

## Solutions/Mixtures

### Unit Tasks Remediation and Mastery Check List

Each student is provided the opportunity to complete a series of tasks to remediate the concepts presented in the unit and to demonstrate mastery of the required standards addressing the topics in that unit. Tasks can be graded based on completion of the task or on correctness of task. Completion of the tasks will generate percentage points that can be added to the student's Unit Test grade UP TO A TOTAL UNIT TEST GRADE OF 80. If the student wishes to submit **The Task Checklist and pieces of evidence**, it is always due one WEEK after the unit test. Checklists are posted on Mrs. Smith's classrooms page on the HCHS website under "attached documents."

Due date for Solutions and Mixtures Checklist/Evidence-

**Pick and choose which activities you would like to do in order to achieve up to 12% back to your Unit One Test (up to an 80).**

\_\_\_\_\_ Make flash cards of the key vocabulary (word on one side/definition on the other) highlighted on the Word Wall. The definition should relate to the chemistry aspect of the term.

**solution, solvent, solute, soluble, insoluble, miscible, homogeneous, heterogeneous, saturated, unsaturated, supersaturated, colloids, suspensions, tyndall effect, acid, base, Brownian, pH, buffer, indicator, neutralization, dissociation (2%)- SCSH9C**

\_\_\_\_\_ Find 10 acidic substances and 10 basic substances in your home. Take pictures of the substances. On each pictures, list the name, scientific name (if possible), and the pH of the substance. This information can be found researching on the internet or you can obtain some pH paper from your teacher. (5%) **SPS6e**

\_\_\_\_\_ Draw a picture of any scene with 15 similar components in it. Use color on the 15 components to represent the gradual change from most acidic pH (0) in the darkest red to the most basic pH (14) in the darkest blue. See your teacher for examples. (5%) **SPS6c**

\_\_\_\_\_ Create your own chemical indicator by boiling red (purple) cabbage in water. The "juice" left after the boiling becomes a chemical indicator. Soak 6 coffee filters in the water and then let the filters dry. Test 3 acidic and 3 basic substances (like lemons and ammonia) on your "indicator paper." Bring in the results of your experiment with a notation on each coffee filter indicator paper of the name of the substance you tested and if the substance was determined to be acidic or basic. (5%) **SPS6d, SPS6e**

\_\_\_\_\_ Complete the online virtual Mixtures lab. **Go to the web address:**  
**[http://www.glencoe.com/sites/common\\_assets/science/virtual\\_labs/PS15/PS15.html](http://www.glencoe.com/sites/common_assets/science/virtual_labs/PS15/PS15.html)**

#### **Procedure for online lab:**

- 1. Select a compound formula.**

**Question: State a problem about the effect of temperature on the solubility of the compound.**

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\_\_\_\_\_

2. *Make a hypothesis about temperature and saturation for a solute.*

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3. Test your hypothesis by determining the solubility of the selected compound at a given temperature. Select a temperature setting by clicking it. Then, add compound to the water using one of the measuring spoons at the top of the screen.
4. Continue placing compound into the water until saturation is reached. When the solution is saturated, undissolved compound will appear at the bottom of the beaker. Click the "Undo" button to remove the last spoonful of compound from the beaker.
5. Repeat the process until you find the saturation point within a gram.
- 6.

Complete the data table and answer the following questions as you complete the lab:

| Temperature | NH <sub>4</sub> Cl | Ba(OH) <sub>2</sub> | CuSO <sub>4</sub> | KCl | NaNO <sub>3</sub> |
|-------------|--------------------|---------------------|-------------------|-----|-------------------|
| 0°          |                    |                     |                   |     |                   |
| 20°         |                    |                     |                   |     |                   |
| 60°         |                    |                     |                   |     |                   |
| 100°        |                    |                     |                   |     |                   |

1. Give an analysis of your experiment and your data on saturation.
2. What conclusions can you draw about temperature and saturation of a solute?  
(8%) **SPS6b, SPS6c**