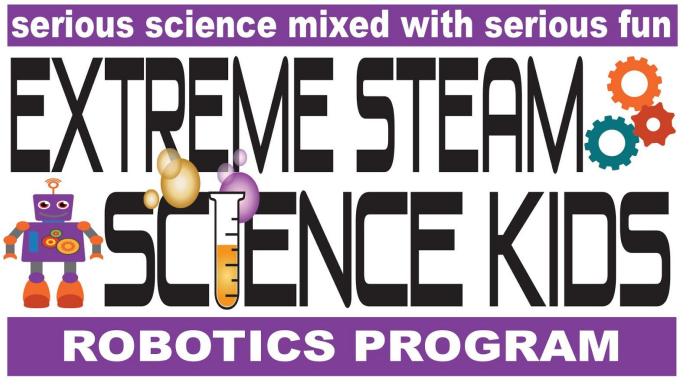

EXTREME STEAM SCIENCE KIDS
ROBOTICS PROGRAM
FOR CODE & GO

ACTIVITY – 4

This class will cover the following topics

Review programming multiple commands
Get an understanding of the distance Colby travels with each command
Practice programming Colby to reach a certain object

Materials needed

Colby robot
Program cards
Different objects such as blocks, garbage can, chair, etc. to delineate a position on the floor
Blue painter's tape

During this lesson the teacher should review the idea of programming multiple commands to make the mouse robot move. Have the class set-up in pairs to reinforce cooperation and teamwork and make sure each child gets a chance to press the buttons and program their mouse robot. The teacher will use the program cards and put together a sequence of commands that each team will follow. Each child must get a chance to program their mouse robot following the cards the teacher put together. Once the class understands this process the different teams will use the cards to practice making their mouse robot move in a variety of ways.

The next step is to help the children understand spatial relationships and the distance their mouse robot must travel from one point to another by creating a program to be followed. This is

accomplished by placing an object on the floor and asking the children to program their mouse robot to move forward until it reaches the object. Review the Blue Forward Arrow and the Green Button that starts the program. It is at this point the children must critically think and experiment with how many forward commands must be used to reach the object. IN ORDER FOR THIS ACTIVITY TO BE ACCURATE PLACE A PIECE OF PAINTER'S TAPE ON THE FLOOR AS A STARTING POINT. EACH TIME A TEAM TRIES THEIR PROGRAM THEY MUST START FROM THE SAME STARTING POINT. This is the only way they can get a true reading on the number of forward commands needed to reach the object. Vary the distance the objects are placed from the starting point and have the children program the forward commands. Introduce the idea of going around one object and making a left turn to reach the second object. Mix up the left and right turns and the distance between objects, so the children get experience in programming their mouse robot to move in a variety of ways. This activity will help them develop an understanding of spatial relationships with regard to programming as well as the idea of testing and retesting their initial approach.