

Maker Mindset! Week 6

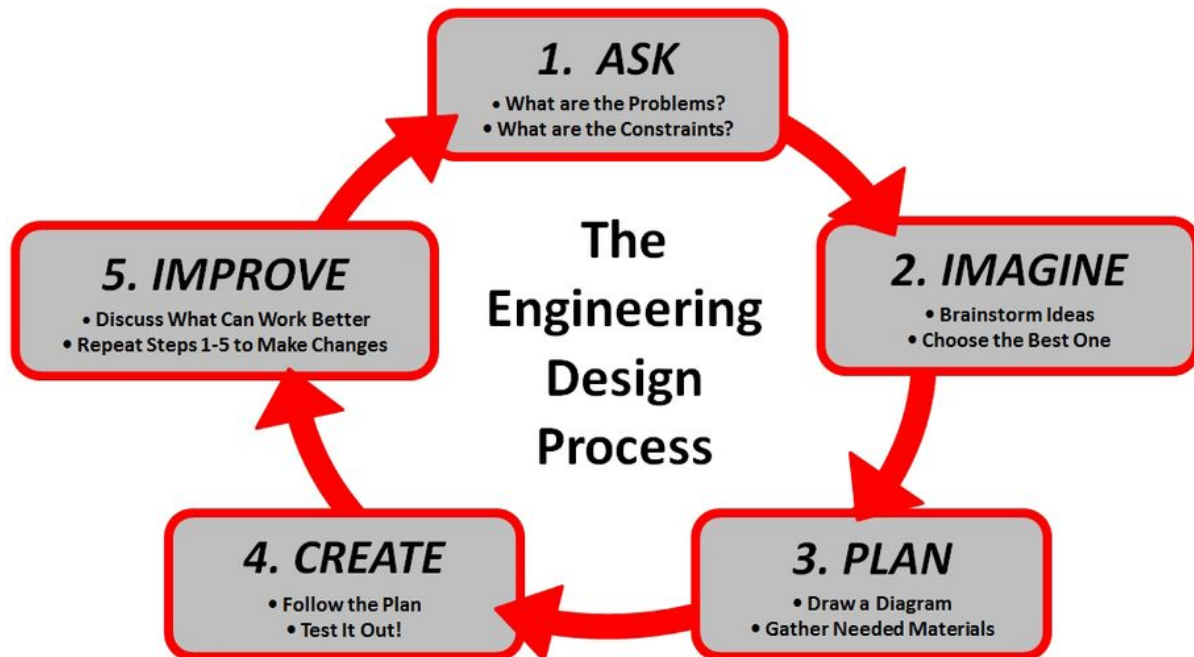
Day 4: Ask, Imagine, Plan

Teacher/Parent Background:

Students will be using the information gathered in the previous days to create and design their own arcade or board game inspired by *Caine's Arcade*. Students will go through the Engineering Design Process to work through the planning, building, and improving of their design.

Related Information:

- [Caine's Arcade](#)
- Engineering Design Process:



Key Terms:

- Iteration
- Connection
- Adhere
- Engineering Design Process
- Ideate

Materials List:

- Pencil
- Journal/notebook
- Notes or drawing from previous day's designs.

Activity Description:

- Reflect on the previous three days
 - *What have you learned about arcade/ board games?*
 - *What did you enjoy about making a marble maze?*
 - *What are some ways you can incorporate some of the ideas of mazes, cardboard connections, and arcade games to make your own design?*
- Review the Engineering Design Process
 - *Explain to the students that they will be going through this process for their final design.*
 - *Describe how Engineers use the Engineering Design Process to make sure they have worked through a problem to solve, and to test multiple prototypes or iterations before the final solution is presented.*
- Give the challenge: Students will create their own arcade/board game inspired by Caine's Arcade. The constraints are set by the instructor depending on what resources are available to you.
- Ask Stage: Decide what type of game they will create
 - *Encourage students to ask questions regarding constraints such as materials, time, etc.*
 - *Student(s) should be documenting the stages in their notebook/journal.*
- Imagine Stage: Students will design in their notebook/journal a few options of potential designs
 - *Encourage student to have a theme or focus to their game*
 - *Try not to lead the student down a particular path. They will work to change their design through testing.*
- *Planning Stage:* Student(s) will list the materials and write down how they will build their game. They will also decide when to do what part of the building, and the steps that need to occur to make that happen.

Closure:

- Ask the student to go over their process with you, and their plan for tomorrow's build.
 - *Ask if they would like to gather all materials needed to be prepared for tomorrow.*
 - *Don't be afraid to ask questions, and for students to have to justify their designs, it's part of the process.*

Extension:

Explore!

Check out the following links to see other carnival games for inspiration:

- [Skee Ball](#)
- [Cardboard Pinball Game](#)
- [Homemade Carnival Game](#)