

Mixtures and Solutions
Layered Curriculum Unit

Partially Meets Layer: You must complete 50 points worth of activities to move on to the Meets Layers.

Listen to the How Stuff Works videos on mixtures and solutions and answer the following: Tell me one thing you learned, one thing you already knew and one questions that you have after viewing the video. (10 points) ___/___

Using the quizlet website <http://quizlet.com/7695209/mixtures-and-solutions-flash-cards/> complete the learn or test option then complete one of the games. (10 points) ___/___

List five facts each about Robert Boyle and Marie Curie. (10 points) ___/___

Make a list of 5 occupations that require knowledge of properties and mixtures and list how the occupation applies to this knowledge. (5 points) ___/___

Read, write an outline and draw a chapter cover about the article A Salty Story p. 7-10. (5 points) ___/___

Explain why humans have taste buds, draw and label a tongue map.(10 points) ___/___

Research the following materials and answer the questions: (10 points) ___/___

Diatomaceous Earth- Where does it come from? Where is it used?

Sodium Chloride- What is it? Where does it come from and how is it made?

Baking Powder- What are the ingredients in baking powder, how does it react with water?

Baking Soda- What are the ingredients? Compare and contrast to baking powder. How does it react with water?

How do they get the fizz in soda? Research the history of soda. When was the first soda made and how was it discovered, etc. Write a two paragraph analysis.(10 points) ___/___

Meets Layer: Choose one assignments worth up to 20 points.

This assignment involves two people; one person becomes Robert Boyle known as the father of chemistry and the other person becomes Marie Curie known for being involved in chemistry and physics. Each person develops 10 interview questions they will ask the other persons character. ___/___

Determine how many grams of salt can dissolve in 25 ml of water. Defend your explanation in writing. ___/___

Write a comic strip involving mixtures and separating mixtures. ___/___

Use the template to create a fake facebook page for a well known chemist. ___/___

Exceeds Layer: Choose one assignment worth up to 30 points.

Now take the questions you developed in the Meets layer involving Robert Boyle and Marie Curie, give the questions to the person portraying the character so they can research the answers. Once the research is complete perform your interviews in costume (optional) for the class and / or video tape them. ___/___

Research the effects of having salt in your body. How is it absorbed? Is it healthy or unhealthy? Write a five paragraph essay about this topic. ___/___

What is the difference between salt and salt substitutes? Does it absorb in water the same way? Conduct an experiment and document your results. ___/___

Design your own experiment that shows the separation of mixtures. All experiments must be approved prior to starting. You must write the objective of your experiment, have a materials list, and write step by step directions on how to complete the experiment. In order to receive full credit, the lab needs to be tested and performed in front of the class. ___/___