



# Crazy 8s Race

## The Big Idea

Play an exciting board game where you'll race to reach the finish! You'll pull your cars onto the board when you roll the right numbers, and see which team drives all the way to 64 first.

## You Will Need:

### To play the game:

- ★ Dice: 1 pair
- ★ Matchbox cars or other playing pieces: 8
- ★ Masking tape

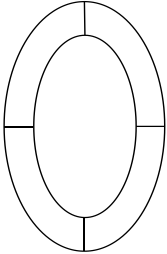
### To make the game board:

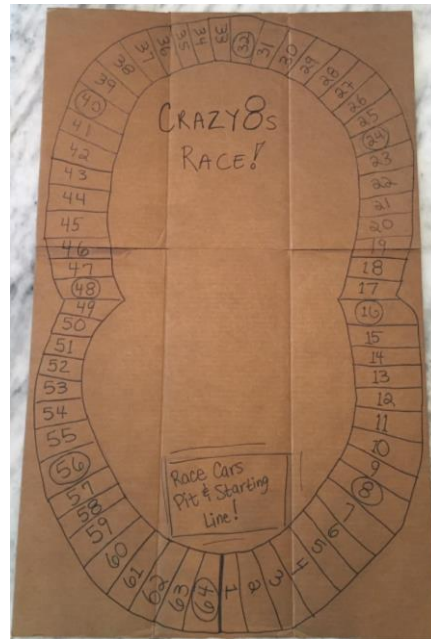
- ★ Large pieces of cardboard or paper, approximately 40" x 25"
- ★ Marker in a dark color: 1
- ★ Crayons (optional)
- ★ Packing tape (optional)
- ★ Scissors

## The Math Behind the Scenes:

- ★ Addition and Subtraction
- ★ Number recognition
- ★ Place Value
- ★ Multiples of 8
- ★ Bonus: Simple probability

# Make the Game Board

1. Cut a cardboard box or tape sheets of paper to make a game board that's approximately 40" x 25".
2. Draw an oval around the edges of your game board with a smaller oval inside to make a racetrack that's approximately 4 inches wide. You can draw freehand, no need to be exact!
3. Divide your racetrack into quadrants, like this 
4. Divide 1 quadrant in half. Divide both of those parts in half to make 4. Divide each in half to make 8 and again to make 16. Repeat until each quadrant has 16 parts.
5. Starting at the bottom, number each space around the track 1-64.
6. Circle the multiples of 8, which are: 8, 16, 24, 32, 40, 48, 56, 64.
7. The final product should look something like our homemade boards pictured below. This also makes a great STEAM project for kids – let them use their imagination to color the infield with cars, pits, pit crews and fans!



# Rules of the Game

1. Divide players into 2 teams. Each team should have 4 cards, regardless of how many players are on a team. It may be helpful to affix a small piece of masking tape to distinguish one team's cars from another.
2. Each team gathers its cards in the center of the racetrack.
3. Each team gets 1 roll of the dice on its turn. Teams alternate rolling the dice, with a new team player rolling each time.
4. To begin play, one team rolls the dice and moves 1 car forward that many spaces. The opposing team does the same.
5. On subsequent rolls, a team can decide to add or subtract the 2 numbers on the dice to move forwards OR backwards on the board. So, if a player rolls 3 and 2, the team can add the dice together to go forward or backward 5 spaces or subtract the dice to go forward or backward 1 space.
6. A team can bring another car onto the board when either:
  - ★ The car lands on one of the multiples of 8;
  - ★ Grades K-2: one die matches a digit where the car stopped on its last turn. For example, the team is stopped on 24 and one die shows 2 or 4;
  - ★ Grades 3+: one die shows a factor of the number the car is currently on. You can remind kids that a factor is a smaller number that divides evenly into the larger number. For example, 1, 2, 3, 4, 6 and 12 are factors of 12. However, 1 doesn't count for this game!
7. When a car is added, it joins the first car at the same spot on the board. All the team's cars move together for the rest of the game.
8. A team wins if they have at least 2 cars on the board and land exactly on 64!

**Before you begin, ask:** “Do you notice anything special about some numbers on the game board?” Discuss. See if the kids realize that some of the numbers are circled! “These numbers are special. They are multiples of 8. A multiple is the product of one number multiplied by another number. For example, 8 multiplied 3 times is 24, so 24 is a multiple of 8. Multiplying a number is the same as adding it many times. So,  $8 \times 3$  is the same as  $8 + 8 + 8$ .”

**Hint:** When deciding whether to add or subtract with each roll, keep in mind that multiples of 8 are good if you need to bring on another car! Numbers ending in 7, 8, 9 or 0 are not good if you need to bring on another car because the die only goes from 1 to 6, so you can't roll those numbers.

**Bonus:** How many spaces on the board give you the chance to bring on 2 cars in one turn? See if kids figure out it's numbers whose digits could show up on both dice! For example, if the team is parked on the 11 space and they roll 1 and 1, they could bring out 2 more cars! There are 33 such spaces on the board: 11 through 16, 21-26, 31-36, 41-46, 51-56 plus 61, 62, 63 (64 is also one of those numbers, but that's the winning spot!)