TASK #8

Student Worksheet – Stay Away from the Edge

Group Name_____ Group Members_____

Overview: Another challenge the robot might face is safe navigation along a ridge line. Get too close and over you go. NASA has asked that you prove your robot is capable of staying away from the edge of a cliff.

Build a light sensor attachment for your robot.

We will need to take some readings to determine what values your robot reads for the table and the edge of the table.

View → reflected light → Port 3

What value do you get when your robot is on the desk? _____

What value do you get when the light sensor is over the edge of the desk?
(hint: keep your hands and legs out of the way) _____

What is your threshold number? _____

There are several progressive steps we would like to make in order to solve this problem. Each program should be done individually and demonstrated to your teacher before moving on.

We would like our robot to drive forward until it recognises the edge of the desk. Get ready to catch it just in case!

- Drive until the edge is detected then stop.
- Shout 'whoops!' when you get to the edge.
- Turn around when you reach the edge.
- Repeat this action staying away from the edge of the chasm

What was the most difficult part of this challenge? _____

How did you go about solving it? _____