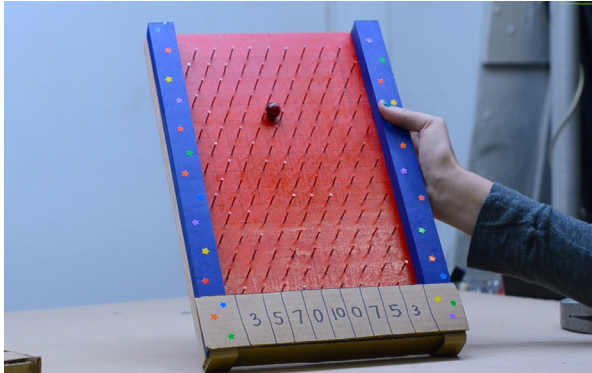




# Marble Drop



## Supplies:

- 9" x 14" plywood
- two 14" x 1" x 1" pieces of wood
- nails 3/4" long  
(approximately. 150 - 200)
- popsicle sticks
- cardboard
- marbles
- craft knife
- ruler
- pencil
- hammer
- hot glue gun with glue sticks
- paint (optional)

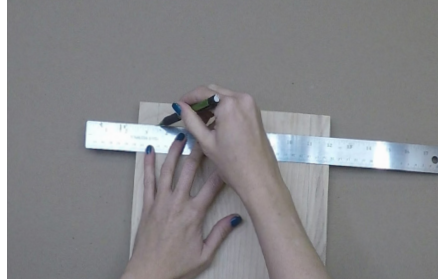




# Marble Drop



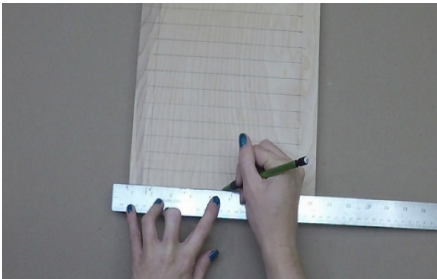
**1.** Place your two narrow pieces of wood along the left and right sides of your board. Mark the margin they'll cover, and then lay them aside again.



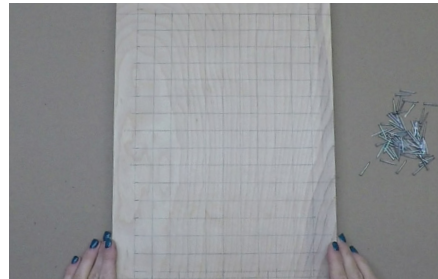
**2.** Make margins at the top and bottom of your board that are about 1.5" wide.



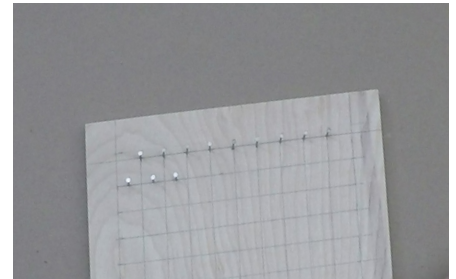
**3.** Draw an evenly spaced grid on your board, centered on your board. Each square of the grid should be larger than your marble.



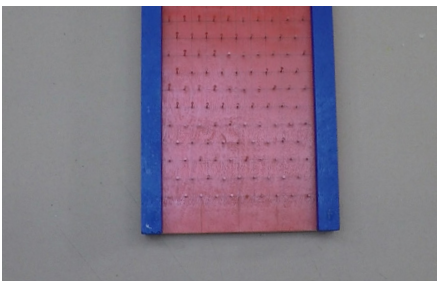
**4.** Measure your grid squares from the center of your board to make sure that the grid itself is centered.



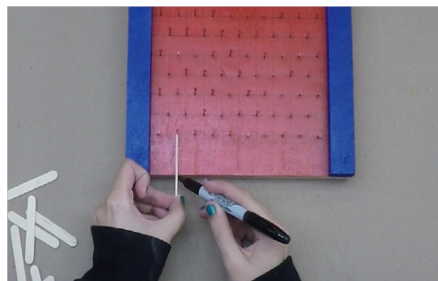
**5.** Our marble has a  $\frac{1}{2}$ " diameter, so the cells on our grid are  $\frac{3}{4}$ " x  $\frac{3}{4}$ ".



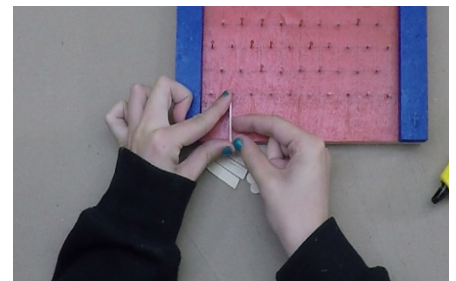
**6.** Hammer the first row of nails at the corners, and then for the second row of nails, hammer each nail halfway between the corners.



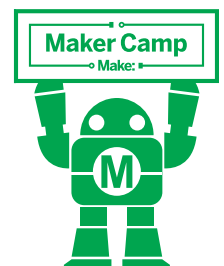
**7.** Continue to alternate between corners and centers in this pattern until you get to the bottom of the grid. After you have all the nails in, glue the bumpers to the left and right of your board.



**8.** Measure and cut a piece of craft "Popsicle" stick long enough to reach from the last row of nails to the bottom edge of the board. Repeat this step until you have one cut stick per nail in the bottom row (unless the nail is right up against the bumper).

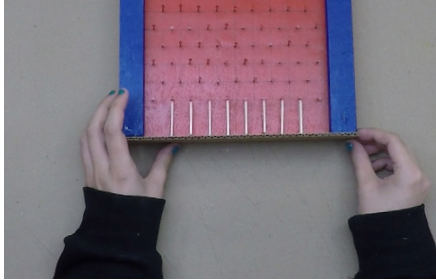


**9.** Glue the popsicle stick walls below each nail in the last row.





# Marble Drop



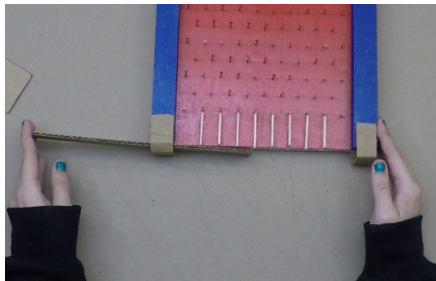
**10.** Cut a piece of cardboard so it's as long as the bottom edge of your board and as wide as the thickness of the bumper and board added together.



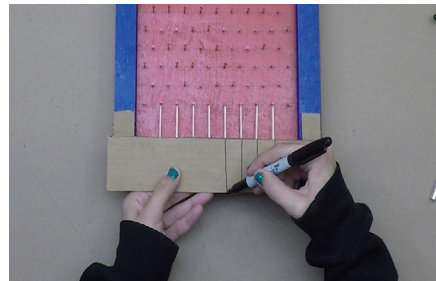
**11.** Cut two thin pieces of cardboard that are long enough to reach from the front of the board to the back. Bend them into U-shapes.



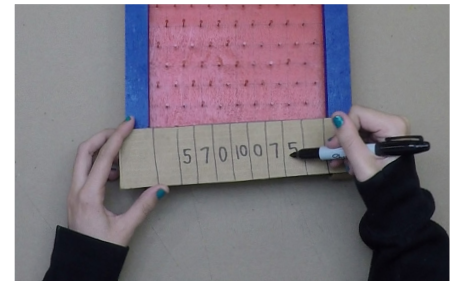
**12.** Glue these two loops onto each bumper. Make sure to leave a small gap at the bottom.



**13.** Slide the cardboard piece that you measured in step 10 into the two loops. It will act as a shelf to catch your marbles. How else could you make a shelf?



**14.** Cut a piece of cardboard to hide the stick walls. Draw the wall lines on top of the cardboard. Glue it to the bumpers.



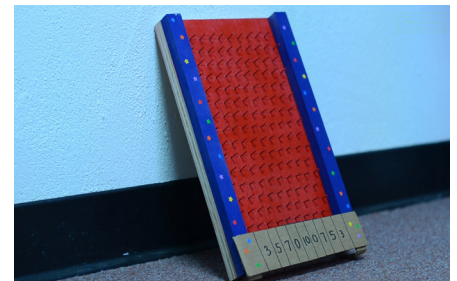
**15.** Give each column a point value. You don't have to use our numbers! You could write down a value to subtract such as "-3" in order to make your game really exciting!



**16.** Test your new Marble Drop game! Play with a friend and keep track of your scores. What will your game rules be? First to 50 wins? Slide the bottom shelf out to retrieve your marbles.



**17.** If you have extra wood, you can make a stand for your game board by gluing a triangular piece of wood to the back.



**18.** If you don't have extra wood to make a stand, this game will work well propped up against a wall or chair.

