



# Loreto College Coorparoo

## Semester 1 2021

### YEAR 8 Technology: Digital & Design

|                |                                    |                 |                                |
|----------------|------------------------------------|-----------------|--------------------------------|
| <b>Student</b> |                                    | <b>Teacher</b>  | Mr Joyce (8B) & Mr Morgan (8A) |
| <b>Issued</b>  | 21/4/2021                          | <b>Due Date</b> | Fri 4/6/21 – 8A P2, 8B P3      |
| <b>Unit</b>    | Micro:bit Coding & problem solving |                 |                                |

| Conditions                       |   |          |           |           |               |           |           |          |           |           |          |           |           |          |           |
|----------------------------------|---|----------|-----------|-----------|---------------|-----------|-----------|----------|-----------|-----------|----------|-----------|-----------|----------|-----------|
| <b>Technique</b>                 | Coding tasks using a Micro:bit + MakeCode App     |          |           |           |               |           |           |          |           |           |          |           |           |          |           |
| <b>Duration</b>                  | 7 Weeks   |          |           |           |               |           |           |          |           |           |          |           |           |          |           |
| <b>Mode</b>                      | Project Based Learning                            |          |           |           | <b>Length</b> |           |           |          |           |           |          |           |           |          |           |
| <b>Individual/ group</b>         | Individual  |          |           |           | <b>Other</b>  |           |           |          |           |           |          |           |           |          |           |
| <b>Resources available</b>       | Dig Tech Portal, Micro:bit hardware, MakeCode app |          |           |           |               |           |           |          |           |           |          |           |           |          |           |
|                                  |   |          |           |           |               |           |           |          |           |           |          |           |           |          |           |
| <b>Assessment Dimensions</b>     | <b>A+</b>   | <b>A</b> | <b>A-</b> | <b>B+</b> | <b>B</b>      | <b>B-</b> | <b>C+</b> | <b>C</b> | <b>C-</b> | <b>D+</b> | <b>D</b> | <b>D-</b> | <b>E+</b> | <b>E</b> | <b>E-</b> |
| 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 copies of student code (HEX files) will be collected at checkpoints. |

## CRITERIA SHEET

|   |                   | A  | B   | C   | D  | E  |
|---|-------------------|--|---|---|--|--|
| <b>The folio of a student's work has the following characteristics:</b> |                   |  |   |   |  |  |
| MicroBits   | <b>K &amp; U</b>  | <b>comprehensive</b> explanation of how the features of MicroBits impact on designed solutions and influence design decisions for each of the design challenges. | <b>detailed</b> explanation of how the features of MicroBits impact on designed solutions and influence design decisions for each of the design challenges. | explanation of how the features of MicroBits impact on designed solutions and influence design decisions for each of the design challenges. | <b>partial</b> explanation of how the features of MicroBits impact on designed solutions and influence design decisions for each of the design challenges. | <b>statements</b> about how the features of MicroBits impact on designed solutions and influence design decisions for each of the design challenges. |
|   | <b>P &amp; PS</b> | <b>systematic</b> testing, modification and <b>proficient</b> implementation of Microbit solutions   | <b>reliable</b> testing, modification and <b>effective</b> implementation of Microbit solutions   | testing, modification and implementation of Microbit solutions  | <b>partial</b> testing <b>or</b> modification and <b>partial</b> implementation of Microbit solutions  | <b>fragmented</b> testing <b>or</b> modification <b>or</b> implementation of Microbit solutions  |

### Context

You will complete a range of Coding activities using your Micro:bit. You will solve problems by writing, testing and refining code and by building prototype designs.

### Task

You are to complete:

- Mini Make Tasks (*Formative*)
- Magic Eight Ball (*Formative*)
- Make a Pet (*Summative*)
- Innovation Challenge (*Summative*)
- Micro:bit Reflection (*Summative*)
- Extension – Reaction Game (*Formative*)

### CHECKPOINTS

Week 3 of Term 2 — progress check (Mini Make & Magic Eight Ball Tasks)

Week 6 of Term 2 — progress check (Make a Pet & Innovation Challenge)

### To complete this task, you must:

Use the resources available to you on the Technologies Portal. These can be found at:

[http://dt.loreto.qld.edu.au/8\\_DD/microbit/introduction.html](http://dt.loreto.qld.edu.au/8_DD/microbit/introduction.html)

### ETHICAL SCHOLARSHIP DECLARATION

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: \_\_\_\_\_