

GenerationSTEM

Website Implementation Overview

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Introduction

This is a website implementation overview explaining each step of the design process to implementing the website. From the paper outline to the final prototype. It also includes the website's information such as details on it and the GitHub repository (found at the bottom of the document). There was some user testing done on each process including all prototypes and the paper outline. Notes from these user tests are found in each section. The Figma link for the prototypes is also found at the bottom of the document.

The website design went through multiple changes. This was due to not only the user testing and recommendations given but also due to all the changes the program went through. As GenerationSTEM was ran, new ideas emerged. Therefore, updates to the website had to be done. These changes will be seen and explained through the different prototypes. Each screen change is described in detail on why it happened and what is new.

Disclaimer:

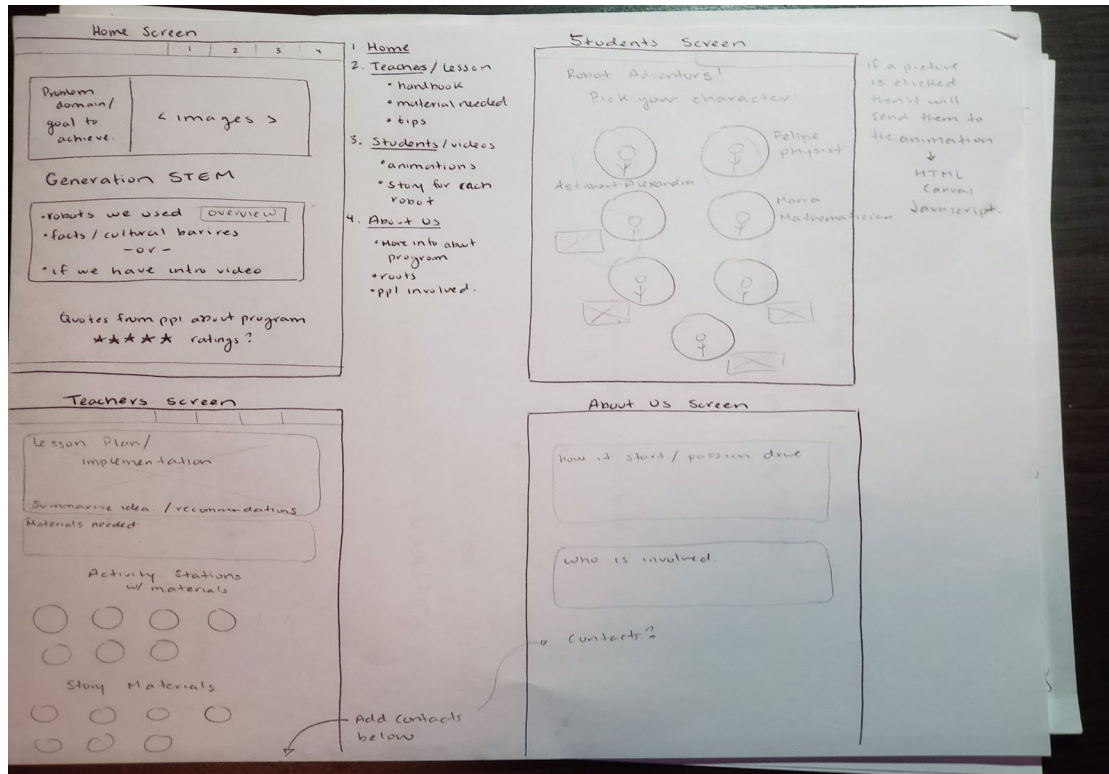
The course posters in the current website (in the materials page) do not accurately represent the original course posters created for the path that the Cue robot has to take. The program needs to get a graphic designer to accurately design the course posters again so the Cue robots follow the path that the story/coding cards say. *The poster designs are found in the bottom of this document and should be digitized exactly as they are.*

The goal is to have all robot course posters digitized for teachers to have quick and easier access to the material for GenerationSTEM. It is possible to include the pictures that are in the Digitize Poster section on page 13 in the website instead of the current posters on the website. However, the teachers have to be told that they will have to create their own posters based on the pictures.

****As the program itself is being updated, the material and content on the website will have to be constantly updated as well. This could possibly mean that the design of the robot course poster could change too.**

Paper Design Outline

Once we knew what we actually wanted to the website we began to draw out on paper the outline of the website. People reviewed the paper such people included Aurabel and Louisa to make sure the website outline contained what we needed. Then I had some outside sources review the paper outlines to give me input on what to add or remove.

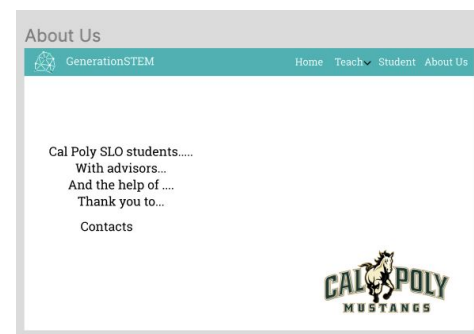
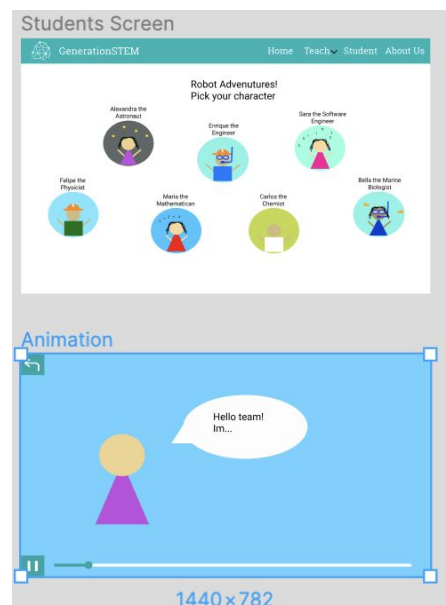
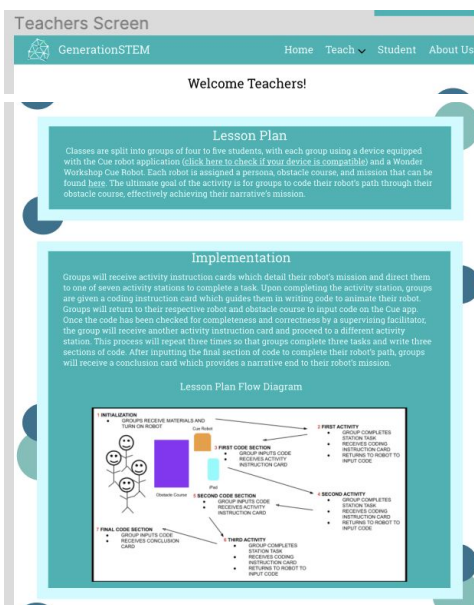


Some recommendations from the paperlines:

1. Add more pages instead of just a home, teachers, student and about us page.
 - a. There will be too much overwhelming information for the user if we just did four pages
2. Make it fun and simple for the students users as well.

Prototype 1

After the paper outlines were reviewed, I took all that was said into note and began the Figma Prototype. I had to do some research before I began the prototype. This research included finding other websites with a similar idea to ours and getting design ideas from them. From here I began the first prototype of our website. I knew the home page had to contain basic intro information. The students page was just for the animations so the students had quick and easy access to it. There was a teachers page that contained the whole hand book of Generation STEM. This included the materials but it was too much information on one page. The about us page was meant to be something short about our team and simple.



User Testing/Recommendations for Prototype 1:

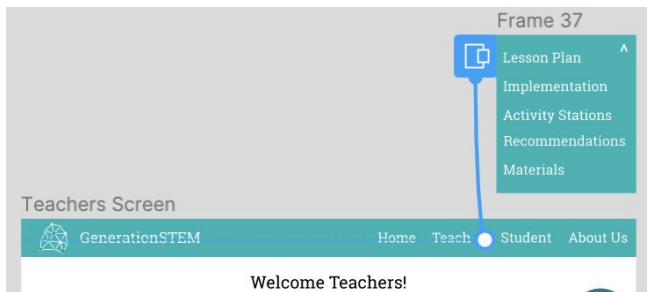
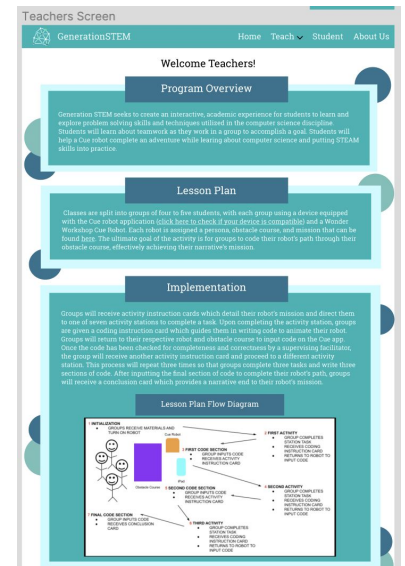
1. Include the program overview into the teachers page instead of having it in the home page
2. Instead of having that last section on the home page with the program overview and the teachers/student option, include just 2 simple options where it leads to more information on the program (the teachers page) and another that leads to learning more about us (about us page)
3. For the teachers page I already know to add another page probably for material so that the information on that page wasn't too overwhelming.
4. Also had to find a different design for the teachers page so it wasn't confusing navigating around the teachers page and read it (want to make it easy for the user to understand what's on the page and how to navigate through it)
 - a. Add a materials page for it
5. For the students screen, we figured out that there would be 4 animations per character so after a student clicks the character is won't just send them directly to the animations but should send them to a screen with and option for the different animations for each character
 - a. Add the different animations page
6. About us should be more detailed and actually include a story about the overview of the program

Prototype 2



<- Home Screen. Removed the overview information that was at the bottom of the page. Instead added 2 large buttons that lead the user to their preferred destination.

->Teachers Screen. Added the program overview here now. Instead of having simple titles, I added the headers of each section into a different color box so the user is able to quickly and easily tell what section is what.

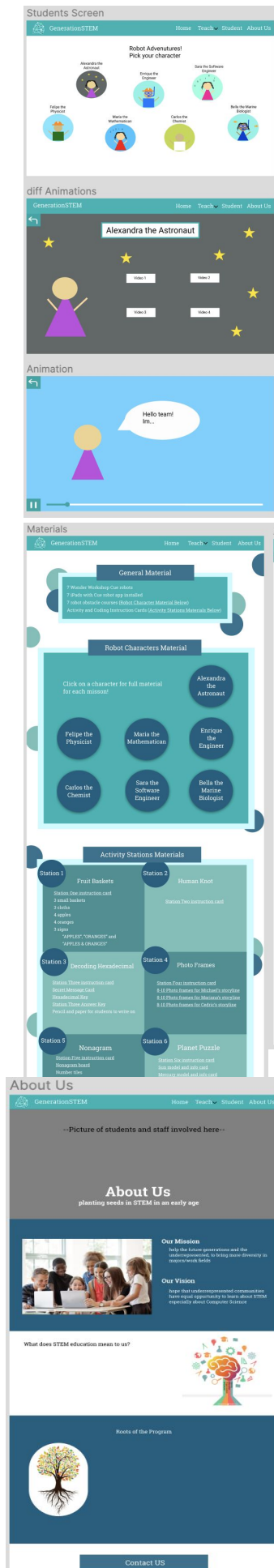


Added a new logo! Also the Teachers tab now has a pull down bar that makes it easier for the user to get to the section they want to without having to scroll all the way there.



Teachers Screen.

Organized the activity stations in a different order to make it more pleasing to the user. Before it was all in rectangle with a simple header. Now each of the stations has a station number header and the layout is in a checked form so it doesn't look like endless scrolling/reading.



Students Screen.

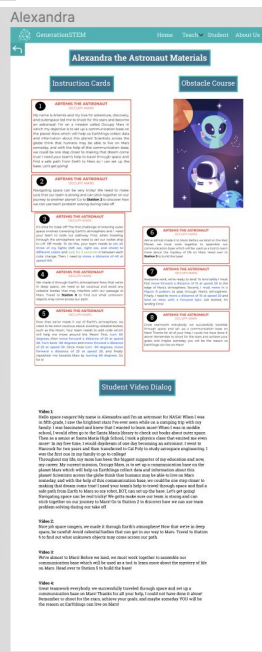
A new screen was added in between the character decision screen and the animation. This screen had to be designed because there is not going to be one animation per character but there will be 4 different animations. A teacher will be able to tell the students when to go on to the next animation.

Character Stories.

This includes the diff animations and animation scenes. The Diff animation scene will contain the different videos/animations for a specific character. The Animation scene will play out this animation built by unity.

Materials Screen.

This screen will contain links to all the materials needed for the activities. There are sections to organize the material so the user is able to find content easily by what they are looking for. General and important material is found at the very top, robot material is in the middle section and organized by character. If they click on a character is will send the user to another page with all the material needed for that character (as can be seen for the Alexandra character to the right of the materials screen). Then the final section is the activity station material that is split by every activity and includes links.



About Us Screen.

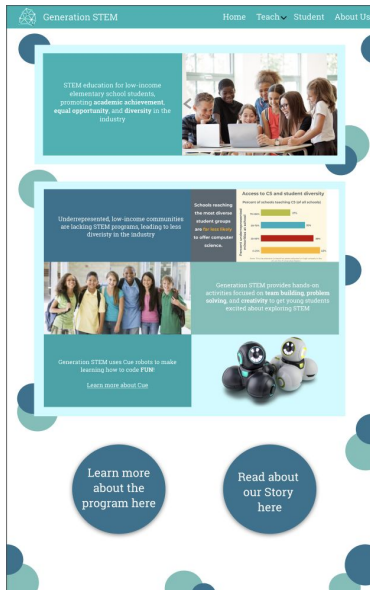
This screen will contain information about how the program began and explain what exactly the program is. It could also include a picture of the members involved. Towards the end of the screen there will be a contact us section with updated information to contact the program.

User Testing/Recommendations for Prototype 2:

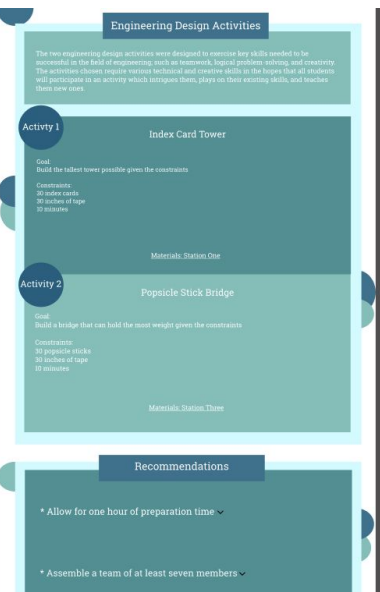
1. Supervisor for an educational program in Santa Maria:
 - Add a back to the top option on every page, especially the material and teachers handbook page because there is a lot of content on them
 - Make the buttons or clickable options obvious that the user knows that they are able to click on it
 - Enjoyed the layout and color scheme
2. Bilingual Educational Assistant
 - Understood how to navigate throughout the prototype, especially when asked to find something
 - Liked the color scheme and said it was easy to read
 - Understood what was a button and what was not
 - i. When she made it to the materials page, she did question if some things were supposed to be clickable (which all underline material are supposed to be in the real website)
 - ii. *Hint:* for the website make sure the mouse icon (for desktop) changes into a different pointer to make it more obvious
3. Graphic Design Student
 - Adding more white space may be better so the user feels like there is more space around the context offered (pleasing to the eye)

Final Prototype

After some changes to the program itself, the website had to be redesigned to adjust to the new changes done. These changes included removing the activity station sections and adding new engineering design activity sections (which include two activities).

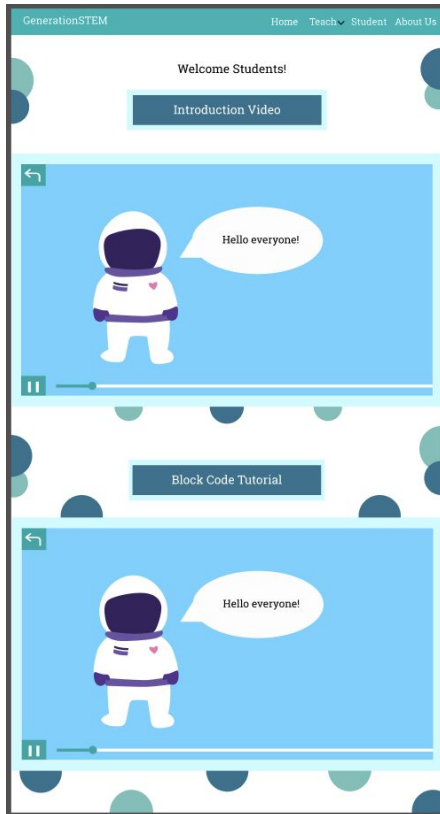


Home Screen.
Same as before.



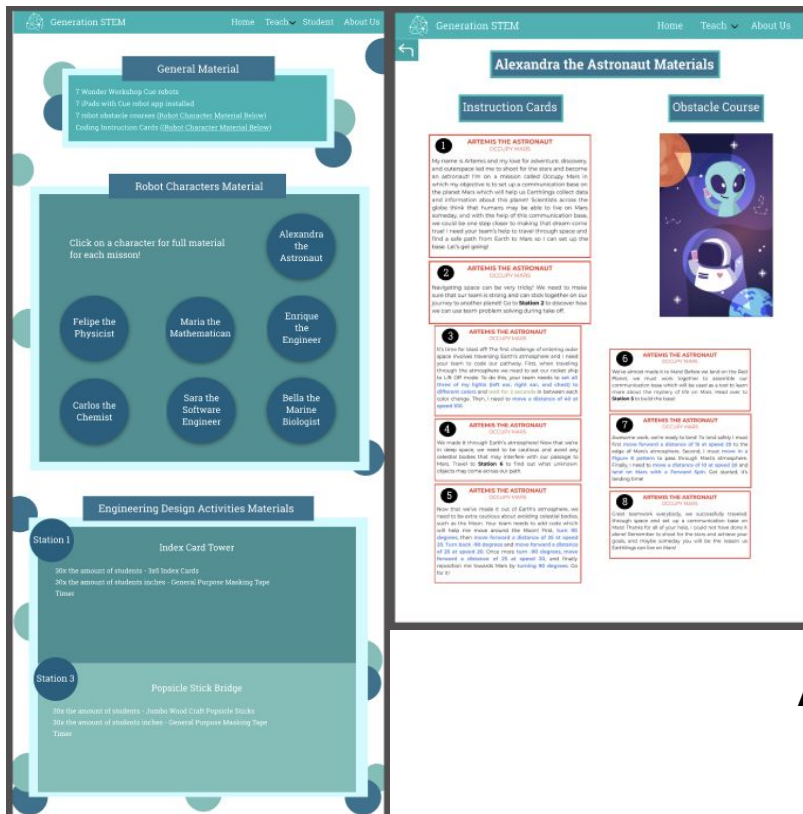
Teachers Screen.

This screen is similar to before. However, it includes the new implementation and activity sections for the program. The old activity stations were removed and the new engineering design activities were added to this section.



Students Screen.

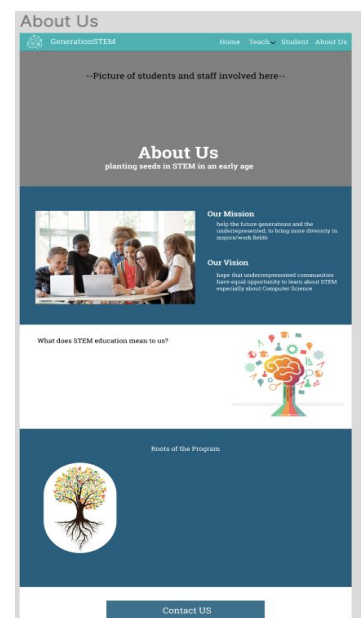
The section of the individual character animations was removed. This was due to the fact that it was decided not to have any of the individual character animations anymore because each story kept getting adjusted throughout time. The students page now contains two sections one for an introduction animation and another for a block code tutorial. Each of these has been built on Unity with the programming language C#.



Materials Screen.

The activity materials section was changed to only include the two new engineering design activities materials. Also the individual materials for each character does not include the video dialog anymore.

About Us Screen ->
Same as before.



Website Information

The website is basically the same as these prototypes especially the final prototype. The design and structure was taken from the final prototype. The biggest change from the website and this prototype is that there isn't the circular design in the background yet. Also the Robot Character Materials section in the Materials page changed to make it easier for the user to get access to the character material. As mentioned in the introduction, the materials section that contains the course poster designs will have to be updated. As the program is changing the website should be updated along with the program as well.

The website's code can be found in the **GitHub repository** called *generationSTEM.github.io*. The Github repository link is <https://github.com/sbcarpin/GenerationSTEM.github.io>. This contains all the code and materials used in the website. There is a README file in this GitHub repository with more specific details of the website code. This will explain how the code was organized and any future things to take into consideration.

The **current website domain** is through the *Github* server at (it contains the introduction Unity animation as well): <https://sbcarpin.github.io/generationSTEM.github.io/>

However, this link is not an accurate representation of the website because through it some content is missing and/or material is out of place.

The Figma with the two different prototype designs is found in this link. Prototype #1 in the Figma is actually prototype 2 on this document. Prototype #2 in the Figma is actually the final prototype in this document. **Figma link:**

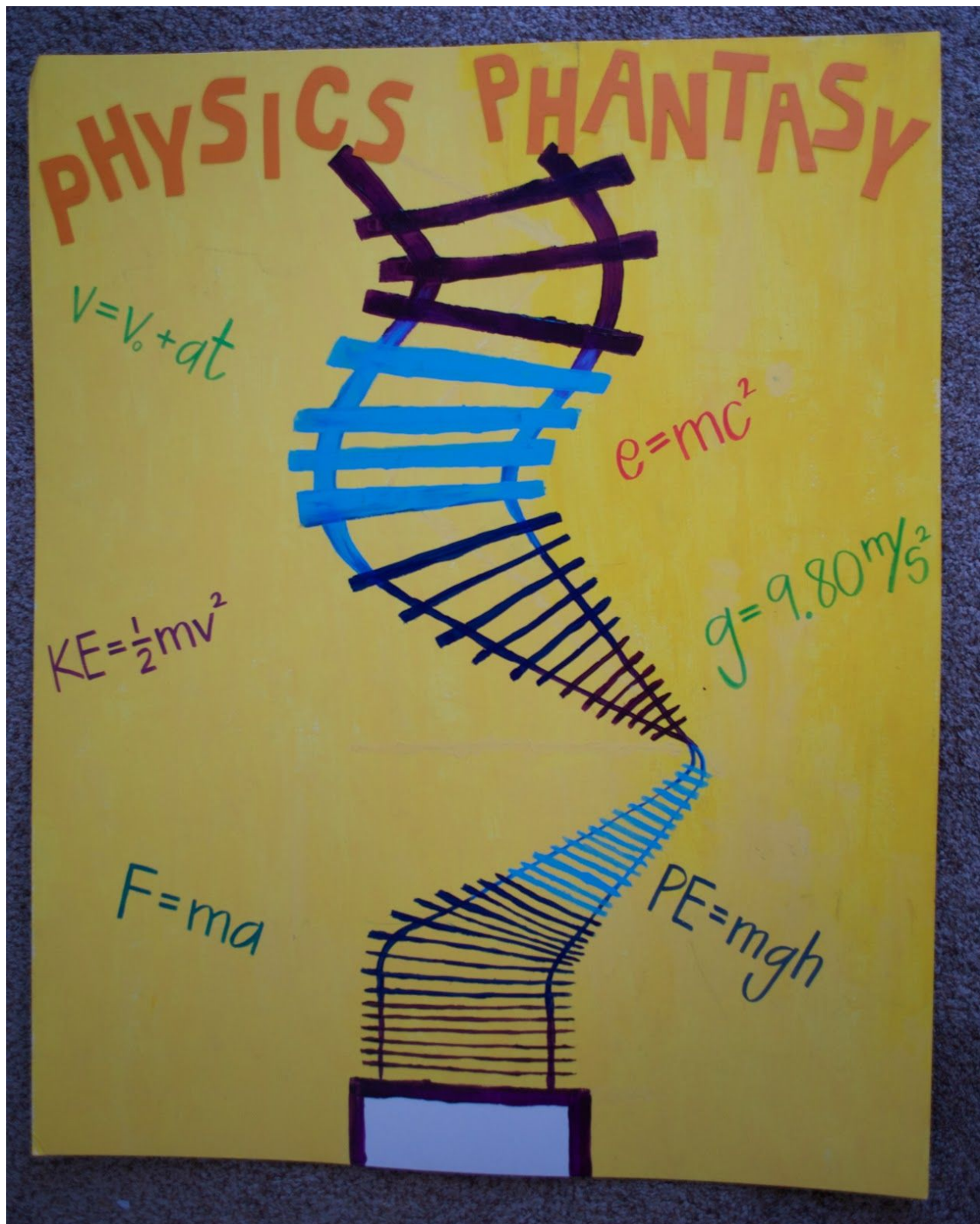
<https://www.figma.com/file/xmPCTwUBxHcUSFHfTzfRaR/GenerationSTEM?node-id=0%3A1>

Digitize these Posters *(exactly as is)*

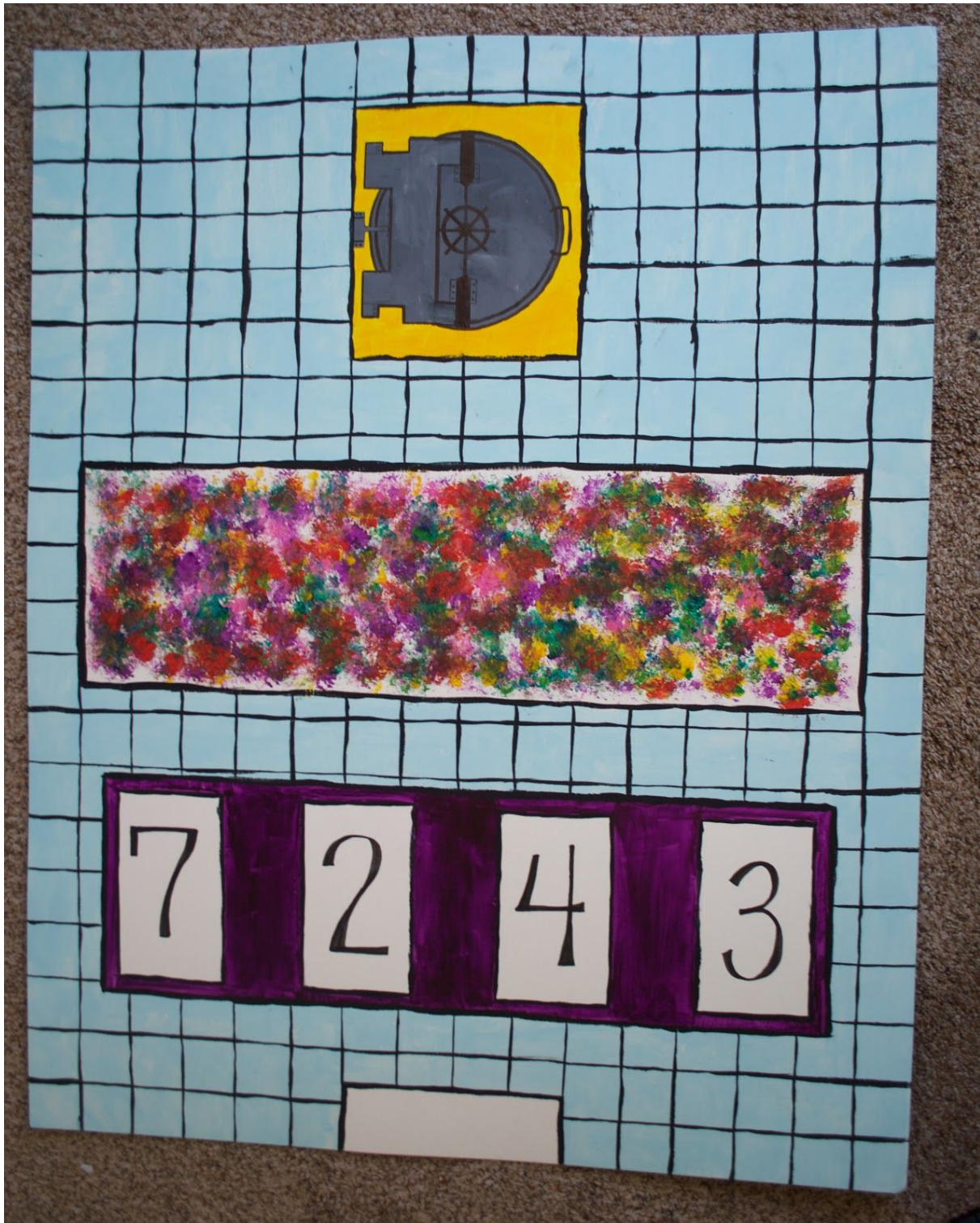
1. Alexandra the Astronaut



2. Felipe the Physicist



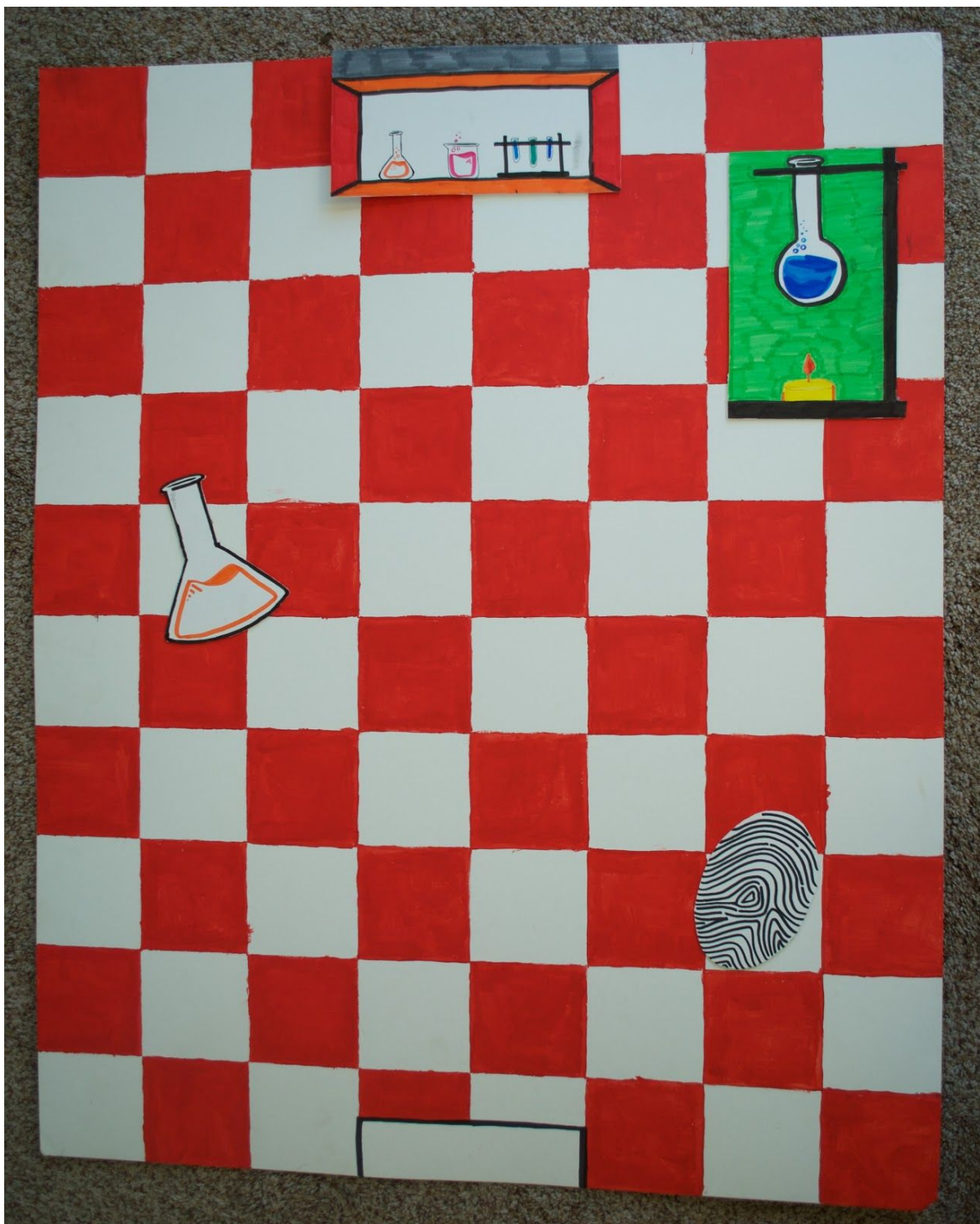
3. Maria the Mathematician



4. Enrique the Engineer



5. Carlos the Chemist



6. Bella the Marine Biologist

7. Sara the Software Engineer

