**CyberWellness with Reaction Game**

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| **Programme:** | Microbit | **Level:** | Primary 4 |
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| **Theme / Challenge Statement:** | Promote understanding of CyberWellness  **Summary**  The students have to work in group to complete a reaction game using recycled materials together with topic Cyberwellness to promote understanding of Cyberwellness |  |  |

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| **Prior Knowledge:** | Students should already know:  1. Basic Coding knowledge Eg. Scratch  2. Understanding of Cyberwellness topic  3. Simple usage of tools, Eg, scissor, pen knife, gluegun, tapes etc |
| **Learning Objectives:** | By the end of the lesson, students should be able to:  1. Recognise the GUI of micro:bit  2. Recognise the different hardware features  3. Write a simple program using micro:bit |

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| **Time** | | **Teacher Activities** | **Purpose** | | **Resources Needed** | |
| **Introduction/Pre-activity** | | | | | | |
| FTGP CW, CW assembly + jit talks, CW carnival, MLP lessons P1-P3 | | Cyberwellness topics | To let students to have basic knowledge about cyber wellness and so that they can apply knowledge when they design micro:bit game to promote awareness of cyberwellness | | FTGP Textbooks, MLP workbooks, CW jit videos | |
| **Lesson development/Main activities** | | | | | | |
| Day 1: 1 hours | | * Introduction to micro:bit hardware and sample projects | * To let students recognise the different parts of the hardware | | Sample project videos, PPT slides | |
| Day 2: 1.5 hours | | * Introduction to micro:bit software * Lighting up the LED * Display HEART shape when button B is pressed | * To let students recognise the GUI of micro:bit * To let students know how to turn on the LED | | PPT slides | |
| Day 3: 2 hours | | * Introduction to logic and loop and using variables to store data * Use logic if P0 is pressed, display left arrow, else right arrow * Use variable to count the round and show as “Rd 1” followed by 2 and so on | * To let students understand what are variables and conditional statements | | PPT slides | |
| Day 4 : 1.5 hours | | * Using variables to create a counter for scoring | * To let students understand variables and the way to use it | | PPT slides | |
| Day 5: 1.5 hours | | * Tinkering process * Using recycled materials and connect to the appropriate pin in the micro:bit * Troubleshooting and testing | * To let students have a better understanding on how did the circuit work, troubleshooting on their program on why it is not working | | NA | |
| **Closure and consolidation/Post-activity** | | | | | | |
| 15mins | | Survey to ask if the students like the activity, what else will they like to learn |  | |  | |
| **List of Projects (5 – 10 projects if possible) created by Students** | | | | | | |
| Project 1 | 2 players reaction game  The players will have to fight for a chance to be able to answer the Cyberwellness quiz. To see who reaction is faster! | | | Aluminium Foil, any recycled materials, Crocodile clips, tape, glue gun, pen knife, scissor | | Remarks / Tips to be shared |

Please send this template, together with any additional resources, e.g. Powerpoint slides, worksheets and .hex file, to: [digital\_maker@imda.gov.sg](mailto:digital_maker@imda.gov.sg).

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| **Contributed by:**  Name of School: Rivervale Primary School  Name of Teacher (Optional): Wong Wan Hui  Date: 2 April 2018 |