Science Club for Girls

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King Open Science Club for Girls
Spring 2005 Newsletter

Dear Parents, Teachers, and King Open staff,

Do you wonder what goes on at 3pm on Tuesdays? Why there's the sound of bottle rockets, the smell of burning crayons and a bottle of purple cabbage juice in your fridge? Why girls are parading with crystals, worms, sprouts and solar ovens with left over s'mores? Well, don't worry; we're not causing too much havoc…But, we are having a blast exploring science!

Nearly 70 King Open girls are participating in the Science Club for Girls this Spring semester. So, we want to keep you informed of our goings-on. Therefore, the 8th grade Junior Assistants have written a short description of what exactly happens inside the Science Club for Girls on Tuesday afternoons. If you want to see for yourself…please stop by for a visit! We'd love to have you join us in seeing how much fun girls have exploring science!

Also, mark your calendars! You are all invited! To a discussion on "Gender and Science." The 8th grade Junior Assistants will be having a discussion with several female scientists on the reality and future of women in science. Given recent debates, we decided it was time to allow Science Club for Girls a chance to express their opinion and to discuss the possibilities for the future. Come see the 7th and 8th grade science exhibits and then join our scientists for this discussion.

What: Panel discussion on **"Gender and Science"** with our 8th grade JAs and female scientists
When: Tuesday, April 26th from 4:30pm to 5:30pm
Where: The **King Open school**…see signs for exact location

Thanks for all your support in making Science Club for Girls a success at the King Open!

Learning about Growth and Change with Kindergarteners:

Hi, our names are Courtney Johnson, Toni Ellis, and Kiara Barros and we are 8th grades at, of course, the King Open School. We are the JA's for the kindergarten group.

The theme of our kindergarten Spring Science Club session is growth, change, and learning what a scientist does. We started the semester by asking the girls what they thought scientists were and what they do. We also measured each girl to compare their growth. Next, we looked at shapes through bubbles to see how shapes can change. We made bubble wands out of pipe cleaners and went outside to blow bubbles.

Next, we went back to learning about growth by comparing plant growth with human growth and by planting beans for observation. We want the girls to walk away with an idea of what growth and change is. After the session, we will observe the planted beans and study how red worms are related to decomposition…yet another form of change.

Our work as JAs includes picking up the kindergartners, if the aren't already there. When we are gathered at the table, we pass out snack. When we begin the activity, we try to make it as fun a possible by playing and talking to them. At the end of our session, we ask the children what they know about the subject we just covered, what they are learning, and what they learned. The JAs also do the general cleaning such as wiping down tables,

sweeping floors, picking up trash, and organizing the room. At the end we take the kindergarteners where they need to go, while the volunteers bring the box of supplies to the cafeteria, where we all brainstorm for the next Science Club session.

Written by Courtney Johnson, Kiara Barros, and Toni Ellis

1st & 2nd grade: Mapping the Human Body

Have you ever seen a map of the world? Probably so. But what about a map of the human body? This session the 1st and 2nd grade girls in Girls Science Club are making maps of their bodies.

In the first class we traced each girl's body twice. One body would be a map of the outside, with clothes, eyes, and fingerprints. The other body would be a map of their insides, with their hearts, lungs, bones, and veins.

Each class afterwards focuses on a different part of the body, which the girls then add to their maps. Before putting the body part on their maps, there are 1 or 2 activities to introduce the part. For example, a few classes ago the girls added their eyes to their maps. Before they did that we did an activity with flashlights to show how the pupil grows and shrinks. When we learned about the sense of touch we put their fingerprints on their maps, but first we did an activity in which they reached into a bag without looking and tried to guess what was inside.

In the past class we added their heart, and in the classes to come we will add the lungs and digestive system, along with their bones and other things that are found on the inside of the human body.

Christina, Aisling, and Hannah are the Junior Assistants, or JAs, for this session's 1st and 2nd grade girls. We help Meghan, the volunteer whose an astronomer at the Harvard-Smithsonian Center for Astrophysics, plan each class, and we help run activities in class. Because the volunteer has help in the class, everything runs much smoother and the girls get more individual attention.

Written by Aisling Hunt, Christina Pierre-Rene and Hannah Sears

3rd and 4th grade girls…and chemicals!

So for this term, we focused on physical and chemical changes. In the following sessions we will explore crystals with the 3/4 grade girls. We have done activities involving the melting of crayons into shapes, the fizzing of baking soda and vinegar and cabbage juice as an indicator for acidity.
We are the Junior Assistance for the 3/4 grade class. Our job is too help the SCFG volunteers by helping set up the experiments and helping the girls understand or complete the experiments. The volunteers are Rachel, a PhD candidate in Physics at Harvard, and Lulu, a pre-med student at Harvard Extension. We also clean up after snack, after the experiments, and straighten up the room after the girls leave.

The girls have lots of fun expressing their thoughts, shouting out their interests and observations. While learning they take valuable knowledge back to their school classroom.

Science Club for Girls is a great place for young girls to learn about science in fun, engaging, hands on activities together while learning. That's what makes little girls want to go home and tell their parents how much they love SCFG and how much fun they had. We (Lacarina and Carina) have had girls come up too us and say how much fun they had and how much they couldn't wait for the class. When girls come to us and do this it encourages us to put more than 100% during Science Club for Girls.

Written by Carina Fish and Lacarina Mallory

5th and 6th grades: Start your engines!

Start your engines! On your marks! Get set! Go! Lately in girls science club we've been having the fifth and sixth grade girls build their own engines, rockets and other space equipment. In our first class we made and discussed air powered engines. We made this by using balloons, straws, string. In the second class the girls continued to explore rockets. In this activity the girls became rocket scientists and they tested various materials to see which one could cause the greatest amount of combustion pressure to shoot a bottle rocket into the air. To do this they used baking soda, vinegar, alka-seltzer tablets and placed the material into film canisters. In our third class the girls got to test out how a robot works. We constructed a robot by using two styrofoam coffee cups, strings, and tape. This robot arm determined how difficult it is to pick up and deposit objects.

So far in girls science club our girls seem to be having a lot of fun with their project. Thanks to the fifth and sixth grade Junior Assistances, Malensky and Dina, the girls in the fifth and sixth grade are having a blast! The volunteers are Phoebe, a graduate student at Harvard's Earth and Planetary Sciences and Sharon, a computer programmer.

Written by Dina Theodore and Malensky Ocar

7th Grade: Exploring Space and Energy

The first day was a blast! We raced balloons down a designated track made of string. Occasionally you would hear a pop and a scream following it because a girl had blown the balloon too big. This was one project to show the girls how to use energy in a contained way. Our second project was chemical reactions using vinegar and baking soda, the classics, water and alka seltzer. At first we tried to follow the directions perfectly, but the film canisters containing the chemical reaction weren't blasting off the way we wanted them to. So everyone started doing their own little experiments with much better results.

Our third project was making solar oven with the reward of s'mores. One group got their oven to heat up to 110 F. We used natural energy from the sun and transferred it to heat up the graham crackers, marshmallows, and chocolate. Yumm... what a treat!

Our names are Sarah Cohen, Treshawna Karyn Williams and Eleni Macrakis. We are the Junior assistants for the seventh grade science club for girls. We are eighth graders at the King Open school. Our role in the seventh grade class is to assist them in their learning process. We're more like their peers instead of their teachers because they are individuals and we learn in school with them. We enjoy Tuesday's very much and we hope they do too.

The Junior Assistants help the two 7th grade volunteers, Rachel and Cassie, both of whom are MIT PhD candidates in Material Sciences and Engineering.

Written by Eleni Macrakis, Sarah Cohen and Treshawna Karyn Williams

News Update: Science Club for Girls welcomes KO teacher Deb Jackson!

Science Club for Girls would like to welcome Deb Jackson as part of our staff! Deb is a King Open Teacher's Aide for the 3rd / 4th grade. She is working with us through a partnership with the 21st CCLC Partnership. She is helping merge SCFG activities (after school) with those of King Open (in school). So, far she has been an invaluable asset. Thanks, Deb!

If you have any questions, please contact Program Director, Alejandra Pallais at 617-549-2442 or email apallais@scienceclubforgirls.org. Or contact Deb Jackson in room 113 at the King Open, or email djackson@cpsd.us.