

STARBASE NEWSLETTER



January - March 2022 - Issue 2

STARBASE Redesigns Classroom Space to Improve Student Learning



The STARBASE Fort Harrison south classroom space now showcases three instructional displays in addition to flexible stool seating.

STARBASE Fort Harrison recently completed a classroom redesign with the goal of improving student learning. Two 55" televisions were installed on the side walls that have the capability of mirroring the main display up front. The setup is particularly useful for robotics lessons where students are spread out throughout the entire classroom space.

To complement the new technology in the classroom, 30 flexible stools were procured for student seating. The stools are lightweight while remaining sturdy and have a slight beveled bottom allowing students freedom of movement while using them. This classroom is also used as the lunch room at STARBASE and the students have appreciated the new stools.

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STARBASE Visits the Montana National Guard's Advanced Technical Training Center

Rossiter Elementary students from Mrs. Schmidt's class were able to visit the Montana National Guard's Advanced Technical Training Center (ATTC) located at Fort Harrison during their STARBASE field trip in March.

The ATTC is often called the "Sim Center" by members of the Montana National Guard. The facility is equipped with state-of-the-art technology utilized by the Montana National Guard for the purpose of training and maintaining their soldiers. There are a number of simulators located at the center which allow advanced training while conserving resources. The simulators are designed for Army/Air missions, so the visiting students were instead able to learn about and operate a number of robots utilized by the National Guard. The robots varied in shapes and sizes but were all equipped with cameras allowing operations to occur in difficult or dangerous terrain. Additionally, some of the robots were equipped with mechanical arms which increased their functionality.

Students were given a short tutorial on the functions and operations of the robots by a member of the ATTC staff and then they had the opportunity to control the robots independently.



Rossiter student "Burcar" operates a reconnaissance robot while visiting the Advanced Technical Training Center on Fort Harrison.



Rossiter student "Tomboy" attempts to pick up an object with a robotic arm while visiting the Advanced Technical Training Center on Fort Harrison.

The students were all thrilled to be able to operate the different types of robots and the staff of the ATTC were wonderful hosts.

STARBASE Fort Harrison is thankful to our military volunteer partners. A key component of the STARBASE mission is to expose our students to the technological environments and positive civilian and military role models found on Active, Guard, and Reserve military bases and installations. We are fortunate that the ATTC is located at Fort Harrison and that we have access to let our students experience their technology.

Mrs. Schmidt enjoyed seeing her students interact with and operate the robots. Every student had the chance to operate each robot. Schmidt summarized the experience by saying, "STARBASE is a wonderful opportunity for fifth graders. They get to practice STEM learning and projects in a way they don't have access to at our school."



Three of the robots that students from Rossiter Elementary School were able to learn about and operate at the ATTC.

Hawthorne, Jefferson, and Rossiter classes visit STARBASE

STARBASE

CLASSES BY THE NUMBERS



Hawthorne Elementary:
42 students



Jefferson Elementary:
50 students



Rossiter Elementary:
82 students

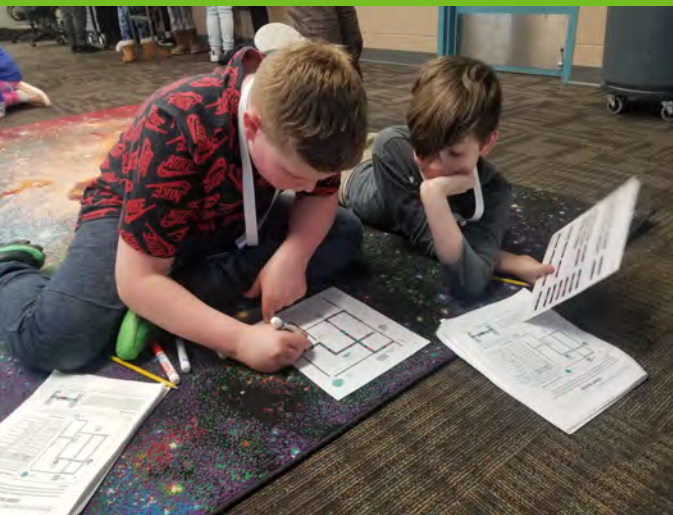
Fifth grade students who attend Hawthorne Elementary, Jefferson Elementary, and Rossiter Elementary visited STARBASE during the months of January - March. Ms. Rudio and Mrs. Carson's Hawthorne classes visited us in January. Both classes were visited by volunteer career speakers who informed the students about their careers in the healthcare and engineering fields. One of the Hawthorne students, "Whipcream", had the following to say, "STARBASE was so much fun and had a lot of different challenges to try. There was so much to learn and to experience." The STARBASE staff consistently observes visiting students meeting challenges while working as part of a team. Building resilience and encouraging persistence for students is a cornerstone of the STARBASE curriculum.

Jefferson Elementary School students who attend Mr. Sund's and Mr. Alger's classes visited STARBASE in late January and early February. Mr. Alger's students enjoyed a guest speaker who had a career as an architect while Mr. Sund's students received a talk from an employee of the State of Montana's Fish, Wildlife, and Parks department.

March was Rossiter Elementary School month at STARBASE. Students from Mrs. Ziska's, Mrs. Schmidt's, and Mrs. Mooney's classes visited STARBASE. Chrissie Nicholls, a Rossiter parent, reflected the following, "STARBASE was an amazing experience for my child. She was excited to attend each day and see what experiment or project they had planned. I have never seen her so eager to come home and tell me about everything she did that day. The instructors were an integral part of the experience as well. Each day she happily recounted some anecdote from an instructor. The activities were also extremely engaging as she excitedly recounted everything she learned each day in great detail. I'm so happy she was able to have this experience."

The STARBASE staff takes pride in engaging and exciting students about the curriculum. It was rewarding to hear such wonderful feedback that our efforts are paying off. Success may not look the same for each student, but every student succeeds while at STARBASE.

"STARBASE was an amazing experience for my child. She was excited to attend each day and see what experiment or project they had planned." - Chrissie Nicholls, Rossiter Parent




Students, "Bambino" & "Hot Dog", from Mrs. Ziska's Rossiter Elementary class work on a lesson employing Ozobots. Ozobots are small, programmable, robots that students code by using different colors of pen ink. The students learn about the coordinate plane system while navigating their robot within a maze.

STARBASE 2.0 Clubs Wrap Up Their Spring Session

STARBASE 2.0 clubs at Helena Middle School (HMS) and C.R. Anderson (CRA) Middle School recently wrapped up their spring sessions. STARBASE 2.0 is an after-school middle school STEM program designed to nurture students' curiosity and skills surrounding STEM. The program utilizes community volunteers as STEM coaches to assist students with their projects, encourage team building, and promote problem solving. STARBASE Fort Harrison's 2.0 Coordinator, Kinsey Vavruska, was excited to get 2.0 programs off the ground again after they were canceled last year due to COVID. Vavruska said, "It is wonderful to get students back to working on STEM projects in the classroom. It is a club they are excited and proud to be a part of. We are looking forward to continuing the programs next fall".

There were 24 students at HMS and 18 at CRA that participated in the clubs this spring. The students worked with LEGO SPIKE Prime robotics and completed challenges associated with the FIRST LEGO League organization. "Star Pilot", a CRA student, said, "I have always loved building with my dad, and I like working with others. I like to build things and take things apart to figure out how they work. All of this was what inspired me to join STARBASE 2.0, and I would say that you should too. It was a lot of fun."



CRA Middle School students "Gail" and "Enderwolf" observe their robots as they navigate the FIRST LEGO League challenge course.

STARBASE 2.0 FACTS

- 40 Hours of STEM activities
- 42 Student Participants
- 8 Community Volunteers
- 9 Spike Prime Robots
- Over 3000 lines of code

STARBASE Fort Harrison is grateful for their Helena Public School District teacher partners, Mrs. Grotbo at HMS and Mrs. Currier at CRA, for providing their classrooms as spaces for the clubs to meet. The clubs met once a week for ten weeks as they mastered programming their SPIKE Prime robots. STARBASE Fort Harrison is also grateful for the community STEM coaches who have volunteered their time to work with the students during the 10-week sessions. STARBASE 2.0 couldn't exist without the support of our community STEM coaches and we are thankful they are willing to invest their time and skills into our students and help shape their career paths.

Staff Spotlight: Kaylee “Hollywood” Nathe

Kaylee Nathe has been an instructor at STARBASE since 2015. She is a native of Havre, Montana, and got her undergraduate degrees at MSU-Northern. Her first professional teaching job was in Saco, Montana, but she relocated to Helena and was hired at STARBASE. She has a dual role at STARBASE Fort Harrison in that she serves as the Deputy Director for the program as well as an instructor. She splits her time between administrative duties and instructing the visiting students. She is married with two children and enjoys camping, board games, and family time.

We conducted an interview with Kaylee to get her perspective on being involved with the STARBASE program:

What made you want to be a teacher?

I believe the memorable teachers I had growing up were a big influence on why I became a teacher. I know specifically my teacher I had in 4th and 5th grade made an immense impact on my life and I strive to do the same with my students. I want to be a person who builds warm and accepting relationships with students to help navigate them through tough times growing up while also providing students with an amazing education.

STARBASE is a unique “5th” grade classroom within the HPSD. What are the unique challenges and rewards you have experienced as a STARBASE instructor?

STARBASE is very different from the everyday 5th grade classrooms you might see among HPSD. We have our own classroom, but not our own students. I would say not having your own students for one full school year would be one challenge because you quickly build a relationship with the students you are teaching that week, and then start back over on Monday. While that is a challenge, the rewards are endless. During my seven years at STARBASE I have been able to make an impact on thousands of students in the district. I am able to teach hands-on, minds-on lessons to students and see the excitement it brings to them. I am able to spark many student’s minds with STEM lessons and show them they are capable of anything!



Kaylee “Hollywood” Nathe is the Deputy Director of STARBASE Fort Harrison as well as a program instructor.

STARBASE has changed a lot since you started here in 2015 and you have been a big part of those changes. What changes do you think has made our program better over the years and why?

I am very passionate about STARBASE and feel like my love for this program has attributed to its growth. I have strived to build relationships with not only the students who visit STARBASE, but also the teachers. The way we deliver the curriculum to students by modeling has been a big improvement as well. Our classrooms have also been remodeled to contribute to student success. We have individual desks, flexible seating with our tables, a calm room, and enough iPads for each student to use individually.



What are your favorite lessons to teach the students each week and why?

Our lessons at STARBASE focus on STEM education and while I love them all, my favorite lessons always fall into the engineering category. I am a very hands-on learner, so I get super excited when it is time for my students to use the Engineering Design Process to build something for the lesson we are teaching. Those lessons always spark students interest who also learn by doing and seeing the process is amazing. Students always get so creative with the bridge or water filter they are creating and it is amazing to see the final product!

STARBASE is also unique in that all our lessons are team taught by more than one instructor. What has the team teaching experience been like for you as an instructor and how do you think it adds value to lessons for students?

Team teaching has had a very positive impact on me as an educator. I believe it has allowed me to become a better teacher and learn new skills. I am able to collaborate with my team to always have the student's best interests in mind and brainstorm new ways to teach them our curriculum. Many times we have to adapt on the spot for lessons and we quickly work together to come up with a plan. Overall, the way we interact as a team makes a big impact on students and they see us positively interacting with one another which helps encourage students to work as a team.

“I want to be a person who builds warm and accepting relationships with students to help navigate them through tough times growing up, while also providing students with an amazing education”
Kaylee “Hollywood” Nathe

Military and Civilian Volunteers Add to the STARBASE Experience

STARBASE Fort Harrison has partnered with a number of military and civilian volunteers this year to enrich our students experience. They serve students by hosting tours on base and by visiting the classroom to give a presentation on their path from 5th grader to STEM professional. Individuals from the following organizations have volunteered or will volunteer this year to serve our students. We are extremely grateful that they have donated their time to help expose our students to the wide and wonderful world of STEM:

Montana Military Museum	Carroll College	Minetech USA
Montana National Guard Advanced Technical Training Center	ExplorationWorks!	Montana WILD
Montana National Guard Civil Support Team	Canyon Ferry Automotive	Montana Fish, Wildlife, & Parks
McDantim, Inc.	Montana Drone Company	State of Montana
Great West Engineering	Montana Historical Society	State Information Technology Services Division
Mosaic Architecture	Anderson ZurMuehlen Technology Services	Travis Archaeological Services
Balanced Chiropractic	St. Peters Health	Energy Laboratories , Inc.
	Headwaters 3D	RDO Integrated Controls