

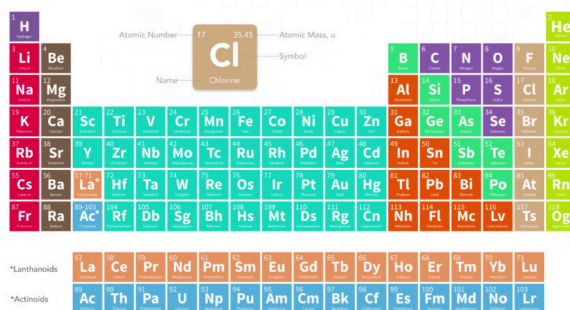
# FIRST STEM SURGE AND HITAJI STEM SEMINAR COLLABORATION REPORT

## The Periodic Table of Elements

Organizes elements based on the number of **protons** and valence electrons.

**Valence electrons** are the number of electrons that an element has in its outermost shell.

The Periodic Table is useful because elements with the same number of valence electrons will have similar properties.

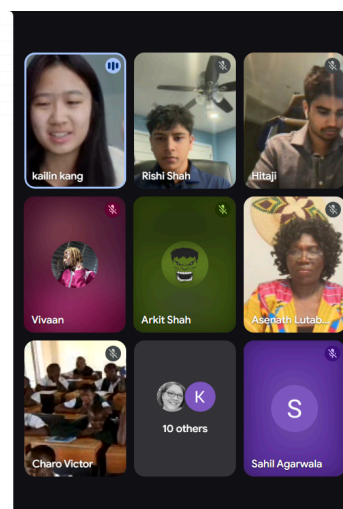


Atomic Number 17 Atomic Mass, u 35.45

Name Chlorine Symbol Cl

\*Lanthanoids

\*Actinoids



## Report Contents

<b>FIRST STEM SURGE AND HITAJI STEM SEMINAR COLLABORATION REPORT.....</b>	<b>1</b>
Report Contents.....	1
Participants in the Program:.....	2
Data generated by the Student Survey's post-seminar:.....	3
Comments About the Program from Surveyed Students:.....	4
Future of the Seminar:.....	4
Conclusion:.....	4
Involvement and Shoutouts:.....	5
Links for more information:.....	6

## Participants in the Program:

Numerous Students, Professors, and members from multiple organizations joined us at the STEM SEMINAR on Sunday, April 27th, 2025.

### **From the Kanga Onditi Primary School:**

- 30 students between 6th and 8th grade
- Harrison Olola (Principal of Kanga Onditi School)
- Jane Anyango (Teacher at Kanga Onditi School)
- Nicholas Onyango Ochieng (Teacher at Kanga Onditi School)

### **From Hitaji Developmental Initiative:**

- The Livingston Hitaji Chapter
  - Ansh
  - Arjun
  - Arkit
  - Sahil
  - Swetan
  - Tanush
  - Vivaan
  - Rishi
- The Onside Kenyan Team
  - Rose Ringo
  - Vincent Ochieng
  - Victor Charo(Head of Programs)
- Asenath Lutabingwa (Founder of Hitaji)

### **From Rotaract Club of Boone at Appalachian State University:**

- Lori Tyler (Staff mentor for the club and Director, Summer Ventures in Science & Mathematics and STEM, Partnerships and Engagement, Math & Science Education Center)
- Lexi R. (Resident of Rotaract Club)

### **From Rutgers University:**

- Krupa Shah

### **From STEM SURGE:**

- Rishi (Program Lead and Liason)
- Kailin (Presenter of the Lesson)
- Wesley (Moderator)
- Claire (Moderator)

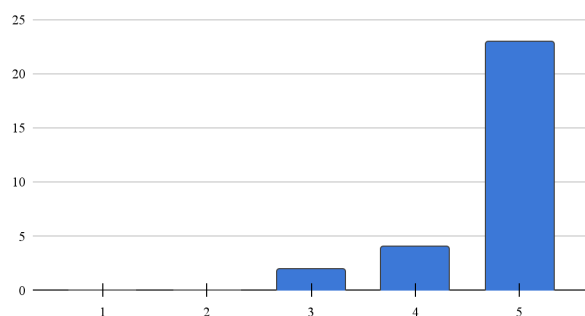
## Data generated by the Student Survey's post-seminar:

After the Seminar, the Students completed a form prompting them to reflect on their experience with the experiments and the lessons they learned. Beyond that, we asked for their feedback and perspective on the lecture, notes, and STEM kits. We asked the students to rate their experience on a scale of 1-5, with one being the worst and five being the best. We asked the following questions:

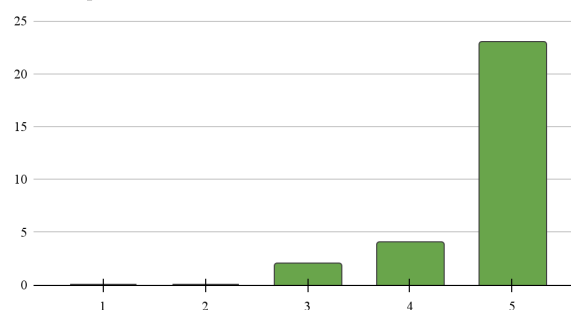
1. How helpful were the notes?
2. How helpful was the lecture?
3. How helpful were the practice problems?

Underneath is a compiled bar graph of their responses and how they felt about the given material:

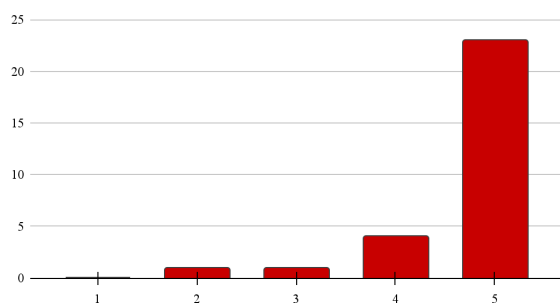
How Helpful Were the Notes on a Scale from 1-5 ?



How Helpful Was the Lecture on a Scale from 1-5 ?



How Helpful Were the Practice Problems on a Scale from 1-5 ?



### Average Rating:

Notes: ~4.72

Lecture: ~4.72

Practice Problems: ~4.69

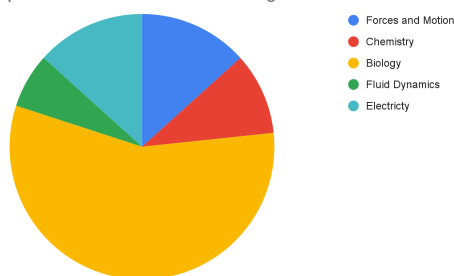
## Comments About the Program from Surveyed Students:

Students were asked about their experience with the seminar and what STEM SURGE AND HITAJI could do to improve it.

- 4 students wanted another session on Introduction to Chemistry in a much simpler version, as they found the lesson a little bit difficult
- 1 student wanted to show an example
- 1 student did not want to have as detailed a chemistry lecture
- 7 students wanted another session
- 3 students wanted more training
- 2 students wanted to continue this program with a variety of experiments that are applicable to their family, and wanted the program to continue sending materials so they could have experiments.

## Future of the Seminar:

STEM preference of students at the Kanga Onditi School



Students were asked about what they would like to do in the future for more seminars. The majority of students would like to continue the workshop with an increased focus on biology.

In written responses, multiple students wanted to work on experiments that apply to them.

Additionally, the students want it broken down even further with more training and explanations before they proceed with experiments.

## Conclusion:

From this data, we can conclude that future Seminars will be directed towards biology. The notes, lectures, and practice problems were all beneficial to the students and helped teach them about Chemical Reactions. However, for future Seminars, the content has to be simplified even further, with more lessons to break things apart. Additionally, the lesson plan should increase its focus and spend more time on building the basics to later expand on in future sessions. We should continue with this program, as many students found it interesting and learned a lot. It was incredibly impactful, and the students would like more seminars to be taught and the program to continue.

## Involvement and Shoutouts:

**Below is the detailed involvement of every member who made this event possible:**

- Asenath Lutabingwa played a pivotal role in establishing the connection between STEM SURGE, the on-site Hitaji team, and the Livingston Hitaji Chapter. Her unwavering guidance and dedication have steered the program through every challenge. Asenath has generously devoted her time and energy—not only to supporting us, but also to empowering all the students participating today. We are deeply grateful; this event would not have been possible without her visionary leadership.
- Rishi S. serves as the founding liaison between STEM SURGE and the Livingston Hitaji Chapter, where he has led the development and execution of this collaborative program. Since introducing the concept, Rishi has spearheaded the initiative with dedication—driving progress, maintaining clear communication between both organizations and leadership, and ensuring milestones are met. He also mobilized a team of passionate volunteers to support the program, further strengthening its impact. His efforts have been instrumental in transforming the program into a meaningful and far-reaching endeavor.
- Swetan S., founder of the Livingston Hitaji Chapter, has been the driving force behind ensuring students have access to hands-on STEM materials. Through his relentless efforts, the team was able to design, test, and ship STEM kits to students in Kenya. Swetan went above and beyond by recording instructional videos and providing clear guidance, all to ensure that every student could engage meaningfully and have a positive learning experience. He has attended every meeting to instruct the Livingston Hitaji Chapter and worked with Rishi to establish its foundation.
- Victor Charo, Head of Programs at the on-site Hitaji team, played a vital role in making this event a success. He coordinated a successful trial run and established the technical infrastructure that allowed us to teach the students effectively. In collaboration with the rest of the on-site team, Victor took the initiative to learn the experiments and materials in advance, ensuring everything ran smoothly on the day of the seminar.
- Kailin K., co-founder of STEM SURGE, played an essential role in making this event a success. She created and delivered an engaging, interactive lesson plan for the students, overcoming technical challenges with creativity and perseverance. Her dedication to chemistry and her commitment to education were evident throughout, as she inspired students and shared her passion with enthusiasm and clarity.
- The STEM SURGE Outreach Committee and Events Committee worked hard behind the scenes for this first Seminar and for creating the content, information, notes, and lectures presented at the seminar.
- The Livingston Hitaji Chapter worked nonstop to send the STEM Kit, surveys, and raise funds for the effort.

Thank you to everyone listed or in one of the sections mentioned above. Your dedication allowed for such an impactful event.

**A huge thanks as well to:**

- To all of the girls participating in today's seminar, your enthusiasm and energy drive this program forward.
- The on-site Hitaji team — Victor, Vincent, and Rose — for your dedication, coordination, and support.
- The Kanga Onditi Primary School for hosting this event, and to the principal and teachers — Harrison, Jane, and Nicholas — for welcoming us so warmly into your school.
- The Livingston Community for supporting STEM SURGE and the Livingston Hitaji Chapter. By choosing STEM SURGE as your tutor or donating money to either organization, you fund programs such as these. Without your support, we would not be able to exist.
- ECACS for your generous donations and support with STEM SURGE

Thank you to everyone who made this program possible, as every contribution allowed success!

### Links for more information:

- Want to watch the full video of the Seminar?
  - ◆ Visit @stemsurge3 on YouTube
  - ◆ Make sure to like and subscribe!
- Want to stay updated on events such as these?
  - ◆ Visit @hitaji\_livingston on Instagram
  - ◆ Visit @stem\_surge3 on Instagram
  - ◆ Make sure to hit a follow to stay updated!
- Want to see more about the two organizations?
  - ◆ Visit [thestemsurge.org](http://thestemsurge.org)
  - ◆ Visit [hitajinitiative.org](http://hitajinitiative.org)
  - ◆ Join the community and sign up for email notifications!
- Want to see the surveys that we received from the students?
  - ◆ Visit the following shared Google Drive:  
[https://drive.google.com/drive/folders/1cjxzbe9HzcJEMBC1z\\_FThJQz1Rcw3Ms0?usp=sharing](https://drive.google.com/drive/folders/1cjxzbe9HzcJEMBC1z_FThJQz1Rcw3Ms0?usp=sharing)
- If you have any more questions, comments, or concerns, email us at:
  - ◆ [stemsurge3@gmail.com](mailto:stemsurge3@gmail.com)