

STEMpowered Voyager 2026

Monday Overview

Today, campers explored concepts in chemistry, machine learning, cybersecurity and geography. In **“Operation Unbreakable”** campers solved encryption puzzles. Through **“Inside the Machine Mind”**, campers taught their own machine learning model to avoid algorithm bias. Campers were introduced to their showcase project, choosing a STEM project to research for **“Voyager’s Mission”**. Campers made their own lava lamps in **“Eruption in A Bottle”**. Campers explored across campus and applied their geographer skills in **“7 Wonders of Waterloo”**.

Tell me what you learned!

Here are a few questions to enhance learning:

- Why is encryption considered a vital tool in cybersecurity, and how does it help protect sensitive data online?
- What scientific principles, such as fluid density or chemical reactions, explain why the colorful droplets move up and down through the oil?

Next Steps!

[LINK HERE](#)



AI learns how to walk!



STEMpowered Voyager 2026

Thursday Overview

Today, campers explored concepts in biomedical engineering, coding, and physics while continuing their “**Voyager’s Mission**”. In “**Sunflower Spinner Circuits**”, campers used Arduino to make their own robotic device. In “**Spectacular Spectroscopes**”, campers observe the visible light spectrum.

Tell me what you learned!

Here are a few questions to enhance learning:

- What is the most unique thing you have learned so far during Voyager’s Mission
- How does a spectroscope split white light into different colors, and what does this tell us about the light source

Next Steps!

[LINK HERE](#)



**Sunflower
growth
timelapse!**



STEMpowered Voyager 2026

Wednesday Overview

Today, campers explored topics of economics, engineer design and soldering. Through "Hot Potato Switch" campers soldered their own board game. In "Tremonous Transactions" campers made a structure that is resistant to earthquakes under a strict budget. They end of their day with a cool treat of liquid nitrogen ice cream!

Tell me what you learned!

Here are a few questions to enhance learning:

- How did maintaining a proper connection and heat during soldering affect the flow of electricity in your board game?
- In "Tremendous Transactions," how did the strict budget limit change your engineering choices when building your earthquake-resistant structure?

Next Steps!

[LINK HERE](#)



**Another
liquid
nitrogen
dessert!**

STEMpowered Voyager 2026

Tuesday Overview

Today, campers explored concepts in chemistry and the engineering design process while also continuing to work on their "Voyager's Mission" projects. In "Marble Mania" campers were challenged to design a racetrack for their marble to undergo. Through "Nuclear Escape", campers solved for clues based on knowledge on elements on the periodic tables and chemical reactions.



Tell me what you learned!

Here are a few questions to enhance learning:

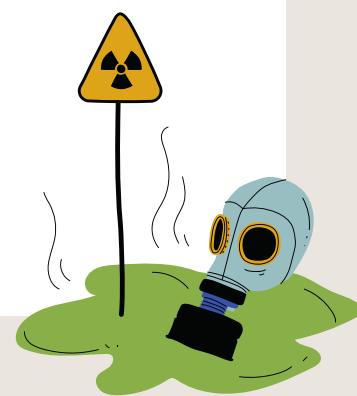
- How did understanding periodic table trends, like atomic number or reactivity, help you decode the clues in "Nuclear Escape"?
- What specific engineering or chemistry concepts from today will you incorporate into your ongoing "Voyager's Mission" project?

Next Steps!

[LINK HERE](#)



Behind the scenes of how AlpenFury was created



STEMpowered Voyager 2026

Friday Overview

Today, campers explored concepts in biology such as transcription, translation, genetic mutations while finishing up their "Voyager's Mission" projects. In "Gene Beads" campers made their own nucleotide coded bracelets and applied CRISPr to edit out mutations. Campers also presented their "Voyager's Mission" projects.

Tell me what you learned!

Here are a few questions to enhance learning:

- How do the cellular processes of transcription and translation convert the nucleotide sequence in your bracelet into a functional trait?
- During your "Voyager's Mission" presentation, what was the most challenging STEM concept you had to explain to your peers, and how did you overcome it?

Next Steps!

[LINK HERE](#)



**All about
CRISPR!**