Vinegar, fruit juices, soft drinks	Baking soda, soap, bleach	Table salt



Activity 4.2 Lab Safety

A. Identify three behaviors or situations shown in the pictures that are considered unsafe.

1
2
3

B. Identify three behaviors or situations shown in the pictures that are considered precautionary measures.

1
2
3

C. What are the proper uses and handling of science equipment?

✓ Handling of Glassware

✓ Measuring volume with graduated cylinders

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		Group 1: oil and water *Group 2*: powdered tea and water *Group 3*: rock salt vs. iodized salt in water *Group 4*: salt in hot water **Materials needed:** Beakers Various solutes (e.g., sugar, salt, powdered tea, oil) Distilled water Stirring rods Thermometers Hot plate or burner Safety goggles Worksheets	Acids and bases are not just abstract concepts confined to laboratories; these are substances commonly used in our daily routines like, washing, cleaning, cooking, etc. Developing an appreciation for these materials will help us utilize it correctly and promote safer environment. For example, in removing stains from our clothes we can use calamansi or lemon extract/ juice to remove it or to prevent unnecessary odor in a room, we can use baking soda or vinegar, etc.	
Developing Understanding of the Key Idea/ Stem	**Activity 1.2: Solubility Rules** Determine if the solubility will become faster or slower in each example. 1. Coffee granules in cold water vs. coffee granules in hot water *slower in cold water/faster in hot water* 2. Burning sawdust vs wooden chips *faster in sawdust/ slower in wooden chips*	The students will answer the guide questions: 1. Which of the mixtures you observed produced a solution? *Salt in hot water* 2. What factors affect the solubility of the mixtures you observed? *Temperature* 3. Why did the oil not mix with water? *Due to the polarity or nature of the solute or solvent. Oil is a non-polar substance, while water is a polar substance*	**A. Guide Questions:** 1. Differentiate acids, bases and salts. *Acids have a sour taste, turn blue litmus paper red and have a pH less than 7. Bases have a bitter taste, feel slippery, turn red litmus paper blue and have a pH greater than 7. Salts are compounds formed by the reaction between an acid and a base with a pH value of 7.* 2. What role does litmus paper do to differentiate acids, bases and salts? *Litmus paper is one of the*	Students will watch a video clip on laboratory safety procedures in a science laboratory, emphasizing the proper use and handling of equipment. Reference: (Use the given link below) https://www.youtube.com/watch?v=VXB1HWnjQBA Before watching the video clip, show the learners some guide questions for the discussion.

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	3. Removing chewed gum using water vs. oil *slower in water/ faster in oil* 4. Chunks of sugar in water VS powdered sugar in water *slower in chunks/faster in powdered* 5. Acetone vs oil in nail polish *faster in acetone/slower in oil*	4. How can knowledge of these factors affecting solubility help you in your everyday life? *This allows us to address issues/concerns regarding which material/s will be dissolved by another material like when we need to use bleach in our laundry.*	*indicators being used in studying acids and bases. It shows a red color in acidic solutions and a blue color in basic solutions.* 3. Give examples of acids and bases used in your household. **The teacher will ask the learners to watch the video lessons.** https://www.youtube.com/watch?v=o_Oxutnx-sI **B. Guide Questions:** 1. In what number of the pH scales will a slightly acidic solution be formed? strongly acidic solution be formed? How about slightly basic solution? strongly basic solution? 2. Give other examples of acids and bases that can be found in your homes. How about the base? 3. What is the color of acid in litmus paper? How about the base?	**Guide Questions:** 1. What material is used to protect our eyes from heat, sharp objects, etc.? 2. Why is it important to tie hair in the laboratory? 3. Are we allowed to handle all chemicals and equipment in the laboratory? 4. What do you think is the reason why we have to notify our teacher/s during accidents or any medical problems? 5. When test tubes are being heated, what is the proper way of handling it? **NOTE:** *The teacher may add more questions depending on the type of learner handled.*

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Deepening Understanding of the Key Idea/ Stem	**Activity 1.3**: **Factors Affecting Solubility** Identify the factors affecting solubility described in the following situations. **Stirring** **Size of Solute** **Temperature** **Nature of Solute and Solvent** 1. Solubility of carbon dioxide in soft drinks *(nature of solute & solvent/ pressure)* 2. Gasoline does not dissolve in water, decreasing the solubility of gasoline. *(Polarity/ gasoline is nonpolar)* 3. Two tablespoons of sugar are added to two glasses of water of the same amount. Glass A is stirred while Glass B is not. Sugar dissolved faster in glass A. *(stirring)* 4. Assuming the same amount of fine salt and rock salt. Fine salt dissolves in water faster	Discuss the following with your seatmate and share your knowledge about the issue. 1. What is the effect of oil spills in the river on our aquatic organisms? *Oil spills can coat the surface of the water, preventing oxygen exchange and sunlight penetration. This can eventually cause death of aquatic organisms.* 2. Why is it important to drink a lot of water after taking medicine? *Water helps dissolve medicines faster and, therefore, aids in faster absorption in the body.*	**Activity 3.3 Experiment Time:** Directions: Complete the table and identify the given sample, whether an acid or base. Procedure: 1. With the use of litmus paper, test the given sample of substances and classify them as acids or bases. 2. Gather and organize your findings in the data. **NOTE:** Please do the inference before performing the experiment proper. Materials: plastic cups, litmus paper, calamansi, bleach, vinegar, hand soap, soda **Sample** | **Inference (Change in Color)** | **Observation (Change in Color)** | | | | | | | | | | | | | | |	**Activity 4.3: "MIRROR ME"** The teacher will facilitate a guided demonstration of the following: 1. Proper Handling of Glassware 2. Measuring volume with graduated cylinders 3. Heating 4. Use of protective devices in the laboratory **Guide Questions:** 1. What laboratory equipment did I use for: a. Measuring b. Heating c. Protection 2. What is the proper way of handling glassware? 3. How is a graduated cylinder used to measure the volume of water? 4. How are wire gauze, alcohol lamp and ring clamp used to heat objects?

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	compared to rock salt. *(size of the particle)* 5. When a beverage is pressurized with carbon dioxide (CO2) gas, the gas dissolves in the liquid to form carbonic acid. *(nature of solute & solvent/ pressure)*		Are your inferences similar to your actual observations during the experiment? Which of the samples are acidic? *Calamansi soda and vinegar* Which of the samples are bases? *Bleach and handsoap* Differentiate your observations when the substances were tested using the litmus paper. *Acid turns blue litmus paper red while bases turns red litmus paper blue* Result: The given solutions are considered as *acids when blue litmus paper turns red and bases when red litmus paper turns blue*	Let the students work by group and assign them a task for demonstration. Use the rubrics below. **Rubrics for Student Demonstration:** Proper Setting up of equipment- 25 points Following Procedure- 15 points Cooperation- 10 points TOTAL - 50 points **Group 1: Proper Handling of Glassware** ***Materials:*** beaker, test tubes, graduated cylinders, etc. 1. With the provided apparatus demonstrate the correct way of holding and transporting glassware from the table to the storage cabinets. **Group 2: Measuring volume with graduated cylinders** ***Materials:*** Graduated Cylinder, Dropper or Pipette 1. Measure 100mL of water using graduated cylinder and transfer the contents in a wide mouthed container.

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				2. Using a medicine dropper, add 5 drops of oil to the container with water. Observe what happens to the oil droplets. **Group 3: Heating** ***Materials*:** Beaker, Ring Clamp, Wire gauze, alcohol lamp 1. Assemble your heating setup using the provided apparatuses. 2. Place 100mL of water in your beaker and apply heat for 10 minutes. Record your data. **Group 4: Use of protective devices in the laboratory** ***Materials*:** goggles, aprons, gloves 1. Demonstrate in the class the proper use of goggles, aprons, and gloves after reviewing the safety rules in the science laboratory.
After/Post-Lesson Proper				
Making Generalizations and Abstractions	How important are the factors affecting solubility in terms of: 1. food 2. medicine 3. drinks 4. pollution	**Activity 2.3 Concept Mapping** Fill in the concept map on factors affecting solubility with examples for each.	**Summarize what you have learned from this lesson using any of the following:** A. Venn diagram B. Concept map C. Spider map D. Your choice of graphic organizer	Why do we need to observe these Laboratory Safety Rules and Precautions?

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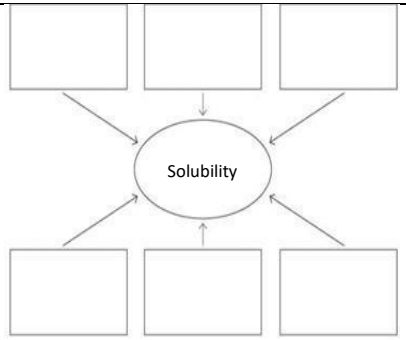
<td> 
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<td>Evaluating Learning</td>
<td>Read each question carefully and copy the letter of the correct answer.

1. How does stirring affect the solubility of solutes?
a. It causes the particles of solute to dissolve slowly.
b. It causes the particles of solute to dissolve faster.
c. It causes the particles of solute to stop moving.

2. Solubility is the____
a. substance that dissolves the solute.
b. dissolved substances.
c. ability of the substance to dissolve in a solvent.</td>
<td>Assessment: True or False.

Write T if the underlined word is CORRECT for the statement and F if it is INCORRECT.

1. The higher the temperature, the <u>slower</u> the solute will dissolve. F
2. Nonpolar substances can dissolve in <u>polar</u> substances. F
3. <u>Solute</u> must be greater in amount in a solution. F
4. The <u>larger</u> the particle the easier it can be dissolved. F
5. Applying <u>agitation</u> can hasten the mixing process. T</td>
<td>Imagine you are a scientist investigating materials in your kitchen. Identify three common household items, explain whether they are likely to be acids or bases, and provide reasons for your classifications.

Use the table below to write your answer.
<table>
<tr><th>Materials in the kitchen</th><th>Acid or Base</th><th>Explanation</th></tr>
<tr><td></td><td></td><td></td></tr>
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Rubric:
1 point- Accurate identification of three household items as acids or bases.</td>
<td>The students will answer their short quiz.

Choose the letter of the correct answer.

1. Which of the following statements is true about laboratory equipment?
a. Laboratory equipment should only be cleaned when it gets dirty.
b. Digital laboratory equipment should be kept in hot/humid environments.
c. Laboratory equipment should be handled without care
d. The life of your laboratory equipment can be extended with proper care and maintenance</td>
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	3. How does increasing temperature affect the solubility of solid solutes? ***a. The hotter the solvent, the greater the amount of solid solute dissolved.*** b. The hotter the solvent the lesser amount of solid solute is dissolved. c. The hotter the solvent, the solid solute will not dissolve. 4. What effect does increase in the surface area of a solid solute have on its solubility in a solvent? ***a. Solubility increases*** b. Solubility decreases c. No effect on solubility d. It depends on the type of solute. 5. Which of the following daily life examples best illustrates a factor influencing solubility?		*1 point*- Clear and logical explanations to support each classification. *1 point*- Effective use of relevant scientific terms and concepts.	2. What should be done after performing an experiment in the laboratory? a. You can just leave it where you used it. ***b. Clean all the equipment and area where you work after you use it.*** c. Ask your classmates or the utilities to clean after you. d. You can clean it when you will use it again. 3. Which of the following is NOT a safe lab practice? a. Keep chemicals, glassware, and other equipment away from the edge of the lab table. ***b. After removing glassware from a heat source, touch it right away to see if it is cool***. c. Report minor accidents to your lab supervisor and/or teacher. d. Heat chemicals in a flask without a stopper.

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	a. Dissolving sugar in cold water versus hot water b. Melting ice cream in the sun c. Boiling water for cooking pasta d. Chopping vegetables for a salad			4. If you are not sure what to do during a lab activity, what should you do? a. Guess b. Do it yourself. ***c. Ask the teacher.*** d. Change lab partners 5. A spill can cause an accident. When is the right time to clean up the spill? a. When you have time. b. After the teacher has told you 3 or more times. c. At the end of the lab. ***d. Immediately after the spill.*** **Written Work:** Given the following situations, which laboratory equipment will be needed to do each task/s. (NOTE: List all laboratory equipment necessary to finish the task). 1. Measure 10.00 mL of water *Answer: 10.00 or 20.00 mL gauged graduated cylinder* 2. Transfer 2.50 mL of hydrochloric acid from

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				one container to another *Possible Answers:* *a. 5.00 mL graduated cylinder (glass)* *b. glass pipette with calibration* 3. Separate sand from water in a mixture *Possible Answer: funnel, filter paper, Erlenmeyer flask and glass rod* 4. Heat water until it reaches 70^0C *Possible Answer: tripod/ring clamp, alcohol lamp, wire gauze, thermometer, beaker or Erlenmeyer flask*
Additional Activities for Application or Remediation (if applicable)		From the scenarios below, identify and explain the factors affecting the solubility. **Scenario 1**: Anna wanted to make calamansi juice. She took a jug and mixed in calamansi extract, sugar and water. She used a wooden spoon to make her juice. *Stirring*		

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		Scenario 2: In a tea party, Anna picked the sugar cube while her friend Mina chose the table sugar. Anna noticed that Mina was able to drink her tea first. *Size of particle* **Scenario 3**: Jack's mom was cooking sinigang. As she was cooking, Jack noticed her mom adding more sinigang mix as the dish boiled *Temperature* **Scenario 4**: Gia wanted to make a salad dressing, so she mixed olive oil, herbs, and salt water. She noticed that the olive oil did not incorporate well as a dressing. *Polarity/nature of solute or solvent*		
Remarks				
Reflection				

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