



Science At Home

Distance Learning Packet Days 22-31

April 27-May 8

The last packet of the a Year

With Adult Supervision try out some of the at home experiments in the learning menu attached to conduct some experiments at home.

Follow the Scientific Method Steps:

- Make a hypothesis about what think will happen.
 - Conduct your experiment.
- Use your observation skills and collect your data.
- Publish your results by writing a summary to send to me (pictures would be great too).

For your results think about things like: What did you think would happen? What happened? If you conducted this experiment again would you change anything? What could you change in the experiment to test something similar?

If you have internet access: Here are a few sites that you can check out for examples or inspiration for other at home experiments.

Emily Calandrelli (the host of Xploration Outer Space and a WVU graduate)

<https://www.youtube.com/spacegal>

Sick Science with Steve Spangler <https://www.youtube.com/channel/UCDom90xOqP4avehFjSJO6NA> or <https://www.stevespanglerscience.com/lab/experiment-library/>

Flinn Science at Home <https://www.flinnsci.com/athomescience/>

If you do not have the supplies available to complete these experiments, an alternative choice board is also provided. You may use any variation of the two choice boards provided as long as you complete one assignment per day.

Experiments Choice Board

<p>Is it a Liquid or a Solid?</p> <p>Make Oobleck by mixing cornstarch and water.</p> <p>Sometimes Oobleck acts like a solid and sometimes it acts like a liquid (this is called a non-Newtonian fluid).</p>	<p>Twirly Birds</p> <p>Learn how helicopters stay afloat by making a Twirly Bird using paper and paperclips; find a template at https://www.scientificamerican.com/article/make-a-whirlybird-from-paper/</p>	<p>Bubble Science</p> <p>Make bubble solution using dish soap and water. You can try 1 ½ cups of H₂O to ½ cup of dish soap but there are lots of other recipes out there. Try adding 2 teaspoons of sugar to the bubble solution, did it give you different results?</p>	<p>Color Changing Milk</p> <p>Pour ¼ of an inch of milk into a pie plate, after letting the milk settle add one drop of food coloring to the center of the plate (you can try several colors at once). Touch the center of the plate with a cotton swab, what happened? Now dip the cotton swab in liquid dish soap and try again, any change?</p>	<p>Combine Baking Soda and Vinegar for a chemical reaction; if you want less mess place the vinegar in a bottle and add the baking soda to a balloon, cap the bottle with the balloon and you can capture the gas released.</p> <p>When combined:</p> <p>Vinegar (acetic acid) and Baking Soda (sodium bicarbonate) release Carbon Dioxide (CO₂)</p>
<p>Stack Liquids</p> <p>Make a 7 layer Density Column using liquids you probably have at home. Directions at https://www.stevespanglerscience.com/lab/experiments/seven-layer-density-column/ your family will think it's magic!</p>	<p>Matchbox Car Lab</p> <p>Build a matchbox car ramp with materials you have at home (maybe legos) and measure the distance a car travels compared to the height of the ramp. Record your results.</p>	<p>Invisible Ink</p> <p>Squeeze a little lemon juice in a bowl with a few drops of H₂O and mix. Dip a cotton swab into the mixture and then write a message on white paper then wait for the message to dry. Once you are ready reveal your message just heat it up by holding it close to a light bulb.</p>	<p>Make a Homemade Lava Lamp or Sensory Bottle</p> <p>You'll need a plastic bottle, vegetable oil, water, food coloring to make a sensory bottle. To turn it into lava lamp by an Alka Seltzer tablet.</p>	<p>How Strong is Soda?</p> <p>Clean something using Coke/Pepsi (old pennies, toilet bowls)</p> <p>Soda is really acidic!</p> <p>Do different types of soda give you the same results?</p>
<p>Coke and Mentos</p> <p>See what type of physical reaction when Mentos are added to a bottle of soda. Do different types of soda cause a different reaction? This one is messy so try it outside.</p>	<p>Bendable Bones</p> <p>Place a chicken bone in vinegar for a few days and see what happens.</p>	<p>Rain Gauge</p> <p>Put out a container to collect rain water and measure the amount of rainfall for a few days. Use the rainwater to water your plants.</p>	<p>Make Slime</p> <p>There are so many recipes out there for different recipes out there. What is your favorite type of slime? Send me the recipe.</p>	<p>Galaxy in a Jar</p> <p>Simply layer cotton balls, acrylic paint, water, and glitter in a jar. Be prepared it takes a lot of cotton balls.</p>
<p>Make a rainbow</p> <p>Use a cup of water, a flashlight, and a piece of white paper or a prism if you have one.</p>	<p>Bounce an Egg?</p> <p>Soak an egg in vinegar for a few days and see what happens.</p>	<p>Add a little milk to a bottle of coke/pepsi then seal it up and let it sit for a few hours and see what happens. The reaction between the acid in the soda and the calcium in the milk will surprise you.</p>	<p>Set up a sundial and observe the changes throughout the day (this can be a paper plate with an upright block on it)</p>	<p>See How Germs Spread</p> <p>Add lotion and glitter or flour to your hands then shake hands with your family, touch commonly touched items like doorknobs to see how easily germs can spread.</p>

8th grade Science

Miss Collett

Learning Menu alternative option for days 22-31

Practicing Observation

This week's assignment is to be an at home scientist. One of the most important skills that scientists use each and every day is accurately recording observations, so we are going to focus on this skill. Remember observations are information you gather with your senses (see, hear, smell, taste, touch).

Spring is starting to arrive and because our lives have slowed down a bit we plenty of time to observe the signs of its arrival. Keep your eyes and ears open and make some observations in your own back yard **email me your observations or better yet send me a photo**. There are some rainy day/inside options too. If you do not have internet access please just write down your observations.

Observe and identify a spring bird.	Listen to the sound of spring rain; describe how those raindrops move through the water cycle.	Watch a Brain Pop video on Rachel Carson the author of "Silent Spring".	Look for buds growing on a tree or bush; Try to identify the type of tree.	Write down the times for sunrise and sunset for today and compare it to tomorrow's times.
Take a look at the WV DNR site; did you find out anything interesting.	Locate and identify a spring flower.	Plant Something. What did you plant?	Observe an insect; record any observations you make. What insect did you study?	Enjoy the spring time delicacy ramps; what do they smell/taste like?
Have you smelled freshly cut grass yet? If so record when and where.	Go out and enjoy the sun, how did it make you feel? How long does it take the sunlight to reach us here on Earth?	Listen to the "spring peepers" when and where you heard them.	Watch a live zoo cam for 10 minutes; record what you observed. What animals did you look at?	What was the average rainfall for March; how does that compare to last year?
Observe a rabbit or squirrel; document your observations.	Take a walk; look for signs of spring, what did you see/smell/hear?	Learn about WV Golden Rainbow trout; what is special about them? How did the first appear?	Write down the daily temperature for today and compare it to the average daily temperature.	Listen to the sound of birds chirping; when and where did you hear it?