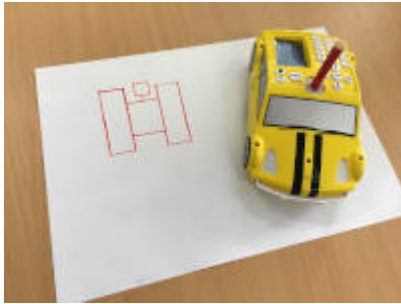




Draw a Butterfly

SLQ Wiki Fabrication Lab 2024/04/26 16:24

Draw a Butterfly



Details

Age group	Year 2 to Year 4 (ages 8 to 10)
Method	Individual activity
Participant to facilitator ratio	6:1
Duration	45 mins

Aim/Key Learning

Program the Pro-Bot to draw a butterfly on a piece of paper.

Preparation and Materials Required

- Pro-Bot for each participant
- A pen that fits the Pro-Bot pen holder
- Paper taped to the table

Activity Steps

1. Introduction

Time: 10 mins

Introduce yourself, participants introduce themselves, cover any housekeeping. Explain the aim of the workshop ('Today we are going program a Pro Bot to draw a butterfly'). Show participants how to program the Pro Bot using the movement and repeat commands. Conduct a brief demonstration of the Pro Bot drawing an object (such as a square). Show participants an pre-drawn example butterfly.

2. Experiment and Explore

Time: 30 mins

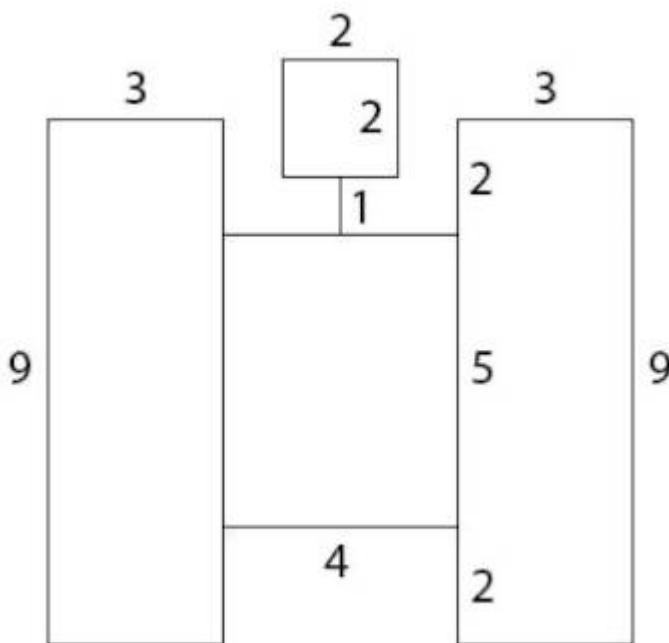
Participants attempt to program the Pro Bot to draw the butterfly. When the Pro Bot makes a wrong move, the facilitator should replace the piece of paper.

3. Evaluation and Closing

Time: 5 mins

At the end of the session, thank everyone for their participation and team work.

Solution



- Each wing is 9 cms high and 3 cms wide
- The body is 5 cms high and 4 cms wide
- The neck is 1 cm long
- Each side of the head is 2 cms

There are multiple ways this can be achieved with the Pro-Bot and the code below is only one way.

Starting at the top left corner of the left wing and facing right, the following code can be used:

// Left Wing	// Right Wing Cont.
Fd 3	Fd 3
Rt	Lt
Fd 9	Fd 7
Rt	
Fd 3	// Move to top of body
Rt	Bk 5
Fd 9	Rt
// Move to bottom of body	// Top of body
Rt	Fd 4
Fd 3	Bk 2
Rt	Rt
Fd 7	
Lt	// Neck
	Fd 1
// Bottom of body	// Head
Fd 4	Rt
Rt	Bk 1
	Fd 2
// Right Wing	Lt
Fd 2	Fd 2
Lt	Lt
Fd 3	Fd 2
Lt	Lt
Fd 9	Lt
Lt	Fd 2

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