Slime Lab - Level 3 Adaptation

(This lab is adapted for students with severe learning challenges. Concepts and tasks have been reduced or eliminated to a more significant degree. Only a few of the original learning objectives are addressed and many prompts and scaffolding are given. Scoring guide and rubric should be modified to reflect adaptations).

INITIAL:

1. *Observe* the substances on the lab tray. Write down as many *properties* of each substance that you can observe and/or *measure.*

	Physical Properties	**Measurements of mass, volume, and density—label numbers**
White Powder (Borax)		Mass of container + substance _____ Subtract Container _____ Final Mass _____ Volume: Mass/volume = density _____g / _____ml = _____g/ml
Glue		Mass of container + substance _____ Subtract Container _____ Final Mass _____ Volume: Mass/volume = density _____g / _____ml = _____g/ml
Water		Mass of container + substance _____ Subtract Container _____ Final Mass _____ Volume: Mass/volume = density _____g / _____ml = _____g/ml

Even though all boxes are available to input data for measurement, it may be decided that the student will only need to complete measurement data for only one or two of the substances. Chemical properties have been eliminated. This concept is probably too abstract fort this level of learner and not necessary to participate in the lab assessment. Mastery of content is not the goal for this student but following directions, completing multiple steps, applying reading, writing and math skills, and communicating are the main goals.

DURING:

2. Mix the 50 ml of water with the 50 ml of glue in cup **a. Stir until mixed. Set aside.**
3. Mix the 1 ml of borax (white powder) with the 50 ml of water in cup **b. Stir until dissolved. Set aside.**
4. *Predict* what will happen if you combine the two mixed substances (cup "a" and cup "b").

Prediction Statement for glue/water + borax/water when mixed together:

5. Squeeze all the air out of the bag and submerge in water tank. What did you observe and what does it mean?

6. Slowly pour the borax/water **in the glue/water** stirring *vigorously.*
7. Take new substance out of the cup and *massage* in your hands.
8. Play with the new *substance,* observing *properties* and behavior.
9. List new *properties*, including mass, volume and density.
10. Give data of all properties that have been *measured* to teacher to record in class chart.

	Properties	Measurements
Glue/ Water + Borax/ Water		Mass of container + substance _____ Subtract Container _____ Final Mass _____
		Volume:
		Mass/volume = density _____g / _____ml = _____g/ml

AFTER

Teacher hands out class l chart with all measurable data: temperature, mass, volume, and density.

Analyze the data on the class chart--answer in complete sentences

<table>
<tr><td>11.</td><td>What did you notice about the heat energy of the substance when you were playing with it?

Generally, these questions would be facilitated by a paraprofessional if available.</td></tr>
<tr><td rowspan="7">12.</td><td>Use the chart to answer the following:</td></tr>
<tr><td>1. What are the most common measurements for mass, volume, and density?

Mass _____ Volume _____ Density _____</td></tr>
<tr><td>2. List the numbers for mass, volume, and density that are different from the majority.</td></tr>
<tr><td><table><tr><td><u>Mass</u></td><td><u>Volume</u></td><td><u>Density</u></td></tr><tr><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>3. Why do you think these numbers are different from the others?</td></tr>
<tr><td>4. When the mass and volume measurements are close to the same, the density closely matches the density of _____ and equals close to ____g/ml. This means the new substance will _____ in water.</td></tr>
<tr><td>5. Make your own statement about the data in the chart:</td></tr>
<tr><td>13.</td><td>How did the chart help you answer the above questions?</td></tr>
<tr><td rowspan="2">14.</td><td>In this lab, which of the following are physical changes and which are chemical changes?</td></tr>
<tr><td>When I mixed the glue with the water. _____

When I mixed the borax with the water. _____

When I mixed the borax water with the glue water. _____</td></tr>
</table>

CONCEPT BOX	
Physical	**Chemical**
Mass -Gram (g) **Volume**--Liter (l), Milliliter (ml) **Density** (Mass divided by volume—g/ml) Density of water is 1g/ml Color Solid, liquid, gas Flexibility Texture Temperature Odor-smell Absorbent	**Toxic** **Combustible** **Flammable** **Biodegradable**

This word box still distinguishes between physical and chemical properties even though this level is not required to differentiate. Incidental learning of concepts not targeted are sometimes understood just by being in the class and listening. These are the main chemical properties being discussed in this unit.

The following words would need to be pre-taught in language arts small group or other pull-out time before the lab:

- Analyze
- Combine
- Vigorously
- Properties
- Predict
- Massage
- Substance
- Measure
- Observe

These are the main science concepts for this level:

- Mass
- Volume
- Density
- Physical properties
- Physical changes
- Chemical changes—introductory level only--optional
- Heat energy