A Matter of Mixtures

Engage

Materials: Bag of Chex Mix per table, paper towel

What To Do:

1. Open the bag and pour the contents on to the paper towel.
2. Separate the contents into different piles.
3. In the chart below, make a sketch of each different type of ingredient in the correct column and place the number of pieces of each type in the correct column.

Sketch	Number

Explore

Materials: cups or beakers, salt, water, oil, vinegar, dry lemonade mix, sand, marbles, BBs, spoon.

What To Do:

Activity 1 _____

1. Fill one of the cups or beakers half full of water.
2. Place a half a spoonful of salt in the water and stir.

Questions:

1. Can you still see the salt?

2. What happened to it?

3. Could you easily get the salt out of the water?

Activity 2 _____

1. Fill another cup or beaker about half full of water.
2. Pour the oil in the cup with the water and stir with the spoon.

Questions:

1. Can you still see the oil?

2. What happened to it after you stirred it?

3. Could you easily get the oil out of the water?

Activity 3 _____

1. Fill another cup or beaker about half full of water.
2. Place a half a spoonful of the dry lemonade mix in the water and stir.

Questions:

1. Can you still see the dry mix of the lemonade?

2. What happened to it?

3. Could you easily get the dry mix out of the water?

Activity 4. _____
1. Fill another cup or beaker about half full of water.
2. Place a spoonful of sand in the water and stir.

Questions:
1. Can you still see the sand?

2. What happened to it after you stirred it?

3. Could you easily get the sand out of the water?

Activity 5. _____
1. Place some marbles in a cup or plastic beaker.
2. Place some BBs in the same cup.
3. Stir them around with the spoon.

Questions:
1. Can you still see the marbles?

2. Can you still see the BBs?

3. What happened to them after you stirred them around?

4. Could you easily separate the BBs and marbles?

AFTER completing the Explain activity go back to each part of the activity above and determine which is a mixture and which is a solution.
Write your idea on the line after the Activity number.

Explain
Directions: Cut the foldable out and glue it in your notebook. Work with your teacher to write the meanings of the two words.

Mixtures and Solutions	
HOMOGENEOUS	**HETEROGENOUS**

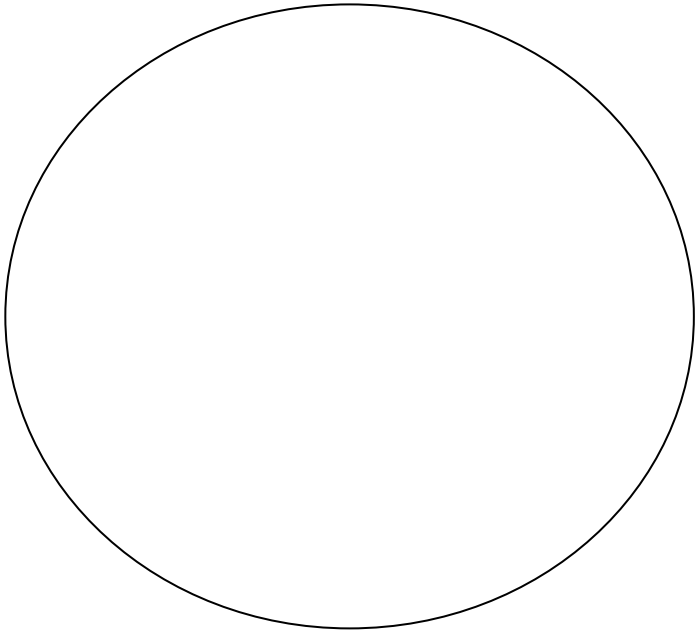
Cut out the boxes below and work with your teacher to place them in a T-Chart to describe Mixtures and Solutions.

Easily separated.		**Made by mixing substances together.**
Not easily separated		**Made by dissolving one substance in another.**
Homogeneous		**Each keeps its physical properties.**
Heterogeneous		**Doesn't maintain its physical properties.**

Elaborate

Air is a mixture of several elements and compound in a gaseous form. The various gases in the air vary from time to time and place to place. To show the amounts of the gases that are in the air, put the following information into the circle graph below.

Nitrogen	N	78%
Oxygen	O	20%
Argon	A	1%
Carbon Dioxide	CO_2	.03%
Neon	N	trace
Helium	He	trace
Krypton	Kr	trace
Xenon	Xe	trace
Radon	Rn	trace
Water Vapor	H_2O	trace



Question:

1. Why is air considered a mixture?

Evaluate

Name _____ period. _____

Exit Ticket

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Directions: Determine if the following statements are True or False. Place a T for True and an F for false in the box.

1.	A mixture can usually be separated easily.
2.	A solution can usually be separated easily
3.	A mixture is usually considered heterogeneous.
4.	A solution is usually considered homogenous.
5.	The different parts of a mixture usually keeps its physical properties.
6.	The different parts of a solution do not maintain its physical properties.
7.	A mixture is made by mixing substances together.
8.	A solution is made by dissolving one substance in another.