Officer Buckle and Gloria

DESIGN CHALLENGE
The Design Process

- Empathize
- DEFINE
  - Constraints
  - Guiding Principles
- IDEATE & Brainstorm
- MODEL & PROTOTYPE
- TEST & Evaluate
- PUBLISH & PRODUCE

Research
An Engineering, Literacy, and Design Thinking Experience
Step 1: Read and Empathize

1) Read the book.
   As you are reading/listening, think about the problems that are happening in the story.

2) Empathize with the characters in the book.
   Think about the feelings, emotions, actions, and behaviors of the characters.
Step 2: Define the Problems

1) Discuss the problem(s) from the story.
2) Create a Problem Statement:

__________ needs a way to ____________
because__________________.

Officer Buckle and Gloria need a way to see that you
know how to use teamwork in order design safety
tips for our classroom.
Step 3: Ideate Possible Solutions

As a group, brainstorm ideas that would solve the problem you identified. What rules might you design to help our classroom work as team? Design a way to display your rule in the classroom.

The more ideas, the better!
Don’t judge ideas!
Sketch or write... you choose!
Step 4: Prototype

Decide on one idea to prototype and begin building!

Prototype Parameters:

- We made this rule because it is important to ______.
- You will have a limited amount of time to build.
- You will only be allowed the materials that are provided on the table.
- Your prototype must be something that every member of your group can speak to.
- Collaborate, use teamwork, and have fun!
Step 5: Test and Feedback

- Partner up with another group to share your design.
- Test your design by accepting feedback.
- Make changes.
- Repeat.
Step 6: Group Present

Be prepared to present to the group. Decide who will speak about each number. Practice presenting to each other before speaking to the whole class.

1) Tell us about your prototype.
2) What was the most challenging part of the process?
3) How well did your group work together?
4) What would your group do differently next time?
Step 7: Time to Reflect Personally

Let’s think about the thinking we used in this process. Have a discussion around the following questions:

1) What went well during the process?
2) What did you learn along the way?
3) What surprised you about this experience?
4) How would you alter your learning experience for next time?
I really like the way your prototype ______________________________

The most successful part of your design was _____________________

I noticed_____________________________________________________

Your design made me think of __________________________________

Have you thought about adding ________________________________

because

Have you thought about taking away ____________________________

because
Next Steps

- Go back with your group and make changes
- Finalize your finished product
- Submit

Extend Your Learning

How can we use what we’ve learned about creating safety tips in our classroom as a way to create safety tips on our campus?

1) What safety tips do we need on our campus?
2) Where should we put them?
3) How might we display them?
4) How can we share the importance of our safety tips with other students on campus?