

LEGO ROBOTICS

Make sure to have this sheet signed every time you have something passed off.

NOTES (20 pts)

Robot:

Loop:

Switch:

Sensor:

Motion:

Sound:

Ultrasonic:

Touch:

In-Class Challenges (Complete All)	Score	Sign-off	Due
A) - Build a robot that can be returned to the original bot at the end of each period.	_____/20		A: B: 4/30
B) - Build a program that demonstrates your knowledge of switches (explain program to Mr. A)	_____/20		
C) - Build a program that demonstrates your knowledge of loops (explain program to Mr. A)	_____/20		
D) - Build a working remote control that enables your robot to move in all 4 directions	_____/20		

	Big Challenges	Score	Sign-off	Due
DO BOTH	1 - BASIC ROBOT Students should build a robot correctly (follow instructions) and load the test program onto the robot. Test program should be run and shown to the teacher. Robot must have wheels, turning capability, and sound turned on.	_____ 50		A: B: 5/4
	2 - KEEP IT SQUARE (REMOTE CONTROL ALLOWED) Program your robot to travel in a square. Robot must travel in a square following the outside of a classroom table. Robot must stay within 1 inch of the edge of the table at all times.	_____ 50		
CHOOSE 2	3 - VOICE COMMAND Program your robot to go forward until it hits a wall. Your robot should then back up until you say the word "TURN" at which point your robot should turn to the right and proceed forward.	_____ 50		A: B: 5/6
	4 - THE MAZE (REMOTE CONTROL ALLOWED) Program your robot to find a blue ball in the maze set up by Mr. Alder and pick it up. Your robot should not pick up a ball of any other color.	_____ 50		
	5 - DANCE OFF Program your robot to perform the Macarena dance to the music. Robot should move in sync with the beat and perform basic "arm movements" and "feet movements".	_____ 50		
DO BOTH	6 - FOLLOW THE LINE Program your robot so that it follows the line. For full points you must complete both courses.	_____ 50		A: B: 5/8
	7 - JOHN HANCOCK PLEASE (REMOTE CONTROL ALLOWED) Program your robot so it writes "Mr. A" on a piece of paper.	_____ 50		
DO THIS	8 - BATTLE BOTS (REMOTE CONTROL ALLOWED) Mr. A will tape a circle on the floor (2.5' diameter). Your robot will go head to head with other robots. The last robot in the circle wins. Each round will last 30 seconds - if neither robot has been removed in 30 seconds the round will be repeated. After a match has been tried 3 times with no removal both robots will be disqualified. You must win one battle for full points. <u>You cannot break the other robot.</u>	_____ 50		A: B: 5/14

TOTAL: _____ /450