

Matter Lab Data

Record all observations and lab equipment/glassware used at each station.

	Observations	Lab Equipment/Glassware Used
Station 1	<ul style="list-style-type: none">• Sample is a blue solid (powder consistency)• The blue solid was dissolved in water to create a blue solution	<ul style="list-style-type: none">• Erlenmeyer flask• Graduated cylinder• Scoopula• Wash bottle
Station 2	<ul style="list-style-type: none">• Sample is a white solid• When solid was placed in water, bubbles were produced	<ul style="list-style-type: none">• Beaker• Forceps• Watch glass• Wash bottle
Station 3	<ul style="list-style-type: none">• 2 mixtures created:<ul style="list-style-type: none">○ Oil and water – oil layer separated from water layer. Oil was on top.○ Alcohol and water – alcohol thoroughly mixed with the water. No layers formed. Could not distinguish between the alcohol and water. All looked the same.	<ul style="list-style-type: none">• Test tubes• Test tube rack• Dropper pipets
Station 4	<ul style="list-style-type: none">• Sample was made of sand and blue solid particles• When water was added to the sample, the blue solid dissolved in the water• The sand and blue water were separated from one another using filter paper, the filter paper captured the sand while the blue water went through the filter paper	<ul style="list-style-type: none">• Erlenmeyer flask• Funnel• Filter paper• Scoopula• Wash bottle

	Observations	Lab Equipment/Glassware Used
Station 5	<ul style="list-style-type: none"> • Two pencils each sharpened on both ends to expose the pencil “lead” • Wires were used to connect one end of each pencil to a 9 volt battery • The other end of each pencil was placed into a petri dish filled with water • Bubbles formed at the tip of the pencil 	<ul style="list-style-type: none"> • Petri dish • Wires • 9 volt battery
Station 6	<ul style="list-style-type: none"> • Three different brands of black ink markers. Each marker was used to draw one dot on a strip of paper • The end of each paper was placed into a solvent • As the solvent traveled up the paper, the ink was separated into its different pigments. Each pigment travelled a different distance up the paper. 	<ul style="list-style-type: none"> • Chromatography paper • Beaker • Paper clips
Station 7	<ul style="list-style-type: none"> • Box filled with various metals • When the magnet was waved over the items in the box, some metals stuck to the magnet and others did not 	<ul style="list-style-type: none"> • Magnet
Station 8	<ul style="list-style-type: none"> • The sample was hot and colorless with a liquid consistency • When a Q-tip was dipped into the solution and used to draw on black construction paper, the sample retained its appearance • After drying the sample with a hairdryer, white crystals were left on the paper 	<ul style="list-style-type: none"> • Hot plate • Q-tip • Black construction paper • Hairdryer

Name: _____ Date: _____ Block: _____

Matter Lab Post-lab

Station 1: Solution Making

1. Is the resulting solution a homogeneous or heterogeneous mixture? Explain your reasoning.
2. How could the mixture of the water and powder be separated into back into its individual substances?
3. Does your answer to Question #2 represent a physical or chemical separation technique?
4. Based on your answer to Question #3, is the process of dissolving a substance in another substance a physical or chemical change? Explain your reasoning.
5. A solution is made of two parts: solute and solvent. The solute is present in the smaller quantity and is what is being dissolved. The solvent is what is present in the largest quantity and is what the solute dissolves in. Identify the solute and the solvent of the mixture created at Station 1.

Station 2: Tablets in Water

1. When the tablet was added to the water did a physical or chemical change occur? Explain your reasoning.

Station 3: Alcohol, Oil, & Water

1. Is the oil and water mixture homogeneous or heterogeneous? Explain your reasoning.
2. Describe one separation technique that would allow you to physically separate the oil from the water.
3. Is the alcohol and water mixture homogeneous or heterogeneous? Explain your reasoning.
4. Describe one separation technique that would allow you to physically separate the alcohol and water from one another. (hint: consider how fast rubbing alcohol evaporates when applied to your skin)

Station 4: Separating Blue

1. Was the original sample of matter a substance or mixture? If a substance, was it an element or compound? If a mixture, was it homogeneous or heterogeneous? Explain your reasoning.
2. Describe how you were able to separate the blue compound from the rest of the sample.
3. Was a physical or chemical separation technique used to separate the sample?

Station 5: Battery Power

1. Based on your observations, did a physical or chemical change occur? Explain your reasoning.
2. What separation technique was used at this station?

Station 6: Mysterious Ransom Note

1. What separation technique was used at this station?
2. Did the separation technique require a physical or chemical change?
3. Was the sample a substance or mixture? Explain your reasoning.
4. Who wrote the ransom note? Explain your reasoning.

Station 7: Metals and More

1. What separation technique was used at this station?
2. Was the sample a mixture or substance? Explain your reasoning.

Station 8: Salty

1. What separation technique was used at this station?
2. Did the separation technique require a physical or chemical change?
3. Was the sample a substance or mixture? Explain your reasoning.