



Summer 2020 Lesson

Class: Innovation Club

Grade Band: Grades 2-6

Teacher: Mrs. Richey

Lesson: Carboard Box Pinball Machine

Objective: Flick a ball around a recycled obstacle course to rack up points and have fun with your family!

Materials: empty carboard box, 2 rubber bands, duct tape, markers, bottle caps, construction paper strip, small recycled items for obstacles, cardboard tubes, 1 marble, paper

Process:

1. Use the bottom portion of a carboard box or shoebox depending on the size you'd like your game.
2. Tape 2 cups on the bottom of the back of the box on one side to elevate your game base.
3. Create two paddles (flippers) out of sturdy cardboard, 1 ½ inches high and long enough to almost meet in the center of the box and stick 3 inches out of the box to create paddles. Cover the paddles in duct tape to strengthen them.
4. Carefully cut an opening 1 inch from the bottom side of the game on the right and left sides with just enough room to insert your paddles.
5. Poke one small hole on the bottom of the box (the part facing you) on each side, about one inch from the outside edges. Loop a rubber band around each paddle and through the hole you just made in a U shape to make the paddles able to flick and return to their resting position.
6. Add a strip of construction paper (bumper) in an upside-down U shape to round the top edges of your game.
7. Glue or tape small obstacles such as bottle caps or small cups in your box. More obstacles make the game more challenging. Write point values next to your obstacles that you can add up when your marble hits those obstacles.
8. Tape a cardboard tube cut in half as a tunnel at the top of your game as a place to drop in your marble.
9. Decorate your game with markers or Sharpies. Make it fancy or give it a cool theme and title!!
10. Drop in your marble and flick your paddles to rack up points in your pinball machine!!

Vocabulary: Flippers (the cardboard levers at the bottom of your game board that can flick up and down to keep your marble in play), bumper (the curved upper area that keeps the marble in the desired playing area), drain (the area below the flippers, your turn ends when the marble lands there), playfield (the main part of the game where the marble is in play), ramp (a raised channel where the marble can travel)