Name: _____ Period: _____ Date: _____

Laboratory Procedures Assignment – Student Edition

I. True or False

Decide whether the given statement is true or false. If the statement is false, provide an explanation to make the statement true and correct.

1. Laboratory techniques are processes and practices that are recommended for using various equipment in the laboratory.

   _____

2. A pipette is used to transfer large amounts of liquid in a vessel.

   _____

3. It is necessary to keep the stopper from the reagent bottles hanging when transferring its content.

   _____

4. Grasp the reagent bottle on its neck when pouring it.

   _____

5. Use a stirring rod to transfer liquids in a narrow-mouthed container.

   _____

6. A filter paper is porous material that separates liquid from solid residue.

   _____

7. When transferring liquids to a test tube, it should be held at an eye level.

   _____

8. A beaker is more accurate in measuring volume of liquid than a graduated cylinder.

   _____

9. In heating, Bunsen burner is used when there is a need to use blue flame in heating substances.

   _____

10. A Bunsen burner uses denatured alcohol in order to function.

    _____

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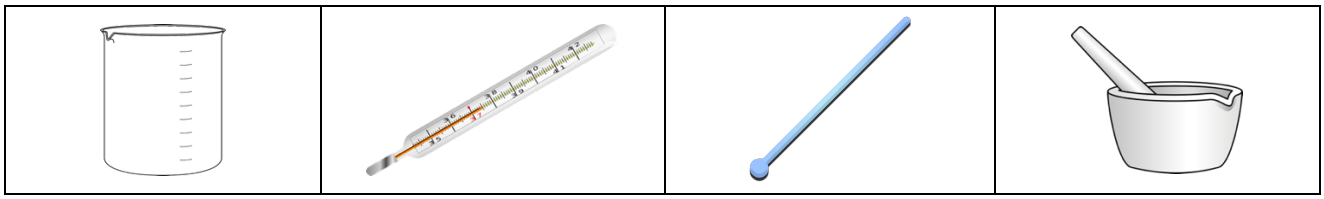
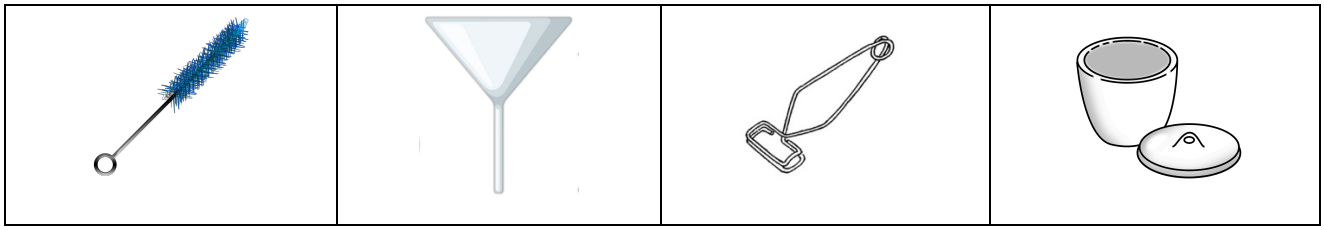
II. Identification

Encircle the laboratory equipment used to perform the following laboratory operations.

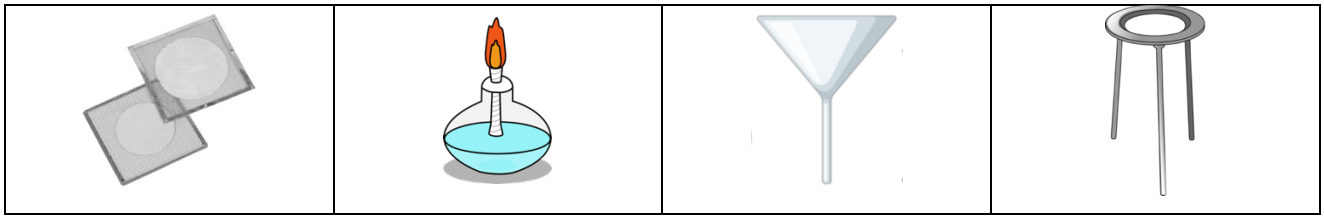
1. Transferring liquids to a wide mouthed container



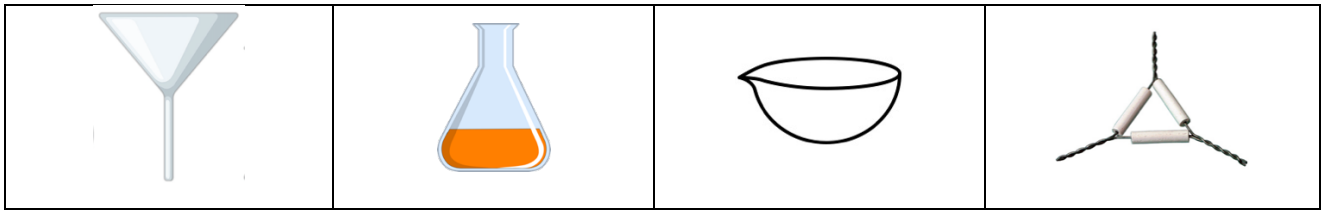
2. Transferring liquids to a narrow-mouthed container



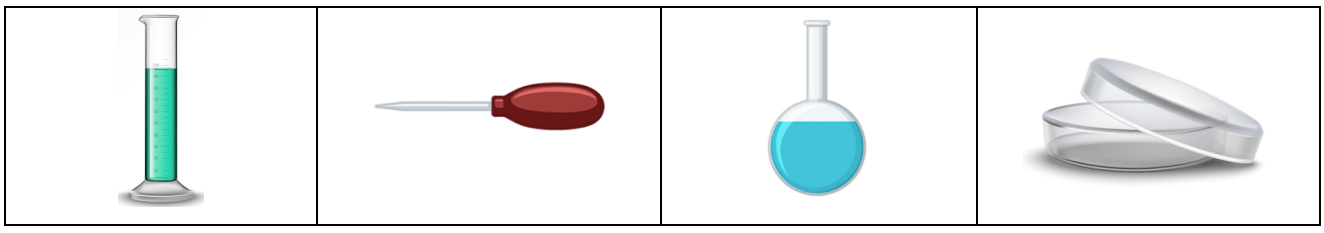
3. Heating substances in a beaker



4. Filtering heterogeneous mixture



5. Measuring volume of solid through water displacement method



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III. Sequencing Events

Arrange the steps in performing each laboratory procedure. Write the correct **number** of steps on the blank.

Transferring Liquids Using a Stirring Rod

_____ Slowly pour the contents from the reagent bottle onto the stirring rod.

_____ Hold the stirring rod upright and let it touch the lip of the empty beaker.

_____ Prepare the vessel and stirring rod as well as the reagent bottle with liquid substance.

_____ Open the reagent bottle and hold it in the middle with the palm covering the label.

Filtering

_____ Wet the filter paper with water until it perfectly fits in the glass funnel.

_____ Fold the filter paper into a cone shape.

_____ Pour the contents of the mixture to be separated onto the funnel with filter paper.

_____ Insert the filter paper in the glass funnel.

_____ Place the funnel with filter paper in a flask with its tube inserted inside.

Heating a Substance in a Test Tube

_____ While heating, move the test tube back and forth.

_____ Hold the test tube with the substance to be heated with a test tube holder.

_____ Light the alcohol lamp using a matchstick.

_____ Heat the test tube just below the surface of the liquid but not at the bottom.

Measuring Mass Using a Triple Beam Balance

_____ Check if the pointer is aligned with the zero mark to check if it is calibrated.

_____ With the pan empty, move the three sliders on their leftmost positions.

_____ Add the total mass of the three riders to determine the mass of the object.

_____ If the balance is not calibrated, turn the adjustment knob on the left side, under the pan.

_____ Move the slides starting from 100-gram, to 10-gram, then to 1-gram.

_____ Once the balance is calibrated, put the object to be measured on the pan.

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Measuring Volume of a Solid through Water Displacement Method

_____ Fill the graduated cylinder with adequate water.

_____ Record the volume of water prior to submerging the object.

_____ Find a graduated cylinder that is large enough to hold the object being measured.

_____ Subtract the volume of the water alone from the volume of the water with submerged object.

_____ Put the solid to be measured in the graduated cylinder with water.

_____ Record the volume of water with submerged solid object.

IV. Providing Explanations

Answer the following questions.

1. When is pipetting best used?

_____

_____

2. In pipetting, why should the tip of the pipette not touch bottom of the container of liquid being transferred?

_____

_____

3. Differentiate the following terms:
    a. Filtering and decanting

_____

_____

    b. Decant and supernatant

_____

_____

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c. Filtrate and residue

_____

_____

d. Gas valve and collar

_____

_____

e. Yellow flame and blue flame

_____

_____

4. Why is pumice stone added to a beaker when boiling liquids?

_____

_____

5. Why is yellow flame considered dangerous?

_____

_____

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