

STEM ACTIVITY: **CODING**

Instructions adapted from: <https://researchparent.com/coding-a-lego-maze/>

**If you have internet access, you can check it out for more details*

Computer coding is the method of giving instructions to a computer to perform a task. There are baby steps in learning how to think like a computer programmer. A beginner can learn the building blocks of programming language. These mazes can be solved with “code” using paper rather than a computer.

1. Cut out the instruction cards.
2. If you can, cover the grey part of your maze with LEGO.
3. Get a figure that has a front to guide through the maze
4. Practice your rights and lefts. You will need to know which is which!

Day One:

Learn to think from the point of view of the figure in the maze. Place the figure at the start of the maze and put the cards in 3 piles (Go Forward, Turn Right, and Turn Left). Place the instructions that you think the character needs to follow into a long list.



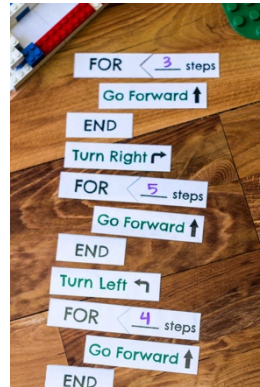
For example, in this LEGO maze, the figure needs to:

Go Forward
Go Forward
Go Forward
Turn Right
Go Forward, etc.

Have a family member follow your instructions to walk your figure out of the maze. Try it with a few other mazes.

Day Two:

Level 2: Now you can try using the card that says “For ___ Steps” rather than just repeating the same card over and over. In coding this is called using a loop. At the end of the “for” loop, you place an “End” card to note where the loop ends. For the example above, the solution would look like this:

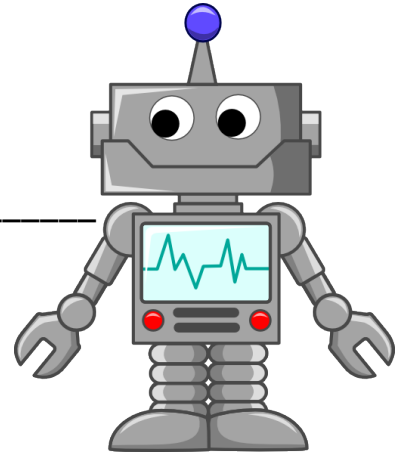


Try it with the different mazes!

At this end of this second activity, fill out the reflection sheet.

STEM ACTIVITY:
CODING

Name: _____



REFLECTION:

What did you do well in this coding activity?

Write about a mistake you made and how you fixed it.

Circle the face that shows your feelings about this coding activity:

