Introduction & Movement

Monday, 27 June 2016

11:46 AM

# Summary

This session aims to introduce students to the mBot Robot at ESC. This robot is the tool used to engage students in lesson content and is aimed to follow a "Learn through Play" pedagogy.

Integration Friendly

EAL Friendly

High-Achiever Friendly

# Background Knowledge

There is no specific prior knowledge required for this lesson. However if students have used [Scratch](https://scratch.mit.edu/) before then they will be familiar with how blocks snap together. Scratch Supporting Activities are also available to help build any foundational skills not considered.

# Fundamentals of this Lesson

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| Learning Intention | Success Criteria |
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| Core Content | Activities / Assigned Questions |
| Introduction to the mBot

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| C:\687A0E25\1978F47E-E0ED-41F8-8838-83CDA742F2B0_files\image001.png C:\687A0E25\1978F47E-E0ED-41F8-8838-83CDA742F2B0_files\image002.png  | Introduces students to the mBot Platform and how to connect successfully.Also includes first two tasks:* Controlling LEDs on Board
* Moving mBot with Arrow Keys

<<mBot Introduction.pptx>>   |

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| C:\687A0E25\1978F47E-E0ED-41F8-8838-83CDA742F2B0_files\image003.png  | Additional Core Tasks\*See Extension Tasks below.  |
| C:\687A0E25\1978F47E-E0ED-41F8-8838-83CDA742F2B0_files\image004.png  | Integration TasksIt is expected that the majority of integration student participate in the mainstream task.*Learning Disability*This worksheet can be given to students to complete the task that have issues with memory recall.<<introduction Keyboard Controls.pdf>>  |
| C:\687A0E25\1978F47E-E0ED-41F8-8838-83CDA742F2B0_files\image005.png  | EAL Support Tasks*Vocab** ***Microcontroller*** Small Basic Computer
* ***Electronics*** Electrical parts (Motors, wires, lights, etc.)

*Activity*No additional/alternate EAL Activity exists.  |
| C:\687A0E25\1978F47E-E0ED-41F8-8838-83CDA742F2B0_files\image006.png  | Extension TasksStudents to create a Graphical User Interface (GUI) to control the robot. * Students create different sprites
* Apply relevant code to each sprite.
* Add additional controls to GUI. i.e.
	+ Light colour controls
	+ Variable Speed of movement

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| Helpful Teacher Resources | Staff Feedback |
| * + PowerPoint Presentation has all prepared notes as prompts or guides to assist you in presenting to students.
	+ Batteries can be replaced by students - but only with teacher approval.

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# Victorian Curriculum Links