REC for Cortex

1.21 Project: Motion Path Challenge - Fundamental

Name: _____ **Class/Period:** _____ **Date:** _____

Overview:

In this project, you will use the driving skills you have developed to draw a complex path with the BaseBot.

Duration:

90 Minutes

Materials:

Qty	Description
1	BaseBot with marker attachment
1	Playing field

The challenge:

1.3.1F: Engineering Notebook Guidelines

Using the BaseBot with the dry erase marker attachment, draw your initials on the playing field.

1 Draw the three initials of your full name into your engineering notebook. Be sure at least one of your initials contains an arc.

2 Record the motions your hand made drawing each letter with your pen on the paper. (i.e. the letter "B" requires one straight line with two semi-circles connecting each endpoint of the line to the midpoint of the line.)

3 Translate these steps into simple line and arc movements with the BaseBot (i.e. Drive forward 10 cm, arc right 5 cm). Make a list of these movements in your notebook and number each step. You will need to scale your letters to an appropriate size that you can draw with the BaseBot.

4 Using either Tank or Arcade style control, try to draw each of your initials with the BaseBot. You may pick up the robot between each letter and orient it for the next letter. You may not pick up the robot during the creation of each individual letter.

5 Compare your driving actions with your written instructions. Do they match?

6 Iterate your driving motions and/or list of movements until they match each other. Be sure to document your changes in your engineering notebook.

7 When you think you are ready to be graded, demonstrate your new skills to your teacher for proper assessment.

8 When you are finished, clean the marks off the playing field.

intelitek▶▶