

Systems	Standards/Proficiency Criteria	Failure and UC	Transfer - Personal Takeaways	Project
-This year we have been studying SYSTEMS - both the past, the present and the future. -We started by studying ancient Egypt, then moved to the soccer team that was trapped in the Thailand caves and moved into the future by looking at plans for sending humans to the moon and Mars. -This work is important because it dives into the power of a system... MUST: -Talk about what a system is and what it is important? -Explain RESEARCH - both primary and secondary sources, (credible, reliable, experts)	-You might just think we are playing, but... -This isn't just legos and robotic kits... -The learning we did is beyond what you actually see here... <u>TEACHERS will help you pull out standards' phrases.....</u> -Proficiency criteria: Pull out 2 or 3 from your sheet. • This means... • For example ...	-but this process isn't easy...it takes time -this isn't always "fun", we spend a lot of time learning, unlearning, and relearning... -there were several times throughout this work where we had to toss out our old ideas and start over... -new information forced us to pivot, replace, shift, MUST: -Talk about failure...why is it important? What does it GIVE us? What happens if we don't fail? Why is it so valuable? -Universal Constructs (+ or -)... talk truth...what was your team really good at OR where did you	-As a human, my biggest life takeaway is.... *(each person shares)	(Your group will use the 'SharkTank hook/speech you shared with Steven.) -Now, we'd like to show you our solution Or... -HERE is our solution. We are excited to show you our idea

-Which experts helped you grow in your thinking? (PICK ONE that really helped your team and explain who they are, what they did and how they helped you)		struggle OR what did you realize you needed to do in order to move forward as a team?		
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Systems

-This year we have been studying SYSTEMS - both the past, the present and the future.

-We started by studying ancient Egypt, then moved to the soccer team that was trapped in the Thailand caves and moved into the future by looking at plans for sending humans to the moon and Mars.

-This work is important because it dives into the power of a system...

This year we have been studying **systems; Past, Present, and Future**. We studied the system of Ancient Egypt, the Thai boys trapped in a cave, and the future of NASA where they will send astronauts to the Moon, and eventually even farther to Mars. A system is an interconnected group made of different people and their beliefs, cultures, and motivations who all have a drive to solve the same problem. Over time, the group is still solving the same systematic problem, but how it is being solved is different. For example, the drive of the system is still the same, but the lenses they share are constantly modifying because of the new information they gather. Their mindset changes and shifts which makes them stronger and wiser, therefore making it easier to solve their problems. A system creates change, big or small, and influences new ideas to solve a problem.

This work is important because it grows people's mindsets and opens different pathways to choose from to explore and learn from. As Steven Smith said; "We've been learning since we were babies." Our minds keep growing and expanding with the new things we learn everyday. The system must be convincing *someone* that the problem is worth solving. And if the solution doesn't work, Steven also said; "Failure makes your end product better!" Failure *may* seem like a setback, but it will help you state your point.

Another big part of an interconnected system is research. Research helps us know more about what we are talking about and learn more about the main point of our system. Meeting with a credible and reliable expert who knows what they are talking about is key. They have done so much research that they are willing to give you to help solve your problem. An interconnected system takes knowledge, different types of people, trying new ideas, and failing....but trying again.

(Mrs. Vice)

Standards & Proficiency Criteria

-You might just think we are playing, but...

-This isn't just legos and robotic kits...

-The learning we did is beyond what you actually see here...

You might think we are just playing with legos and toys, but the learning and development we have done goes beyond what you see here. We don't have some of the right tools but we have the brains to make these inventions work. We are gathering knowledge and creating solutions to real-world problems.

Yes, Legos and other materials have helped us model our solution, but we have spent more time gaining knowledge, gathering information from credible and reliable sources we can trust, along with experts' (primary source) tips and quotes, and learning more about **HOW** our idea works or could work. Something that we did that helped our project was **analyzing interrelationships** among our concept. For example we used Python, microbit, radio waves, and block coding to make our prototype function. We had to understand how the coding languages worked together so our hologram would function properly. We also used our mental health knowledge that we have to find solutions to help improve astronauts' mental state while in isolation from the rest of the world. We have had to locate information and go digging for the minor details to make our full project even stronger. This means that the more research and ideas we have attempted for our final project the better the outcome. Our thinking has changed greatly. Without changes in our thinking, we wouldn't be able to learn, unlearn and relearn.

(BC)

Failure and UCs

-but this process isn't easy...it takes time

-this isn't always "fun", we spend a lot of time learning, unlearning, and relearning...

-there were several times throughout this work where we had to toss out our old ideas and start over...

-new information forced us to pivot, replace, shift,

But this work isn't just fun and games. We have spent so much time learning and relearning what mental health **truly** is, why being in a good mental state is important, and how it can negatively impact people when they are in isolation. With the knowledge we gained, we were able to contribute our own personal ideas into our final solution. This didn't happen right away because we were not vulnerable, because of this we weren't able to trust or take risks. As we continued to work together we went through multiple rollercoaster moments when we didn't know how to go up the next hill. We also learned through this process that not every idea we had was going to work. We had many setbacks and shifts in our thinking that demanded us to change how we viewed our final solution. Failure has taught us to be patient and to take time to make mistakes. Making mistakes causes us to take a new path. This process has not always been fun because of these setbacks. Through persistence we are very proud of our projects outcome and each other. We wouldn't take back any of our embarrassing moments

or failures because all of these moments got us to where we are today. (Mrs. Vice)

Transfer and Personal Takeaways

-As a human, my biggest life takeaway is....

Brooke

My biggest **learning point** was how to work with and navigate with the micro bits. I also learned how to give them a meaning with the prototype from the eyes to the mouth to its arm. I persevered through problem solving and all of it taught me something new about solving problems, because of all of the learning, unlearning and relearning. Whenever I walked into the learning lab for NASA I knew our work was going to be **meaningful**. This work made me feel like I was in the driver's seat of my learning which showed me that I was capable of much more than I would have thought. Through this **adventure**, there was major difficulty and hardships but I'm so fortunate we did this because it taught me better group working **skills** and added much more to my **knowledge**. All of the fails that I have had taught me to be more patient, try new things more often and to accept the fails because each fail is a new learning point. (BC)

Annie

As a human my biggest life takeaway from this project is having a learning environment and experience that helped me improve in my own personal life. I learned how to use code and use Micro-Bit kits to create **bigger ideas**, this work is more than just "*playing*". We could actually see our thinking evolving and getting better. For example, worksheets just test our brain, you finish, and you're done. Most likely you won't use it ever again, but our NASA project is the opposite. We can reuse, replan, and rethink our ideas continuously. Everyday brings something new, and our work is never really done. Instead of **concealing**, dimming, or limiting our ideas, this work allows our brain to see endless possibilities. (BC)

Isla

As a human, my biggest life takeaway is talking to NASA experts who helped my group make an amazing prototype. Before this work we did with NASA, I had never done any "**hands on**" learning. Never had I been given an opportunity to **lead my learning**. **In the past I would have been given a chapter from a book to read and a question to answer**. Because of our NASA systems for survival project, **I got to choose what I wanted to learn about**, not the teachers. And then, we got to create a prototype that modeled our solution to show NASA experts, specifically Steven Smith, who **grew our thinking** farther after each call. Another takeaway from our NASA project is that I learned not to **Underestimate** mine or others' ideas because they all help us "**grasp**" our final Idea. Before NASA I would always second guess ideas, not sure if it would work. But now, I am less afraid to try a new idea. **I have learned that no idea is a bad idea, every idea is worth a shot taking**. (BC)

Reese

As a human, my biggest life takeaway from this project was becoming a better **worker and teammate**. Getting to share my ideas and execute them really helped me **grow** and I saw what I am **capable of doing**. For example, in the beginning of my NASA work I had to build up the courage to share my new ideas, but as the time went on I became more confident in my work and had more evidence to back it up. I had to become **vulnerable** to be able to communicate my ideas with my team and allow them to build on my work. The NASA project has been a big **inspiration** to people like me and I would not trade it for unneeded work or "**fake work**" that won't be used in the future. (BC)

Project

(Your group will use the 'SharkTank hook/speech you shared with Steven.)

-Now, we'd like to show you our solution

Or...

-HERE is our solution. We are excited to show you our idea

Now we would like to show you our solution to helping astronauts solve their depression while in space, specifically on the moon. About 250 million people, specifically adults and teens suffer from depression. This is a serious problem for the astronauts making them lose about 20% of their sleep which would affect their job as astronauts. So, we are creating a device that will keep astronauts in their best state of mind. Meet Maveric the Mental Health Man. Maveric is a hologram prototype who will help keep astronauts' minds healthy and happy. Some of his lifelike features are his blinking eyes, a mouth that can change from a smile to a frown, a beating heart, and an arm that can wave to you.