Maker Mindset! Week 6

Day 2: Build a Connection!

Teacher/Parent Background:

Today we will be making connections to board games and the construction of Caine's arcade. Without learning and understanding various types of connections, students will often simply attempt to tape or glue two flat pieces of cardboard together. This is a problem because there is not a lot of strength to hold the two pieces together.

Related Information:

1. ASK
   - What are the Problems?
   - What are the Constraints?

2. IMAGINE
   - Brainstorm Ideas
   - Choose the Best One

3. PLAN
   - Draw a Diagram
   - Gather Needed Materials

4. CREATE
   - Follow the Plan
   - Test It Out!

5. IMPROVE
   - Discuss What Can Work Better
   - Repeat Steps 1-5 to Make Changes

The Engineering Design Process
Maker Mindset! Week 6

Key Terms:
- Flange
- L-Brace
- Slot
- Tab
- Score

Materials List:
- Paper tubes
- Small to medium-sized cardboard pieces
- Brass fasteners
- Wire and/or string
- Cardboard cutting tools (scissors)

Activity Description:
- Ask student
  - Take a look at things around you. Look at how the door is secured to the wall. Look at an office desk or table. Even the chair you sit on has connections.
- Show the photo of examples of different connections

![Cardboard Connections Grid](Photo permission by Klara Reford @kindyfriends)

- Introduce each cardboard connector and demonstrate how each piece works.
  - Ask students how they could use each type of connector.
- Working with an adult or partner, have students re-create the example
board, displaying each type of cardboard connector to get hands on experience how the connectors work.
  ○ *Prompt students to continue to brainstorm how pieces could be used in a game.*
    - *Ask the students if they see any connections with the connectors and Caine’s Arcade*

**Closure:**

Students should reflect on their ideas for assembling their own type of game in their notebook, and how they might incorporate their own connectors.

**Extension:**

*Assemble Linkages (see below)*