

## Marker Cars

*Explore force and motion and make your unique mark with toy cars!*

### Big Idea

Cars help us move from one place to another add a marker to see how pushing and rolling affects the marks you make.

### Standards

1.A Demonstrate understanding through age-appropriate responses.	Children will follow simple one and two step directions to complete the Marker Car Project.
7.A Measure objects and quantities using direct comparison methods and non-standard units	Children will compare and categorize which car is the longest, shortest, and makes a continuous line with the marker.
11.A Develop beginning skills in the use of science and engineering practices, such as observing, asking questions, solving problems, and drawing conclusions.	Children will begin to create new ideas, observations and investigate toy cars with markers taped to the back.
26.A Understand processes, traditional tools, and modern technologies used in the arts.	Children will use colored markers in a new way by attaching it to the back of the car.

### Materials

- Toy cars- best is small matchbox
- Masking tape
- Markers
- Paper or cardboard

### Setup

Find a clean floor space to work. Tape the markers, with the caps off, on to the bumper or back of the toy cars.

### Directions

1. Begin by setting up the cars and placing on the paper. Think of this like setting up a racetrack and drawing a whole new way.
2. Create different kind of lines by driving the car. For example, create straight lines, wiggly lines, lines that start and stop. Then create different shapes such as circle, rectangle, and triangle. Next, explore overlapping lines where one line is on top of another. Which toy cars are the longest, shortest? Can you tell me about the lines the cars make?
3. Have fun drawing with cars!

*Investigation Questions:*

*Q: What other designs can you make with your cars?*

*Q: Which can you tell me what type of car is the longest, shortest, and makes the continuous line?*

*Q: What do you think would happen if we put the paper on a ramp with the marker car?*

*Q: Is there one car that draws a bright line? Can you tell me why?*

*Q: What else can you tell me about the Marker Car?*