

Code SS Weekly Highlights December 20, 2018

SMD Space Science & Astrobiology

- **The NASA Ames NAI Team participates in the Theuerkauf Elementary School STEAM Day**
- **POC: Andrew Mattioda (SST), Gustavo Cruz-Diaz (SSA), and Christiaan Boersma (SSA)**

- **Short story:**

On December 6, 2018, Drs. Gustavo Cruz-Diaz, Christiaan Boersma and Andrew Mattioda of the NAI Ames CAN 7 Team participated in a STEAM (Science, Technology, Engineering, Arts, and Mathematics) camp held at Theuerkauf Elementary School, Mountain View. The camp was designed to peak student interest in the STEAM fields.

During their time with the students, Drs. Boersma, Cruz-Diaz and Mattioda talked to 45 students (4th to 5th grade) about research at NASA and STEAM career opportunities. Their presentation included hands-on science demonstrations, teaching them about chromatography and spectroscopy regarding the properties of light. The students were very interested in the presentation, in particular those related to breaking visible white light into its various colors using diffraction gratings. All of the students eagerly participated actively in the hands-on demonstrations.

NASA Ames participation in this camp is made possible through the NASA Astrobiology Institute under Cooperative Agreement Notice NNH13ZDA017C issued through the Science Mission Directorate.



Theuerkauf Elementary school students, using hand-held gratings, are excited to see how white light can be broken down into a rainbow of colors."



The view through the diffraction grating looking at the compact fluorescent light bulb. Notice how the white light is divided into red, orange-yellow, green and blue light bulbs.



Dr. Andrew Mattioda instructs three Theuerkauf Elementary School students how diffraction gratings break white light into the colors of the rainbow. The students used the diffraction gratings to see the difference in light from an incandescent, compact fluorescence and LED light bulb.



(Left) Dr. Gustavo Cruz-Diaz instructs a Theuerkauf Elementary School student how diffraction gratings break white light into all of the colors of the rainbow. The students used the diffraction gratings to see the difference in light from an incandescent, compact fluorescence and LED light bulb. (Right) Dr. Christian Boersma teaches students how chromatography is used to separate out a mixture of chemical compounds (color marker) into its individual components (colors).



Dr. Christian Boersma teaches students how chromatography is used to separate out a mixture of chemical compounds (color marker) into its individual components (colors)