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Summer 2021

STEM Afterschool Club - Lava Lamps

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NEBRASKA HONORS PROGRAM
CLC EXPANDED LEARNING OPPORTUNITY CLUBS
INFORMATION SHEET

Name of Club: STEM After School Club

Age/Grade Level: K – 4th

Number of Attendees: 20-25

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

Expand knowledge on science topics in an interactive and fun environment.

Resources: *(Information for club provided by)*

UNL Honors Program, Holmes and Calvert Site Coordinators/Resources

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?)*

Some of the activities produced a take home product, but some of them were simply observing a reaction.

Introducing your Club/Activities:

In the STEM After School Club, young students will learn about basic concepts in science through interactive and fun experiments.

General Directions:

We made it a point to respect the teachers present and the classrooms that we used. It was clear that students would only be able to have fun with the experiments if they paid good attention and did not distract those around them.

Tips/Tricks:

Have other teachers/aids assist with the experiments to make them run more smoothly. Make the club hands-on and fun – I found that the students learn better not from demonstrations, but from actually performing the experiments. Demonstrate the experiment and keep the children on track to not go over into the next activities time.

LESSON PLAN WORKSHEET

(copy table as needed)

Lesson Activity Lava Lamps

Name:

Length of Activity: 30 minutes

Supplies: Vegetable Oil, Alka-Seltzer, Food Coloring, Jar with lid

Directions:

Fill the jar $\frac{2}{3}$ with vegetable oil and $\frac{1}{3}$ with water. Add drops of food coloring. Add 1 Alka-Seltzer tablet to the jar - screw on lid fast. Watch the reaction occur, and discuss relevant information and concepts. Questions?

Conclusion of the activity:

All of the students understood what carbon dioxide was and what role it had in the lava lamps. They also understood density. They learned that the differences in density between the oil and water created a separation in the water which allowed the reaction to take place.

Parts of activity that worked:

All of the student's lava lamps reacted as expected; this created many happy students.

Parts of activity that did not work:

The green and blue food coloring worked much better than the yellow food coloring. Some kids did not get their lids screwed back on quick enough and made a mess. A couple of students also shook their lava lamps which made the reaction end sooner and yielded a less impressive result.
