



## ***GRADE 3-5 CHALLENGE: CARDBOARD ARCADE!***

Students in grades 3-5, to participate in this challenge, you, or a team of 2, will need to create a cardboard arcade game. You can use any additional materials in your creation. Be INNOVATIVE!

We will display all the games in our very own arcade at the **STEAM Fair on May 19th, 5-7pm**. Each game will cost 1 carnival ticket to play. You may choose to provide prizes for your customers.

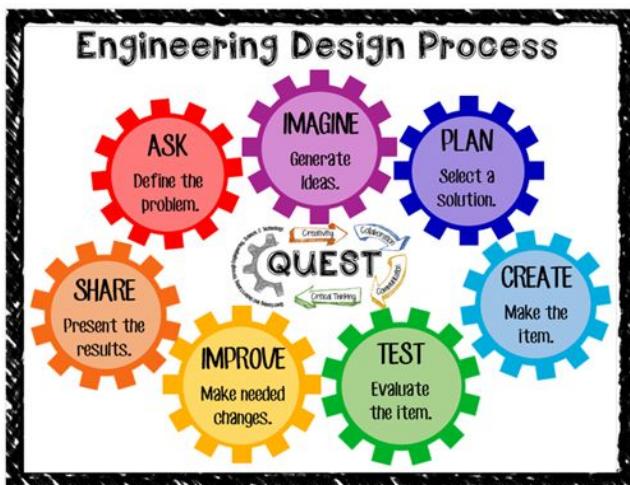
- **Register your game entry by May 17** →
- **Arcade setup- 1:45pm, Presentation and Judging- 2pm-3:30pm**
- **Check the rubric on the back to see what the judges will be looking for.**
- **Be sure your display includes game rules and/or instructions how to play.**
- **Be ready to present your engineer design process and reflection notes to the judges.**



Get ideas- Google “Cardboard Arcade” and/or watch the “Caine’s Arcade” videos on Youtube. Reuse materials from around school (boxes available), home, the recycling, Dollar Store, Axman, etc... No need to spend big money, just be innovative, document, and construct a durable game. Good Luck!!!

# CARDBOARD ARCADE- JUDGES RUBRIC

How will your project score?	Functionality & Durability	STEAM Connection	Innovation Creative & Original	Display Instructions	Presentation Design Process & Reflection
<b>Level 4</b> <i>STEAMtastic!</i>	Successfully designed to perform a specific function or task and solid design- stays together when played multiple times.	Game clear connection to: <b>-Science</b> <b>-Technology</b> <b>-Engineering</b> <b>-Art</b> <b>-Math</b>	-Attractive Design -Creative game pieces & details -Used a variety of materials to build -Original Idea	-Engineer Name -Game Title -Has clear, neat, easy to follow instructions on how to play	-Engineer design process documented, includes tests conducted, plan drawings/pictures, & is well explained. -Clear analysis & reasoning for materials used in the design to affect performance. -Explains insight gained from 2 problems worked through in process.
<b>Level 3</b> <i>STEAMazing!</i>	Designed to perform a specific function or task, but not durable.	Connects to Four areas	Three of the above items	Three of the above items, but difficult to understand.	Three of the above items, but process is unclear or missing a step.
<b>Level 2</b> <i>STEAMprogress!</i>	Project is not designed to perform a specific function OR falls apart easily	Connects to Three areas	Two of the four above items	Two of the above items, and/or hard to understand.	Two of the above items, and/or hard to understand.
<b>Level 1</b> <i>STEAMstarter!</i>	Project does not perform a specific function and falls apart easily	Connects to Two areas	One of the items completed	One of the above items, and/or hard to understand.	One of the above items, and/or unclear design process.



## Engineer Reflection Questions~ *Answer on another page*

- The game I made is:
- How you play it...
- Mechanically how it works...
- Some of the problems I worked through...
- To Improve I would....