

Busy Bins for \$5 or less

MATERIALS

- Blue Painters Tape*
- Chalk** (for outside)
- Blindfold**
- Printable Coding Cards available at: www.STEAMengineOKC.org/freebies#busybins

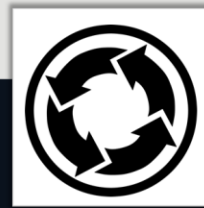
* If using tape indoors, test a piece of tape on your floor to make sure that it doesn't damage it

**Optional

Coding
Unplugged:
a-MAZEing
Escape

INSTRUCTIONS

- Identify a clear floor space (indoor or outdoor) that is at least 10 feet x 10 feet wide.
- Using painters tape or chalk, create a maze on the floor (see samples in the printable that accompanies this activity)
- Review the terms and meanings of the symbols on the printable coding cards.
- Create an "algorithm" by placing coding cards to instruct another person escape the maze.
- For another level of difficulty, have the person "escaping" the maze wear a blindfold.



CODING UNPLUGGED: AMAZEING ESCAPE

Overview

This activity introduces the basic concepts of coding – or creating a sequence of instructions to create an algorithm to achieve intended results. Rather than teaching a specific coding language, this activity focuses on developing computational thinking – or the ability to look at problem and modify it so that it can be solved using a computer or a machine. Computational thinking often requires breaking problems down into a series of smaller problems or identifying patterns.

Terms to Know

Algorithm – a list of steps perform a task or solve a problem

Sequence – the order of steps in an algorithm. If steps are out of order, then the algorithm will not achieve the intended results.

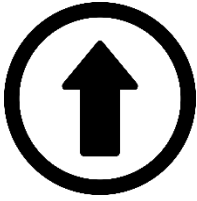
Command – each of the steps in an algorithm is a command. They instruct the computer what to do.

Program – an algorithm that can be run by a computer because it has been coded into a computer language.

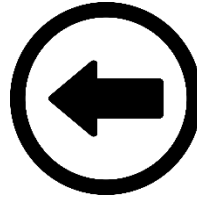
Loop – the act of doing something over and over again. A loop repeats an algorithm.

Bug – a flaw or error in a system, that results in an unintended action or result.

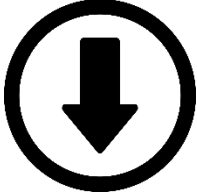
Commands for this Activity



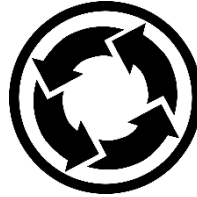
Move forward 1 step



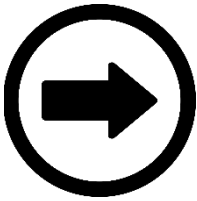
move left 1 step



move backward 1 step

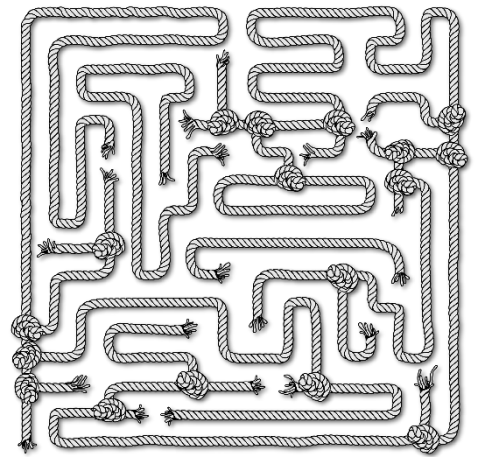
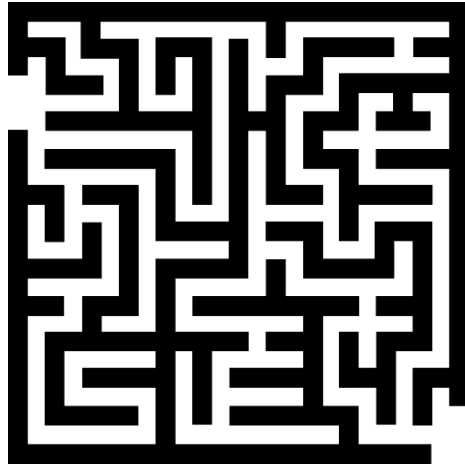
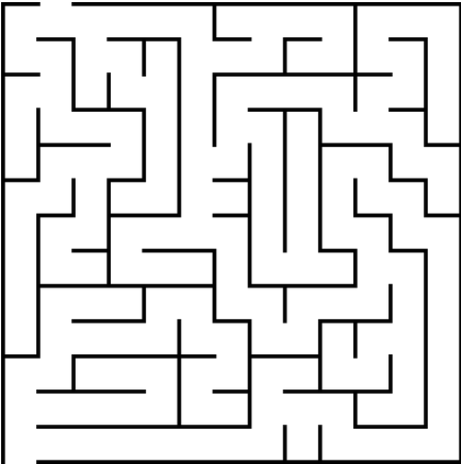


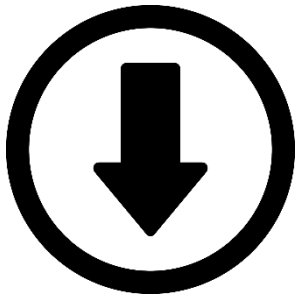
Repeat the previous steps



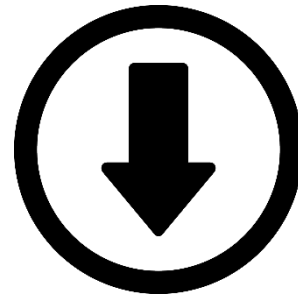
Move Right 1 step

Sample Mazes

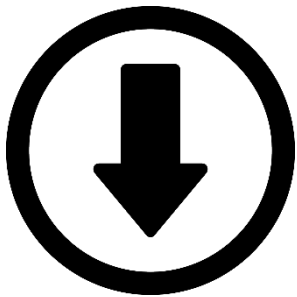




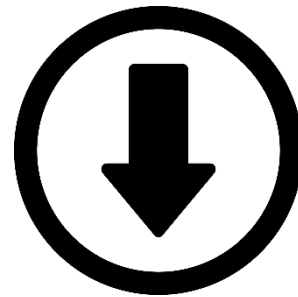
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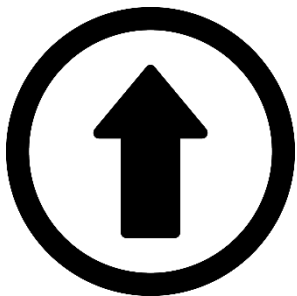
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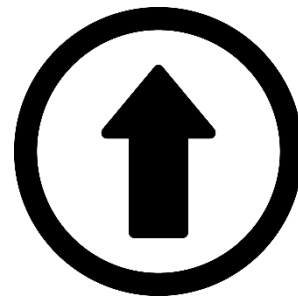
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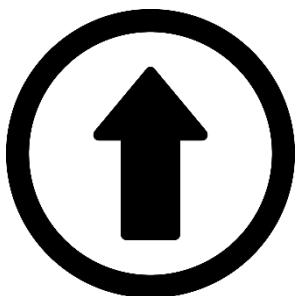
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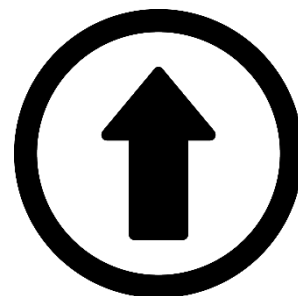
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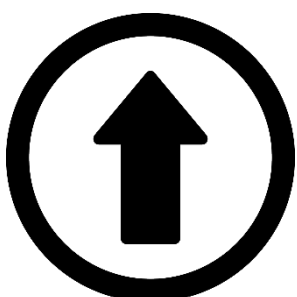
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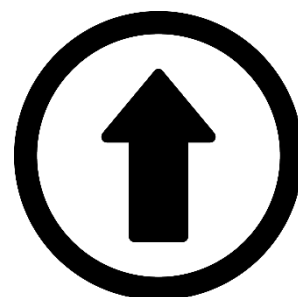
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ESCAPE**



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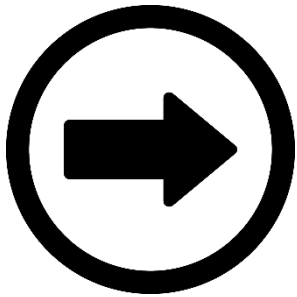
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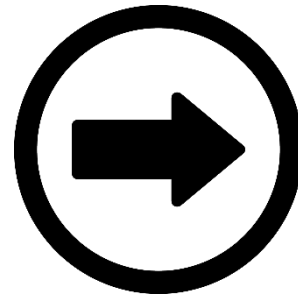
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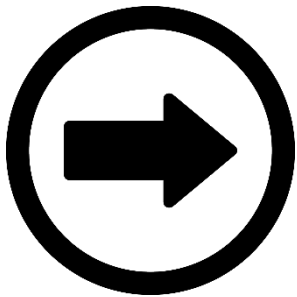
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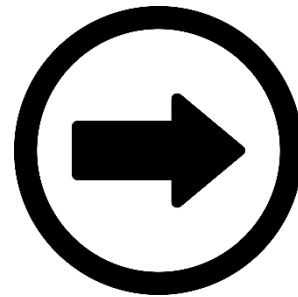
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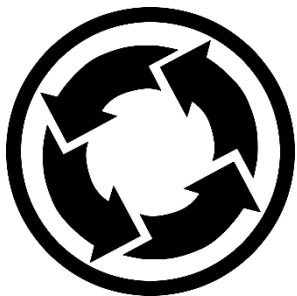
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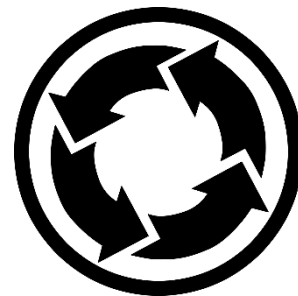
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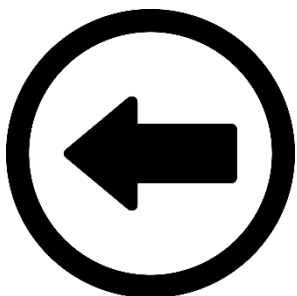
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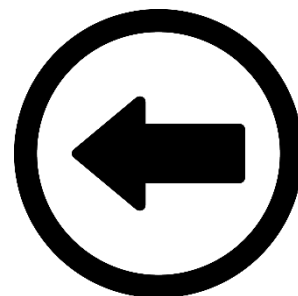
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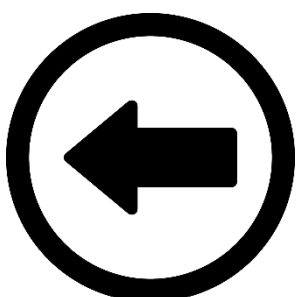
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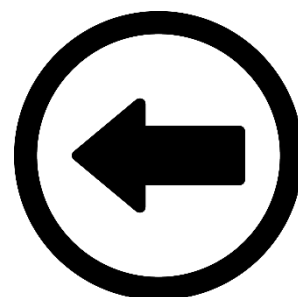
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