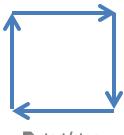
Name:	Date:	Class:	

Loops and Switches Worksheet

PART 1 (Day 1)

Suppose we want to make a robot move once around in a square pattern as shown on the right. Assume 2 feet on each side. →

To do this, the robot needs to go forward, then turn right, then go forward, then turn right, then go forward, then turn right, then go forward and turn right to get back to its original position.



1. Write, in English, the steps of how you would have a robot do this.



2. Now, use LEGO blocks to implement this (as shown on slide 6, but do this without looking at the slide).

3. Now, do this using the loop idea introduced in class (as shown on slide 10, but do this without looking at the slide).

Name:	Date:	Class:	
PART 2: Mini-Activity 1 (Day 1) Using the loop command, program Go forward until it hits a wall, the Repeat the above instructions until the second s	the robot to: hen back up one rotation		
• Then stop.	intil the robot detects a s	souria.	
1. Write the logic you will use to p	rogram this task.		

2. Sketch out the program below, in the form of NXT software blocks, and discuss with your group partner to make sure it will work. Then implement it on the robot.

Nar	Name:	Date:	Class:				
PΔ	PART 3: Mini-Activity 2 (Day 2)						
Program the robot to end up exactly 24 inches from a wall, no matter where you start.							
•	So the robot to end up exactly 24 inches from a wall, no matter where you start. So the robot can be in one of two states; either 1) the robot is closer than 24 inches to the wall or 2) the robot is farther than 24 inches from the wall.						
•	 Program for this task using a switch state 	ment.					
1.	1. Write out the logic you will use to progra	m this task (as d	liscussed on slides 14-18).				
2.	Sketch the NXT program below, and discu work. Then implement it on the robot.	ıss it with your န	group partner to make sure it will				

Name:	Date:	Class:					
PART 4: Mini-Activity 3 (Day 2) Program the robot so that it moves forward until it hears a sound. If the touch sensor is pressed when it hears a sound, the robot should turn left. If the touch sensor is not pressed when it hears a sound, the robot should turn right. Use the switch statement.							
1. Write the logic you will use to pro	gram this task (as dis	cussed on slide 20).					