

# LEGO Robotics Part Two



SUBJECT	GRADE	NUMBER OF STUDENTS	TIME FRAME
Operating a Robot	3 <sup>rd</sup> +	10-20 (in turns)	20 Mins

## OVERVIEW

After completing this lesson, students will be able to operate a robot through the use of the Mindstorm app on an iPad. They will also be able to complete various missions on the challenge arena. This lesson enables students to develop problem-solving skills that will allow them to become the critical thinkers and creators of the future.

## Procedure

1. Students will practice (in turns) operating the pre-constructed robot via the iPad. They will practice driving forward, backward, left/right turns and using the up and down features of the robotic arm.
2. As a class, go through the three main missions for students (broken down into two teams) to complete using the robot. A Discovery Station docent will showcase each mission.
  - a. **Opening the Door:** Students will taking turns operating the robot to push open the door on the challenge arena. They are only permitted to touch the robot when the robot is in the base.
  - b. **Color Wheel:** Students will operate the robot to push on the wheel lever – thus causing the color wheel to spin. Once the wheel stops, the student must identify which of the three colors are isolated. That isolated color is then the color pull slot that the student must then have the robot remove from the color wheel and brought back to the robot base.
    - i. This requires the students to work as a team and construct an attachment to then put on their robot. They may then take turns if desired to attempt this mission.
  - c. **Making a Goal:** Students will operate the robot to maneuver the ball into the soccer goal. Students are only permitted to use the robot to complete this task, without any outside interference from the students.
3. Students may then complete more missions if so desired by the instructor.