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Got Science? Club

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NEBRASKA HONORS PROGRAM
CLC EXPANDED LEARNING OPPORTUNITY CLUBS
INFORMATION SHEET

Name of Club: Got Science? Club

Age/Grade Level: Grades Kindergarten-3rd

Number of Attendees: 12-15

Goal of the Club: *(learning objectives/outcomes)*

The goal is to expand the students' knowledge on multiple basic science principles by participating in hands-on experiments.

Resources: *(Information for club provided by)*

University of Nebraska-Lincoln Honors Program

Content Areas: *(check all that apply)*

- Arts (Visual, Music, Theater & Performance)
- Literacy
- STEM (Science, Technology, Engineering & Math)
- Social Studies
- Wellness (Physical Education, Health, Nutrition & Character Education)

Outputs or final products: *(Does the club have a final product/project to showcase to community?)*

There is no final product. Some of the experiments will be able to be taken home.

Introducing your Club/Activities:

Got Science? Club allows young students to learn the basics of multiple fields of science by doing hands-on experiments.

General Directions:

Every day we start with an ice breaker. We then begin our experiment for the day. Once completed, I give the basics to the science behind the experiment.

Tips/Tricks:

Try to have students work together in pairs or groups to minimize the amount of experiments going on and to be able to help more students.

Try to perform experiments that don't have too many materials or steps to make things more organized and simpler for a group of such a young age.

LESSON PLAN WORKSHEET

(copy table as needed)

Lesson Activity Name: Dancing Raisins

Length of Activity: 25 minutes

Supplies: Clear cups, Sprite soda, raisins, water

Directions:

Step 1: Fill a cup with water and place a handful of raisins in it. Observe what happens.

Step 2: Fill a cup with Sprite and place a handful of raisins in it. Observe what happens.

<https://www.stevespanglerscience.com/lab/experiments/dancing-raisins-the-bubble-lifter/>

Conclusion of the activity:

The students were able to compare what happened with the raisins when they were put in the cup of water versus the cup of Sprite.

Parts of activity that worked:

The students were really excited about the raisins moving up and down in the cup. The experiment worked really well with the cup of Sprite.

Parts of activity that did not work:

Some of the students were somewhat frustrated with the water portion of the activity. They were upset that nothing happened.

Lesson Activity Name: Elephant Toothpaste

Length of Activity: 30 minutes

Supplies: One-liter bottles, safety goggles, funnels, 20 volume hydrogen peroxide liquid, dry yeast, water, liquid dish soap, plastic cups, plastic table covers, tablespoons, food coloring

Directions:

Step 1: Add 4 ounces of 20 volume hydrogen peroxide to the one-liter bottle.

Step 2: Add a squirt of dish soap and some food coloring to the bottle and swirl to mix the solution.

Step 3: Mix a package of dry yeast with 4 tablespoons of warm water in a plastic cup.

Step 4: Stir the yeast and water.

Step 5: Pour the yeast mixture into the bottle.

Conclusion of the activity:

The students watched the solution erupt into foamy “elephant toothpaste.” They learned the function of the dry yeast as a catalyst.

Parts of activity that worked:

The experiment erupted a significant amount, making the students extremely interested in the result and wanting to repeat it.

Parts of activity that did not work:

It became very messy.

Lesson Activity Name: Draw Yourself as A Scientist

Length of Activity: 30 minutes

Supplies: Markers, paper, crayons

Directions:

Step 1: Have the students draw what they predict they would look like as a scientist.

Step 2: Have them also draw a crazy experiment they would perform and to write a little prediction about it.

Step 3: Have the students share their drawings with the rest of the group after everyone is finished.

Conclusion of the activity:

The students were very excited to draw crazy versions of themselves as scientists doing crazy experiments.

Parts of activity that worked:

Some of the students were very creative and put a lot of thought into what they would be like as a scientist.

Parts of activity that did not work:

Some students didn't really seem to enjoy the activity much. They didn't put much effort into their drawings because they didn't seem interested and wanted to perform an experiment instead.

Lesson Activity Name: Shadow Art with Chalk

Length of Activity: 30 minutes

Supplies: Chalk

Directions:

Step 1: Take the students outside and have them stand on the sidewalk in an area where the sun is shining.

Step 2: Have them get into pairs and trace each other's shadows.

Step 3: Have them stand in different areas, facing different directions and trace their shadows again. Do this multiple times.

Step 4: Have them compare the size and shape of all of their shadows.

Step 5: Explain to them what causes a shadow and why shadows change as they stand differently.

Conclusion of the activity:

The students learned about sunlight and how it plays a role in creating shadows. They also learned about the ways in which shadows can change based on where you are relative to the sun and your surroundings.

Parts of activity that worked:

The students really enjoyed getting outside and using chalk.

Parts of activity that did not work:

Instead of focusing on tracing each other's shadows, some of the students just wanted to draw with the chalk.

Lesson Activity Making Whirligigs

Name:

Length of Activity: 30 minutes

Supplies: Paper, scissors

Directions:

Step 1: Cut out 3x14cm pieces of paper.

Step 2: Cut 1/3 of the way through the paper straight down the middle of the long side of the paper.

Step 3: Cut 1/3 of the way from the side at the very end of the previous cut you made.

Step 4: Do this on both sides of the previous cut.

Step 5: Fold both sides of the bottom section of the piece of paper that has not been cut toward the middle.

Step 6: Spread the two flaps at the top apart, making sure not to completely bend them.

Step 7: Fold a tiny part of the bottom section of the paper up, making a little hook.

Step 8: Drop the piece of paper high from the ground with the two flaps on top and observe how it falls.

<https://www.youtube.com/watch?v=B4Nxf6blzSE>

Conclusion of the activity:

The students made whirligigs and watched as they dropped them high off the ground.

Parts of activity that worked:

The students were really fascinated by how the whirligigs spun and flew down as they dropped them. They were amazed by how they were made simply from a piece of paper.

Parts of activity that did not work:

The different cuts were difficult to some of the students. A lot of assistance was needed by many of the students to ensure they made the whirligigs correctly.

Lesson Activity Mentos and Soda Geysers

Name:

Length of Activity: 30 minutes

Supplies: Different types of soda in 2-liter bottles, Mentos, paper

Directions:

Step 1: Take the Mentos and soda bottles to an open area outside.

Step 2: Have the students get into groups of no more than four people. Give each group one bottle of each type of soda.

Step 3: Instruct the students to roll up a piece of paper, leaving enough space for the Mentos to fit in the paper.

Step 4: Put 7 Mentos in the rolled piece of paper and gently drop them all into one of the soda bottles, trying to get them to all go in at the same time.

Step 5: Make sure to get a good distance away from the bottle right after dropping the Mentos to prevent from getting sprayed on.

Step 6: Repeat steps 3-5 for each type of soda and compare the geysers.

<https://www.stevespanglerscience.com/lab/experiments/original-mentos-diet-coke-geyser/>

Conclusion of the activity:

The students got to observe what happens when Mentos is dropped into different types of soda. The geysers differed with different types of soda, sparking more fascination than what was anticipated by exploding soda.

Parts of activity that worked:

All of the soda bottles formed good sized geysers that lasted a good amount of time. Rolling the paper also helped get all the Mentos into the bottle, causing the geysers to work well.

Parts of activity that did not work:

This experiment got kind of messy because some of the students didn't get far enough away from the geyser soon enough.
