



Loreto College Coorparoo

Semester 1 2022

YEAR 9 Technology: Digital & Design

Student		Teacher	Mr Li
Issued	March 21 st 2022	Due Date	Thur 2 June 9A (6), 9C (2), Fri 3 June 9B (1)
Unit	Robotics & Coding		

Conditions

Technique	Creating, testing and developing Code to solve problems		
Duration	9 Weeks		
Mode	Project Based Learning	Length	
Individual/ group	Individual	Other	
Resources available	Technology Portal, Lego Robots, EV3 Classroom software, Running Boards		

Assessment Dimensions	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E+	E	E-
1. Knowledge & Understanding															
2. Processes & Production Skills															

Authentication strategies

The teacher will provide class time for task completion.
The teacher will consult with each student as they develop their responses.
Student progress will be monitored, and digital copies of student responses collected at the checkpoints.

CRITERIA SHEET

	A	B	C	D	E
The folio of a student's work has the following characteristics:					
K & U	comprehensive explanation of the control and management of Robotic systems	detailed explanation of the control and management of Robotic systems	explanation of the control and management of Robotic systems	description of the control and management of Robotic systems	statements about the control and management of networked Robotic systems
P & PS	systematic testing and prediction of results and proficient implementation of Robotic solutions	reliable testing and prediction of results and effective implementation of Robotic solutions	testing and prediction of results and implementation of Robotic solutions	partial testing and prediction of results and partial implementation of Robotic solutions	fragmented testing and prediction of results or fragmented implementation of Robotic solutions

Context

You will learn how Robots are being used in the world today and reflect on their societal impact. You will learn how and why Robots are programmed to do specific jobs. You will learn how to program Robots to perform tasks.

Tasks

You are to:

- Work collaboratively to build your shared Lego Robot. *(Formative)*
- Create 'Stop at Object' code *(Formative)*
- Create 'Stop at Line' code *(Formative)*
- Create 'Collide & Turn' code *(Summative)*
- Create 'Line Follower' code *(Summative)*
- Create 'Assault Course' code and video Robot navigating course *(Summative)* Possible Extension Task!
- Create 'Repeat Square' code *(Summative)*
- Create 'Infinite Loop' code *(Summative)*
- Create 'Driving Test' code and video Robot navigating course *(Summative)* Possible Extension Task!
- Write a research essay detailing how Robots affect society. *(Summative) 500- 750 Words*

CHECKPOINTS

Week 3 of Term 2 — progress check (Coding tasks completed so far)

Week 6 of Term 2 — progress check (Check on Coding Tasks & Discussion of proposed Research Essay)

To complete this task, you must:

Refer to the detailed instructions provided on the Digital & Design Portal at:

http://dt.loreto.qld.edu.au/9/U1_Robotics/17_colour.html

ETHICAL SCHOLARSHIP DECLARATION – Lego Robotics & Coding unit

I, _____, confirm and acknowledge that the work produced in this assessment, including Code, is my own. Any words/phrases that I have used from other sources have been referenced and acknowledged.

Signed: _____ Date: _____