

Colored Water Experiment

1. This Experiment will take several days.
2. Place 2 drops of food coloring into the bottom of one of your petri dish.
3. Fill your beaker with water.
4. Pour water into the bottom of the petri dish so that is $\frac{3}{4}$ full and stir the food coloring.
5. Label and put on shelf.

Salt Water Experiment

1. This Experiment will take several days.
2. Place a spoonful of salt into the bottom of another petri dish.
3. Pour water into the bottom of the petri dish so that it is $\frac{3}{4}$ full and stir the salt water.
4. Label and put on shelf.

Sugar Water Experiment

1. This Experiment will take several days.
2. Place a spoonful of sugar into the bottom of another petri dish .
3. Pour water into the bottom of the petri dish so that it is $\frac{3}{4}$ full and stir the sugar water.
4. Label and put on shelf.

Collecting and Presenting Data

Colored Water Experiment Observations

1. After 24 hours, what does your petri dish look like? _____

2. After 48 hours what does your petri dish look like? _____

3. After 72 hours what does your petri dish look like? _____

Salt Water Experiment Observations

1. After 24 hours, what does your petri dish look like? _____

2. After 48 hours what does your petri dish look like? _____

3. After 72 hours what does your petri dish look like? _____

Sugar Water Experiment Observations

1. After 24 hours, what does your petri dish look like? _____

2. After 48 hours what does your petri dish look like? _____

3. After 72 hours what does your petri dish look like? _____

Analyzing and Interpreting Results

Colored Water Experiment

1. What was the final condition of each portion of your petri dish? _____

2. Why was your petri dish in this condition? _____

3. Were you able to separate the food coloring and water? _____

4. Food coloring and water is an example of a _____ (Compound/Mixture)

Salt Water Experiment

1. What was the final condition of each portion of your petri dish? _____

2. Why was your petri dish in this condition? _____

3. Were you able to separate the salt and water? _____

4. Salt and water is an example of a _____ (Compound/Mixture)

Sugar Water Experiment

1. What was the final condition of each portion of your petri dish? _____

2. Why was your petri dish in this condition? _____

3. Were you able to separate the sugar and water? _____

4. Sugar and water is an example of a _____ (Compound/Mixture)

True/False

1. A ratio of the parts of a mixture are exact. _____

2. A ratio of the parts of a compound are exact. _____

3. The parts of a mixture keep their properties. _____

4. The elements of a compound keep their properties. _____

5. Hydrogen is a compound. _____

6. Water is a compound. _____

Mixture or compound

1. Properties Change _____

2. Properties don't change _____

3. Energy not taken or given off _____

4. Energy always taken or given off _____

8.2P.1 Compare and contrast physical and chemical changes and describe how the law of conservation of mass applies to these changes.

Iron & Sugar

Mixture or Compound? Or Both?

Frame the Investigation

Question: When sugar and iron are combined, is a compound or mixture formed?

Hypothesis: _____

Designing the investigation

1. Place a 1/3 of a spoonful of sugar in a Aluminum Cup.
2. Place 1/3 of a spoonful of iron filings in a Aluminum Cup.
3. Stir them together with a stirring stick.
4. Make sure that your magnet is in a plastic bag.
5. Hold your magnet in the mixture. Move it around and lift the magnet.

Collecting & Presenting Data

1. Could you tell the difference between the sugar and the iron before using the magnet? _____
2. The magnet lifted the? _____
3. The magnet didn't lift the ? _____
4. Were you able to separate the iron from the sugar? _____
5. Did the properties of iron change? _____
6. Did the properties of sugar change? _____
7. Was a new product formed? _____
8. Did a chemical reaction take place? _____

Analyzing & Interpreting Results

1. Iron filings & sugar together make a _____ (Compound/Mixture)
2. Was your Hypothesis correct? _____

Sugar & Iron Heated Experiment 2

Frame the Investigation

Question: When sugar and iron filings are combined, then heated, is a compound or mixture formed?

Hypothesis: _____

Designing the investigation

1. Wear Goggles.
2. Add a 1/2 spoonful of sugar and empty plastic bag into aluminum Cup.
3. Mix/stir.
4. Hold the aluminum cup with your test tube clamps over lit alcohol burner until the sugar melts. (30 seconds)
5. Remove the cup from the flame and extinguish the alcohol burner.

6. Raise your hand and I will come by and make sure that the contents of your cup is not on fire.
7. Allow the cup to cool for 2 minutes.
8. Examine the substance in the cup . Put the magnet in the cup and see if you can attract anything.

Collecting & Presenting Data

1. Could you tell the sugar from the iron filings after being heated? _____
2. Did the magnet lift the iron filings, the sugar or neither? _____
3. Did the properties of the iron change? _____
4. Did the properties of the sugar change? _____
5. Was a new product formed? _____
6. Did a chemical reaction take place? _____

Analyzing & Interpreting Results

1. Sugar and iron filings heated together make a _____
(Compound/Mixture)
2. Was your hypothesis supported? _____