

Volcano Eruption Scene

Kindergarten

Testable Question: 5 pts - The testable question should ask a specific, measurable, cause and effect question.

When pigment material was poured into water, what happened? Do they mix?

When oil was poured into water, what happened? Do they mix?

When an effervescent tablet was dropped into water, what do you see? Does it melt?

How does pigment material affect with water?

How does oil affect with water?

How does an effervescent tablet affect with water?

Prediction: 5 pts - The prediction should highlight a reasonable outcome based on a specific change.

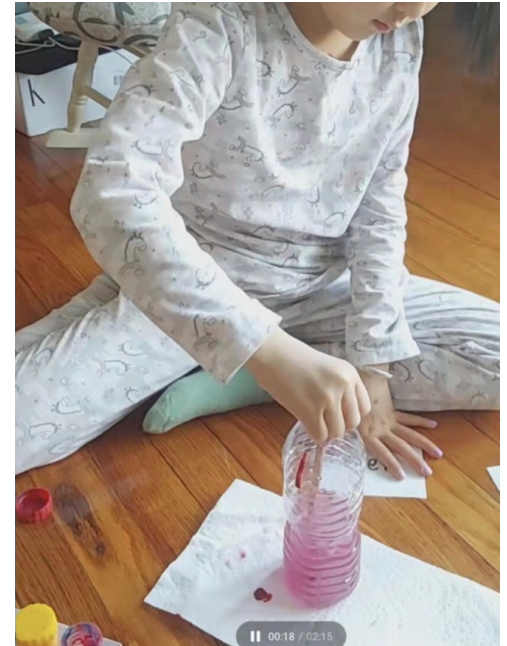
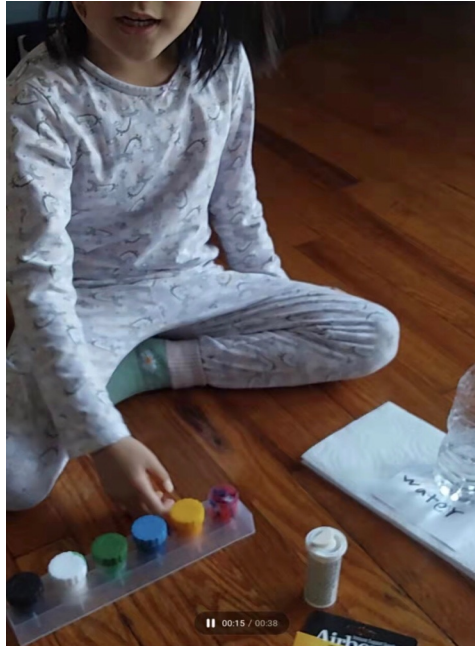
I think pigment material and oil could mix with water, because paint material and oil are the same as water, they are liquid, and they can flow. The effervescent tablet will melt in water, because it just like a kind of solid like I used to have, which is easily melt in water.

Procedure: 5pts - Describe the step-by-step process you have planned in a way that someone else could repeat the same process. Be detailed and as clear as possible. Use as many or as few steps as you need.

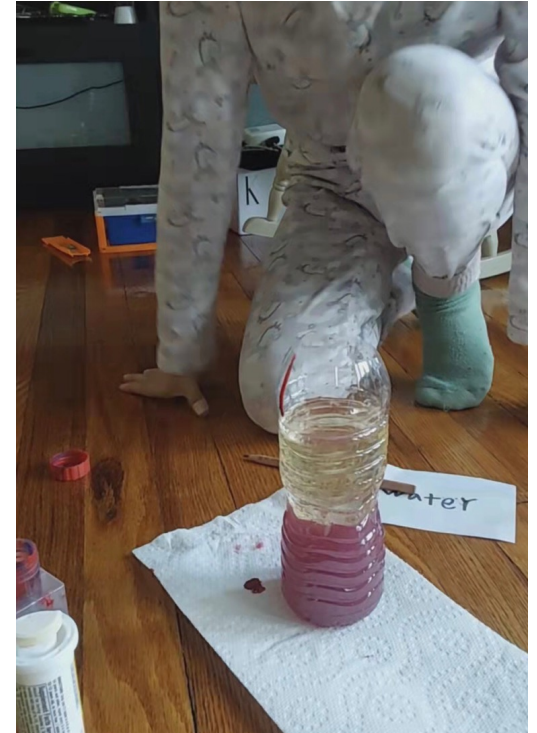
1. Prepare all materials needed: a half bottle of water, a half bottle of oil, a few red pigment material, a box of effervescent tablets, a stirring stick and a pair of safety goggles.



2.Put some red pigments into a half bottle of water, using the stirring stick to mix pigments and water. Leave the water for a while, and check water color change into red.



3. Pour oil into water bottle, stir with stick and stand for a while, check how the oil-water separation is happening.



4. Put effervescent tablet into water bottle, then see what happens.



Background: 5 pts - Describe why this project was selected and share what you found out in your research. Explain why this project is important.

I chose this project because I saw an experiment video like this on my mom's phone, it looks very funny.

In my research I found out that oil and water are incompatible, paint pigment and water are compatible, and effervescent tablets could be dissolved in water, at the same time, it releases some bubbles.

This project is important because it helps me to understand oil is lighter than water, it can float on water, and when effervescent tablet dissolves in water, it can release bubbles.

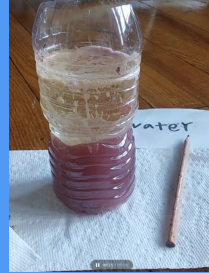
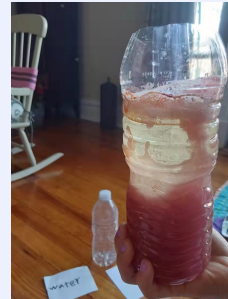
Constant Conditions: 10 pts - Identify your independent variable, dependent variable, and constant conditions. Be sure to measure in metric measurements.

Independent Variable: I changed the quantity of effervescent tablet

Dependent Variable: the number of bubbles

Constant Conditions: the volume of water, oil and pigment materials

Data and Trials: 15 pts & 5 pts - Use photos, charts, graphs, or illustrations to

Half bottle water, half bottle oil, red painting pigment, one effervescent tablet	Less bubbles	
Half bottle water, half bottle oil, red painting pigment, half effervescent tablet	More bubbles	
Half bottle water, half bottle oil, red painting pigment, one and half effervescent tablets	Lots of bubbles	

Conclusion and Reflection: 10 pts - Share what you learned. Were there any surprises? What would you do differently or to continue the project?

I found out that oil can not compatible in water, I saw a scene of the oil-water separation, and an effervescent tablet was dissolved in water, which released a lot of bubbles. Bubbles passed through the water layer and the oil layer, reached the top of the oil layer and then slowly fell down through the oil and water to the bottom.

I was surprised that more tablets were dropped in water, more bubbles rose upwards. The bubbles rose from the bottom to the top, just like seeing volcanic eruption, that is interesting.

I did this project again on following weekend, and changed the color of pigments, also the quantity of effervescent tablet.