

LESSON 12

Blockly Practice with Mazes

Introduction:

This lesson is going to use PVC mazes to help campers practice the commands that they learned in the last lesson on the Blockly application.

Preparation:

Teacher should use the blueprints provided for Lesson 5, Mazes 1-5 to assemble the 5 mazes out of PVC pipe. We recommend PVC because it is easy to work with and very child-friendly. The children can easily put together the different pieces of the PVC with the different size lengths and the connectors using the PVC elbows, couplings, and Tees. However, any materials can be used to construct these mazes. The pictures of the mazes below show measurements of each wall of the maze that the teacher will assemble. Use your pre-cut pieces of PVC pipe and connectors to make these Mazes. Please refer to the Lesson 5, "Mazes 1-5" document for computer aided pictures or create your own Mazes to let the campers practice. Campers should work in pairs.

Teacher Demonstration:

1. Show the campers the 5 different mazes and explain each one
2. Explain that each camper must complete the maze in order to move on to the next maze.
3. Review commands used and learned yesterday.
 - a. What folder were they found in? (drive)
 - b. What commands did we use? (forwards, backwards, turn left, turn right)
 - c. Which commands do you think you will need to complete these mazes?
(forwards, backwards, turn left, turn right)

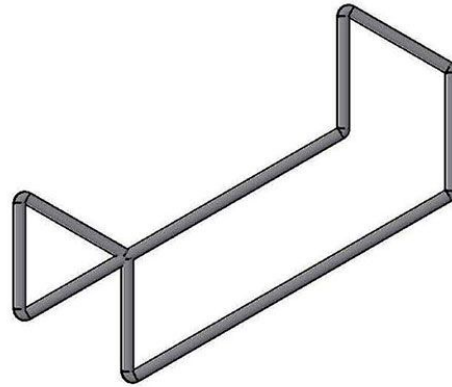
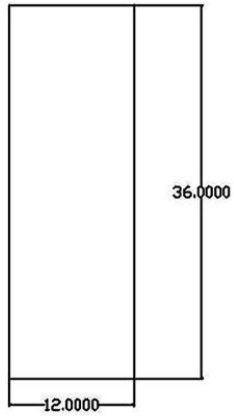
Extended Activity:

Camper grouping: High/low camper together

Campers should break into their groups and start at a Maze. Both campers in the group must complete the maze before moving on to the next one. The mazes are shown below. If you want to create your own practice scenarios, feel free to orchestrate them with any materials and design you choose.

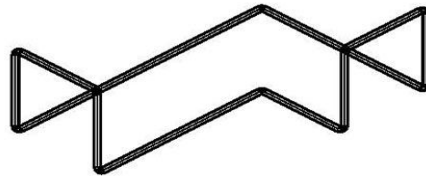
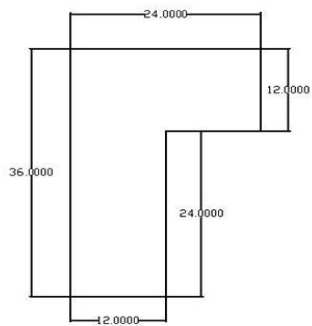
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Top View



Maze 1

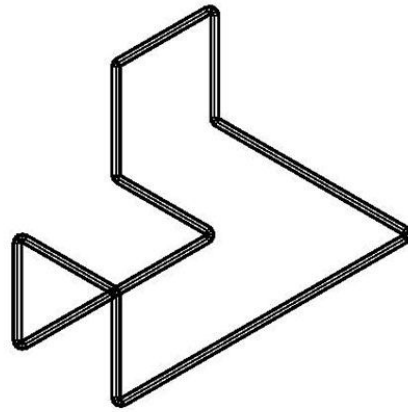
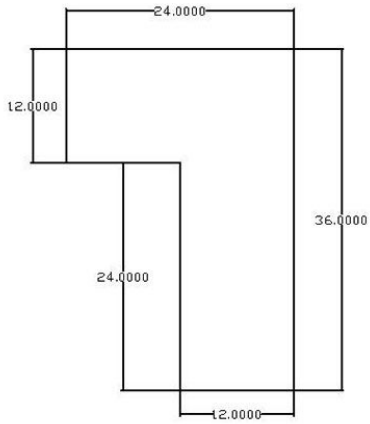
- (4) 1 ½ foot pieces
 - (2) couplings
 - (6) 1 foot pieces
 - (8) elbows
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Maze 2

- (2) 1 ½ foot pieces
- (2) 2 foot pieces
- (7) 1 foot piece
- (10) elbows
- (1) coupling

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Maze 3

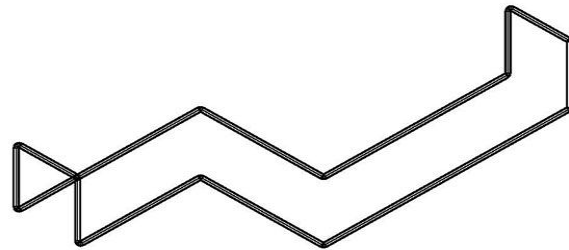
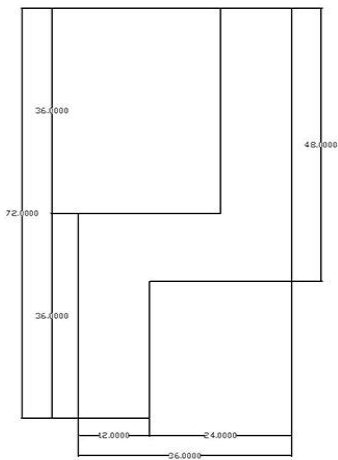
(2) 1 ½ foot pieces

(10) elbows

(2) 2 foot pieces

(1) coupling

(7) 1 foot piece



Maze 4

(4) 1 ½ foot pieces

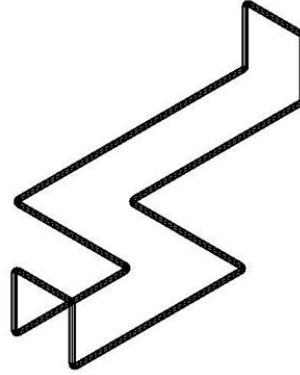
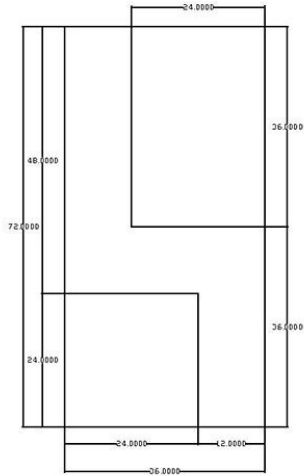
(12) elbows

(6) 1 foot pieces

(3) couplings

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(5) 2 foot pieces



Maze 5

(4) 1 ½ foot pieces

(5) 2 foot pieces

(12) elbows

(3) couplings

(6) 1 foot pieces