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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,	**-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…** *TEACHERS will help you pull out standards' phrases…..* -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 it is 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	**-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**

experts) -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)		where did you struggle OR what did you realize you needed to do in order to move forward as a team?		

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. The past system we studied was Ancient Egypt, the present system we studied was All 13 (which was the cave rescue in Thailand), and the future system we are solving for is NASA. Throughout this work we learned a system has many layers._The layers of a system all have their own job to get to the goal. In order to get to the goal you have to respect and understand each other's purpose. Communicating is key, sometimes new experts and new resources will be found when most needed.

Studying the way that a system works has helped us learn that there will be many barriers. It has helped us move past those barriers as we work together and communicate. This has helped us when our ideas aren't aligned with eachother. We had to learn to compromise and take a step back and listen to understand eachother and our ideas. These ideas are like the layers of a system. These layers rely

on eachother throughout the process, just like how our group counts on each other to be responsible and do their job productively. Also, when we studied the way a system worked it showed us there are always new possibilities being developed. For example our own ideas aren\'t any random thoughts about mental health, they are real possibilities for solving an actual problem that is happening in the real world. In fact, the feeling of isolation and how it impacts mental health is present as astronauts go into space.

Our primary resources were essential to helping us develop a solution. Primary resources and experts, Steven Smith and Greg Clements have directed us to multiple resources of information that were credible and reliable. All of these puzzle pieces have come together to help us provide a solution, but getting here wasn't always easy. Before we got to the solution we explored multiple pathways and a lot of the times they would fail. Finally, we found our one idea after many attempts. This shows that success doesn't always come easily when you are doing real work. Real work is thinking the unthinkable (living on mars), creating honest work (showing you know more than others think you do), and having no limits or no end point. Other work doesn't give the chances that we have in our everyday class like making a robotic dog.

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 just think we are playing, but really we are analyzing interrelationships among concepts, issues, and problems. For example, we had to research the relationships of mental health and the feeling of having a "purpose". We learned that it is

easier to handle and balance stress when people feel like they have a purpose. When you have a feeling of purpose you are able to relieve stress in an easier way. The learning we do is beyond what you actually see, this work can be impactful for the world we live in. We would not be able to do this on a worksheet. Our thinking that we have done would not have been able to happen if we had not worked through a process that looks like “playtime” but really isn’t. Throughout this process we had to communicate our ideas, analyze barriers that have occurred, and then solving or getting around the problem..

This isn't just legos and robotic kits, this is us justifying or critiquing conclusions that are drawn. We designed our dog according to our conclusion drawn from our mental health research. Every part we created on the dog was done for a reason. This dog can be underestimated, but really the dog can help with feelings and emotions in multiple ways. For example, the movement of the head and tail can bring comfort and companionship. The barking of the dog can represent happiness when seeing their owner (showing the owner they have a purpose because the dog is happy to see them. When you are in transit going to the moon your thoughts can get to you, but having the reminder of a personal purpose can help with the way you think about your current situation.

We also had to design projects that combine hardware and software components to collect and exchange data. For example, we had to be very patient because it takes a while to figure out how to code. We had to get everything correct because one mistake could mess up the whole code. So, we had to take it slow which was hard because we wanted to get it done and over with. We also wanted to make our dog bark but

we realized we couldn't do it with the resource we were using so we had to go onto another coding resource. It took a long time to figure out how to make our dog bark but eventually after a lot of patience, all of our hard work paid off and we got it to bark.

Mrs. Vice

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,
This process isn't always "fun" but we spent a lot of time learning, unlearning, and relearning and know this is an important part of the iteration cycle. For example, we underestimated the coding part, but once we started we definitely had to unlearn and relearn to understand and be successful. We later realized that our "dreams" of what we wanted to happen, would not happen with our limited amount of time. We know this because when we were trying to code a sensor and get the light to represent the feeling of the dog, we had to spend multiple days trying to figure out the problem. This was a time in our group where we felt very frustrated and stuck in the mud. We would not have been able to get out of the mud if we did not have a growth mindset and listen to our teammates. But soon we understood we had to **reconfigure** our current ideas and **intentionally improve** the way our dog moves and barks. We started to stress before making a new solution because we knew that our time was limited but we didn't know we only had a couple of weeks to make the vision we had in our mind reality. Luckily all of us shared ownership, so we could move forward.

Mrs. Vice

Transfer and Personal Takeaways

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

Ava As a human, my biggest life takeaway is to not let a little barrier stop you from what you believe you should do. In our project we had experienced a code error that had made us take a step back. But I still had to know that there are many chances in the world and that you will get the chance for all types of possibilities. Possibilities include having barriers. When barriers occur, they help us learn to problem solve in a creative way. Life will take away opportunities and give them back in many different ways. I want to remember when a barrier comes up, I need to stay confident.
(BC)

Owen: As a human, my biggest life takeaway is that I am not going to get everything perfect on the first try. In our project we had a dream that we wanted to achieve but many barriers popped up along the way. For example, we had to try many different ideas and a lot of the time they would not work. It was frustrating but I had to learn that sometimes I had to try multiple times and not always get it on the first try so that I could learn from my mistakes and improve my ideas and grow. (BC)

Rosalie: As a human, my biggest life takeaway is that I learned that I can't underestimate others. During our project every one had to come up with an idea and I did not know how the ideas would turn out. But now that we are at the closing of our project I can now see that we all have great ideas, every group faced many problems and they were all solved because everyone had a lot of capability.

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

Here is our solution. We are excited to show you our idea and our change of thought process
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