7th Grade Worksheets

Follow along with your VSVS team using these sheets and info!

Chromatography Observation sheet

Name:_____

Chromatography Part I: Separation of Green Colors

1. What did the color change to when the yellow and blue solutions were mixed?

   _____

2. What happened to the marker's green color on the chromatography paper.

   _____

3. What can you conclude about the green ink? How many dyes are used to give it its color?

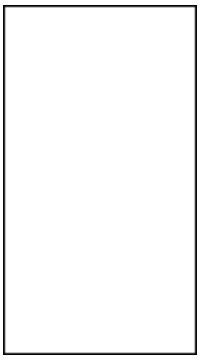
   _____

4. Which color traveled faster?

   _____

Chromatography Part II: Forensics Using Black Pens

5. Draw and label your results on the "chromatography paper" below. Include the initials of the suspect's pen on the diagram.



6. Is your chromatogram the same as those from other black pens?

   _____

7. Whose pen was used to write the ransom note?

   _____

Answers Chromatography Observation sheet

Name:_____

Chromatography Part I: Separation of Green Colors

1. What did the color change to when the yellow and blue solutions were mixed?
   _____green_____

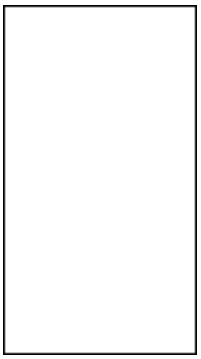
2. What happened to the marker's green color on the chromatography paper.
   _____separated into yellow and blue_____

3. What can you conclude about the green ink? How many dyes are used to give it its color?
   ___2 dyes_____

4. Which color traveled faster?
   _____blue_____

Chromatography Part II: Forensics Using Black Pens

5. Draw and label your results on the "chromatography paper" below. Include the initials of the suspect's pen on the diagram.



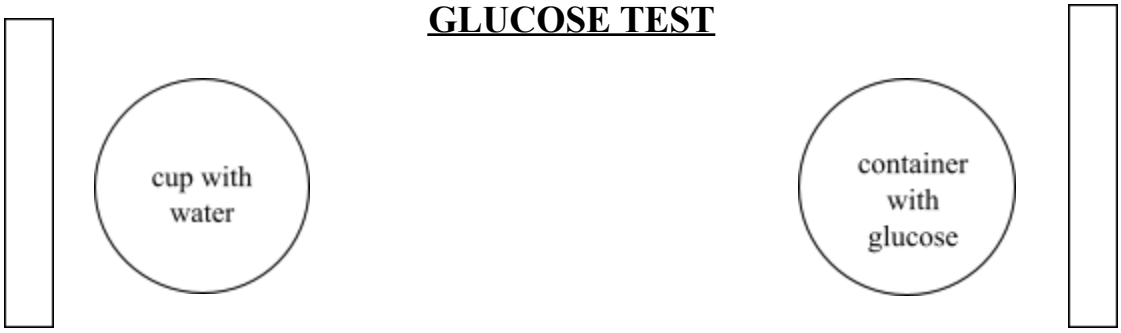
6. Is your chromatogram the same as those from other black pens?
   _____not all_____

7. Whose pen was used to write the ransom note?
   _____PC – Pam Chromatogram_____

Observation Sheet **Name** _____

Vocabulary Words: diffusion, osmosis, dialysis tubing, glucose, starch, iodine, semi-permeable membrane

GLUCOSE TEST



What color is the glucose strip after it is dipped in water?

_____

What color is the glucose strip after it is dipped in glucose solution?

_____

STARCH TEST

What color is the water after iodine is added?

_____

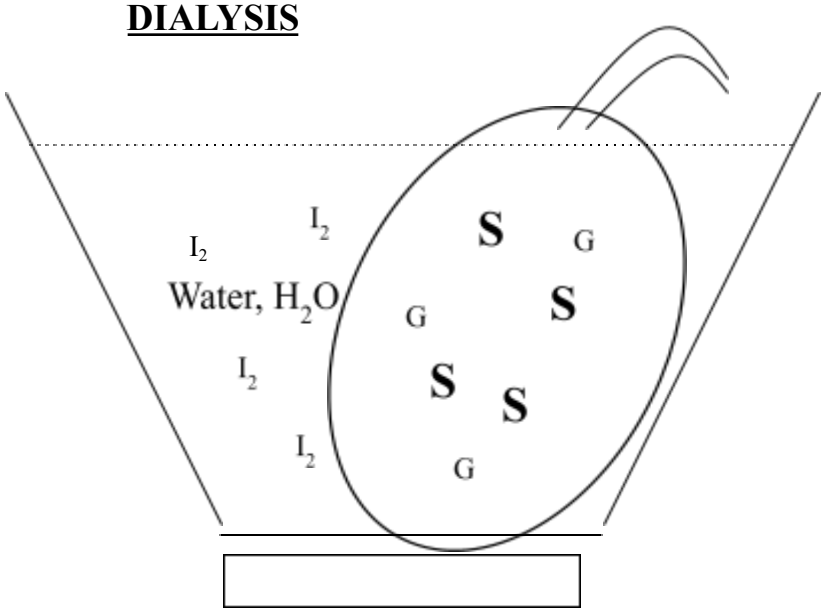
What color is the starch solution after iodine is added?

_____

Predict the Direction of Movement of the Molecules:

Remembering what size beans crossed the wire screen, predict which molecules will diffuse in what direction in the experiment. Draw arrows next to a starch (S), glucose (G) and iodine (I_2) molecule in the cup diagram below, to show the predicted diffusion direction.

DIALYSIS



TUBING TESTS

10 minutes after dialysis tubing is added to water: What is the color of the glucose strip when it is dipped into the liquid **closest to t**he tubing?

_____

5 minutes after the iodine is added: What is the color of solution **inside** dialysis tubing

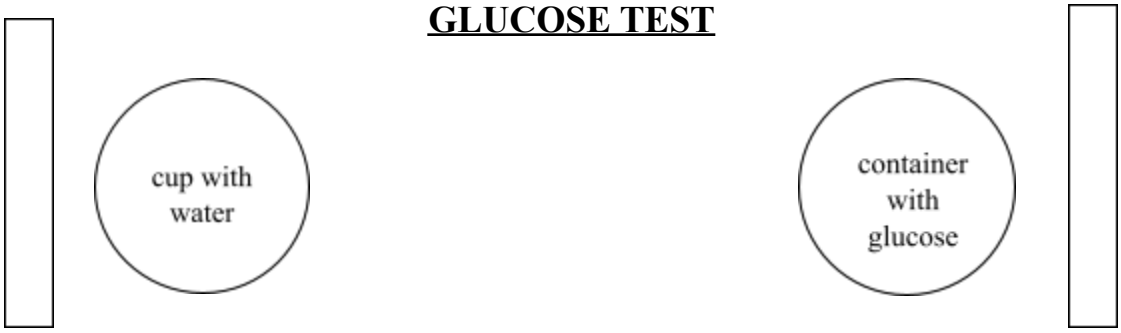
_____

Were your predictions for the movement of the molecules correct?

Observation Sheet - Answers Name _____

Vocabulary Words: diffusion, osmosis, dialysis tubing, glucose, starch, iodine, semi-permeable membrane

GLUCOSE TEST



What color is the glucose strip after it is dipped in water?
no color

What color is the glucose strip after it is dipped in glucose solution?
green

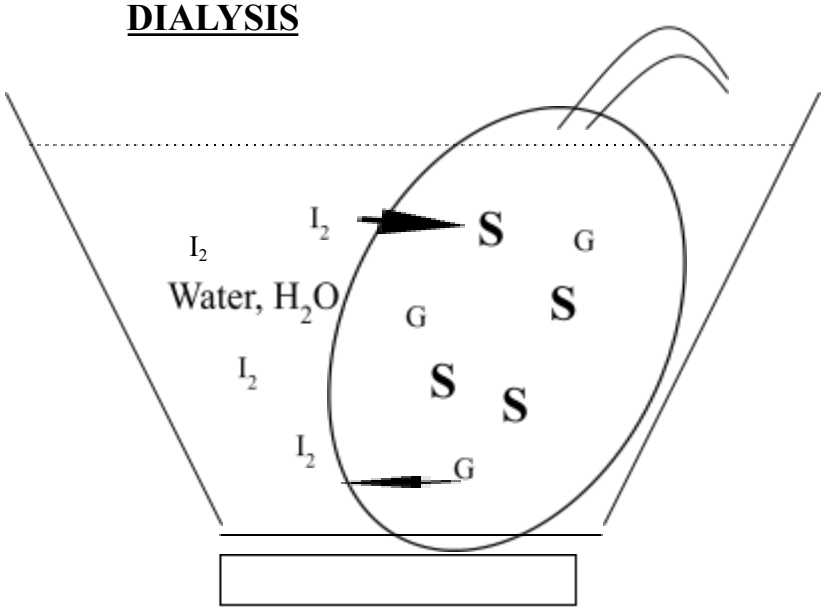
STARCH TEST

What color is the water after iodine is added?
pale yellow – the color of dilute iodine

What color is the starch solution after iodine is added?
Blue/Black

Predict the Direction of Movement of the Molecules:
Remembering what size beans crossed the wire screen, predict which molecules will diffuse in what direction in the experiment. Draw arrows next to a starch (S), glucose (G) and iodine (I_2) molecule in the cup diagram below, to show the predicted diffusion direction.

DIALYSIS



TUBING TESTS

10 minutes after dialysis tubing is added to water: What is the color of the glucose strip when it is dipped into the liquid **closest to t**he tubing?

_____

5 minutes after the iodine is added: What is the color of solution **inside** dialysis tubing

_____

Were your predictions for the movement of the molecules correct?

Conductivity Observation Sheet

Name _____

A. Testing the Circuit.

What happens when you touch the ends of the red and black lead wires together?

_____

Explain_____

B. Conductivity Tests with Solids

Which of the following materials cause the LED to light up?
Circle your answer.

iron nail	bright light
plastic bottle cap	no light

On this basis, what material has metallic bonding?

Which material is a molecular compound?

C. Conductivity Tests with Solutions

Which of the following solutions makes the LED glow brightly, dimly, or not at all?
Circle your answer.

1. distilled water	no light,	dim light,	bright light
2. sugar plus water	no light,	dim light,	bright light
3. glucose plus water	no light,	dim light,	bright light
4. sodium chloride plus water	no light,	dim light,	bright light
5. sodium bicarbonate plus water	no light,	dim light,	bright light

On the basis of the above results, which materials are ionic compounds?

_____

Which materials are molecular compounds?

_____

D. Testing the reaction of a polymer gel with ionic and covalent compounds

What happened to the polymer gel when the following were added?

1. Sucrose (sugar) _____
2. Glucose _____
3. Sodium chloride (table salt) _____
4. Sodium bicarbonate (baking soda) _____

On the basis of the above results, which materials "extract" water from the gel (the ionic or covalent compounds)?

_____

Conductivity Answer Sheet

A. Testing the Circuit.

1. What happens when you touch the ends of the jumper cables together?
   The LED lights up.

Explain: **Touching the ends of the leads together completes the circuit.**

B. Conductivity Tests with Solids

Which of the following materials cause the LED to light up?
Circle your answer.

1. iron nail	bright light
2. bottle cap	no light

On this basis, what material has metallic bonding? – iron nail
Which material is a molecular compound? Plastic cap

C. Conductivity Tests with Solutions

Which of the following solutions makes the LED glow brightly, dimly, or not at all?
Circle your answer.

1. distilled water	no light
2. sugar water	no light
3. glucose plus water	no light
4.. salt water	bright light
5. sodium bicarbonate plus water	dim light

On the basis of the above results, which materials are ionic compounds?
Sodium chloride and sodium bicarbonate
Which materials are molecular compounds
distilled water, sugar and cornstarch

D. Testing the reaction of a polymer gel with ionic and covalent compounds

What happened to the polymer gel when the following were added?

1. Sucrose (sugar)	nothing
2. Glucose	nothing
3. Sodium chloride (salt)	gel becomes watery
4. Sodium bicarbonate	gel becomes watery

On the basis of the above results, which materials "extract" water from the gel?
The ionic compounds, sodium chloride and sodium bicarbonate