

LAB 2 Laboratory Techniques P1

Name _____ Period _____ Date _____

Introduction: To study the nature of matter and energy it will be necessary to apply skills and use equipment that allows for the “testing” of ideas and concepts. To be successful these techniques need to be practiced such that an experiment is focused on the “testing” of the” idea, not the technique.

Purpose: (1) Identify lab equipment and its use P1 Approval (10 pts) _____ Date _____
(2) Practice using said equipment P2 Approval (10 pts) _____ Date _____
(3) Separate a mixture of 3 substances P3 Approval (10pts) _____ Date _____

Total Score _____

Identifying equipment:

Draw a picture (with labels)	Uses (make a list): (use the internet)
A	A

B	B
C	C

D	D
E	E

F	F
G	G

H	H
----------	----------

Additional Equipment (just list it and its uses)

LAB 2 Laboratory Techniques Part 2

Watch the website videos then perform the following tasks individually (your lab partner or instructor can sign you off):

- | | | |
|---|----------------|------------|
| 1) Measure the volume of a liquid (water): | Approval _____ | Date _____ |
| 2) Measure the mass of a substance (sand): | Approval _____ | Date _____ |
| 3) Filter a solid (sand) from a liquid (water): | Approval _____ | Date _____ |
| 4) Heat a liquid to boiling (water) | Approval _____ | Date _____ |
| 5) Measure the temperature of a liquid: | Approval _____ | Date _____ |

LAB 2 Separating a Mixture Part 3

Perform the following in a lab group (FIRST CREATE A PROCEDURE, THEN GET APPROVAL BEFORE STARTING):

- 1) Make a mixture of 60ml of water, 2 grams of salt, and 2 grams of sand:

Proposed Procedure: (Hint, use a combination of approved techniques and equipment!)

1)
2)
3)
4)

Procedure Approval _____ Date _____

- 2) Separate the water, sand and salt:

Proposed Procedure: (Hint, use a combination of approved techniques and equipment!)

1)
2)
3)
4)

Procedure Approval _____ Date _____

- 3) Measure the mass of the sand and salt:

Proposed Procedure: (Hint, use a combination of approved techniques and equipment!)

1)
2)
3)
4)

Approval _____ Date _____

Questions (2pts each): Put your answers on separate paper with your name and period at the top. Make sure to use the data from the procedure in your answer.

- 1) What happened to the salt when it was mixed with the water?
- 2) What was different with the sand and water compared to the salt?
- 3) Why did filtering separate the sand and water but not the salt?
- 4) When a water and salt mixture is heated does the salt boil? (use evidence!)
- 5) How does the starting mass of salt and sand compare to final separated masses?

Extension:

- 1) If it was possible to collect and condense all the steam what would its volume be?
- 2) Is there a way to collect all the steam? (Be creative!)