# Maze: From Here to There

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| **Objective:** Children will act as robots and programmers, following and giving verbal directions (i.e., a code) to get from a designated Point A to Point B. | **Vocabulary:*** code
* sequence
* forward
* backward
* turn
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| **Materials:*** a large enough space to move and move around freely
* a Point A (e.g., cone, toy, x on the ground, etc.)
* a Point B (e.g., cone, toy, x on the ground, etc.)
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| **Learning Trajectory and Progression Steps:**Sequencing: * Simple Sequencer
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| **The Investigation:*** Set up your Point A and Point B so that they create a straight path.
* Introduce the activity to children:
	+ **“Today we are going to be robots and programmers!”**
	+ **“We are going to try to get a robot from here (Point A) to here (Point B) by giving them directions, or a code to follow. The programmer’s job is to give directions. The trick is that the robot can only move the way the programmer says.”**
* Model being the robot and ask children to give you directions. Help children to be specific in their directions.
	+ **“If you want me to take three steps. Say, ‘Move forward three.’ That's the code!”**
* Move the number of steps children tell you to and ask children to determine if you made it to your goal or not. **(Simple Sequencer)**
* If not, have children suggest another number of steps to take. Keep trying until you (the robot) reach the goal.
* Once you make it to the goal, help children determine how many steps in total it took to make it to the goal.
	+ **“We moved forward three and then four. 3+4=7. It took seven steps to get from there [Point A] to here [Point B].”**
* Have children give you the directions as one command.
	+ **“Okay, so to get to the end, we had to move forward seven steps. Let’s try it out one more time to make sure that’s right.”**
* Allow children to have turns as both the programmer and the robot to try both giving and following the verbal directions.
 | **Adaptations:**See [**A Guide to Adaptations**](https://stemie.fpg.unc.edu/guide-adaptations)for general ideas and strategies.**Examples of Adaptations for this investigation:****Environment:*** Allow children to use different ways to move, such as using a wheelchair, walker, etc.

**Instruction:*** Accept all forms of communication when children given directions including verbal, visual, gesture, AAC, etc.
* If children say that the robot made it to the goal when the robot did NOT make it to the goal, support children by modeling **“I didn’t make it!”** and showing where the end point is vs where you ended up. **“We tried to make it over here”** (step to end) **“but instead we made it over here.”** (step back to where the incorrect directions got you). **“I didn’t go far enough. Let’s try more steps.”**
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| **How To Continue This Investigation:*** Add a Point C that still involves Point A and B but includes a challenge such as a turn. **(Sequence Planner)**
	+ Start a conversation comparing the first and second goal.
		- **Is one farther than the other?**
		- **Do we think it will take more or fewer steps to get there?**
		- **How many steps did it take us to get to our first goal? Can we use that to help us get to our second goal?**
	+ After children have determined the directions needed to get to the new goal, invite a new student to join the investigation and ask children if they remember/can lead the new student to the goal with the directions that were previously determined.
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