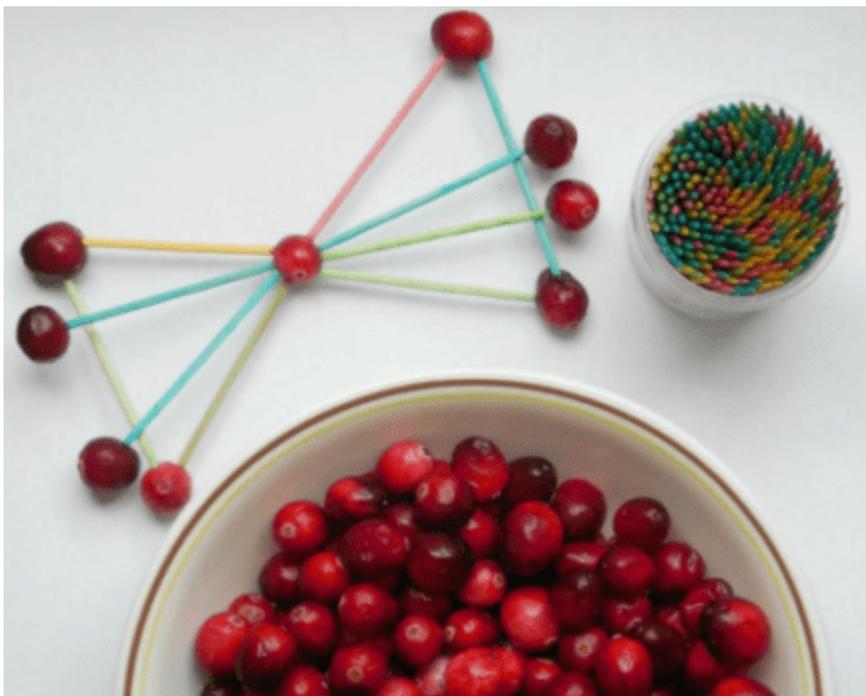


With the kids home from school during the Fall holiday, now is a great time to bond with your little ones (or adults after some drinks) over some fun activities. These fun and easy Fall Science Activities great for the whole family, and are sure to bring holiday cheer!

Here are 5 Fun and Easy Fall Science Ideas

Cranberry Raft Engineering Challenge



Fall is cranberry season, which means they're ready to eat... or do a fun science experiment with! Fun Fact - cranberries are buoyant and will float in any amount of water, which makes them the perfect tool for creating a gorgeous red raft.

In this open-ended engineering design challenge, they will build a raft using cranberries and tooth picks to test to see how much weight the raft can hold without sinking. You can allow the use of as many materials as desired. Or, you can put limits on the materials, for example: “Using 10 toothpicks and 15 cranberries, build a raft that holds at least 10 quarters without sinking.”

It is also fun to allow a free build first, and then begin adding challenges later. This gives kids a chance to explore and understand the materials and their limits before designing a raft to specifications. A professional engineer would understand the materials before going into the design process or would test them through the design process, just like this!

For more on this Science challenge, visit [here](#).

Homemade Butter in a Jar



This idea might be one of the most simple ones on the list, but it is also the tastiest and can even be shared at a holiday dinner! To make a small amount of butter, you really only need two things - heavy cream and a clean jar. Fill your jar half full with the heavy cream and tightly replace the lid. Now, you are ready to shake! And shake some more - shake, shake, shake!!! (refrain from shaking it like a polaroid picture though).

Stop every once in a while to check the progress. You should start to see a little ball forming. When it seems to stop growing and the liquid looks thin, you are done! Take the butter out of the jar and place it on a dish or another container. The remaining liquid is now buttermilk. You can save the buttermilk in the refrigerator for a recipe if you would like.

For a little science behind the experiment, the butter is created when the fat in cream starts to stick together. Small amounts of fat cells in cream and milk are held together by a tight

membrane. Under normal conditions, these membranes keep fat cells from grouping together to form large globs. When the cream is agitated by the shaking of the jar, the fat cells bump against each other and the membranes burst. This frees the fat cells to clump together to form large globs and finally a large clump of butter.

Tracing Veins of Leaves



Depending on where you live, most trees have begun to change colors and are absolutely beautiful to walk around and see. Take your loved ones on a brisk fall walk around your neighborhood and collect some of these colorful leaves. Once the leaves are back at home and

the kids have picked their favorite ones, bring out the paint and crayons and let them trace the veins. It makes a very unique piece of art as well as teaches kids to take a closer look at everyday things around them. Take this activity a step further and use it to teach kids about the biology of a tree.

For more info on this Science experience, visit [here](#).

Magic Dancing Corn



This is the perfect Fall Science experiment if you are already in the kitchen and want to

show the kids a fun chemical reaction while you're waiting for you pie to finish baking.

This dancing corn experiment can get a bit messy, but in a fun way! Make sure to have a surface or area you can easily clean up. It is recommended to start by placing your glass or jar in a pie dish or on a cookie sheet to catch the overflow. Everything you need is most likely already in your pantry!

Ingredients:

- Tall Jar or Glass (mason jars work well)
- 1/8-1/4 cup of popping corn
- 2 tbsp. of baking soda
- 1 cup of vinegar (use as needed)
- 2 cups of water

Steps:

1. Fill the jar with 2 cups of water.
2. Add 2 tablespoons of baking soda and stir well to mix thoroughly. To make it a little more fun, add a drop of food coloring (this is optional though).
3. Add the popping corn kernels or popcorn. You don't need to add too many for a fun dancing effect. This is a perfect opportunity to talk about predictions and have your kids guess what they think will happen when the vinegar is added.
4. The fun part of the dancing corn activity: adding the vinegar! Add the vinegar slowly for a controlled eruption, and faster if you want it to be slightly more chaotic.

Chemistry is all about states of matter including liquids, solids, and gasses. A chemical reaction occurs between two or more substances that change and form a new substance. In this case, you have an acid (liquid: vinegar) and a base (solid: baking soda) when combined make a gas called carbon dioxide which produces the eruption you can see as well as the dancing action.

The secret to the magic dancing corn is the baking soda and vinegar chemical reaction. The carbon dioxide bubbles lift the corn, but as the bubbles pop, the corn falls back down! You can repeat this experiment over and over again.

Bending Bones



This experiment is perfect for mini archeologists and future doctors! Wash leftover bones from your holiday turkey or chicken dinner and get a jar. Fill the jar with vinegar, put the bones in, and let them sit for at least one week. Then, rinse them off and see if the bones will bend! The bones that were in vinegar bend because the calcium carbonate in the bones reacted with the vinegar. This experiment shows how bones need calcium to stay strong so

they don't break (or bend) easily. We don't want bendy bones!

We hope you enjoy spending some quality fun learning time with your family this Fall, happy experimenting!

For more fun and easy science activities to do with kids, check out our article, "Fun Kid Friendly Science Activities: A Chemist's Guide for Cooped Up Kids".

Fun Kid Friendly Science Activities: A Chemist's Guide for Cooped Up Kids

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