

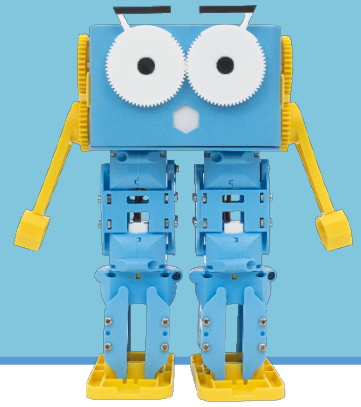
Lesson 1.9 – Introduction to If Statements

Education Level: Second Level (Age 7-11)

Lesson Duration: 45 minutes

Prerequisite Knowledge: Lessons 1.1-1.8

Device Compatibility: Laptop, PC or Tablet



Lesson Overview

In this lesson, students will continue to develop their understanding and programming skills by looking at a concept called if statements. Students will be asked to relate if statements to situations in real life before creating a small program where Marty responds to inputs such as random numbers or user input.

Learning Objectives

- Consider the actions and tasks that we could use robots like Marty to do
- Understand how to read if statements and predict outcomes
- Use if statement coding blocks to program Marty to respond to inputs

Key Vocabulary

- If statements
- Coding Blocks
- Functionality
- Condition
- Decisions

Resources & Equipment

- Marty the Robot
- Marty Workbook (Lesson 5)
- Laptops/Computers/Tablets
- Access to the Scratch editor

Additional Reading

- Educator's Guide
- Introduction to Programming with Marty using Scratch

Learning Plan & Activities

1. Now that students have had a lot of time programming with Marty, they should now have an idea of what functionalities Marty has. Discuss with the class what tasks or things that they think robots like Marty could do
2. Introduction to if statements and compare to real life situations like the following
IF there is a green man, THEN it is safe to cross the road
3. Ask students to think up some of their own examples of if statements
4. Split into groups so that there are 2-3 students per Marty and ensure that Marty is connected to a Scratch editor
5. Programming task of creating a *Marty Magic 8 Ball* where we will generate a random number and Marty will respond to this with an action or movement based on the number that is generated

Additional Challenges

- Using the *ask* blocks like in the previous lesson, students could ask users questions and use their inputs as a way to decide what actions Marty should respond with

Curriculum Benchmarks

Curriculum for Excellence – Technologies Benchmark Guide

● = Fully Addresses Benchmark ○ = Partially Addresses Benchmark

Curriculum Organiser	Benchmark Covered	Lesson 1.9
Digital Literacy	TCH 0-01a	●
Technological Developments in Society & Business	TCH 0-05a	●
	TCH 1-07a	●
Craft, Design, Engineering and Graphics	TCH 0-11a	●
Computing Science	TCH 0-13a	●
	TCH 1-13a	○
	TCH 2-13a	○
	TCH 3-13a	○
	TCH 3-13b	○
	TCH 4-13a	○
	TCH 0-14a	●
	TCH 0-14b	●
	TCH 1-14a	●
	TCH 1-14b	●
	TCH 2-14a	○
	TCH 3-14a	○
	TCH 0-15a	●
	TCH 1-15a	●
	TCH 2-15a	●

National Curriculum – Computing, Design & Technology

● = Fully Addresses Benchmark ○ = Partially Addresses Benchmark

Curriculum Organiser	Benchmark Covered	Lesson 1.9
Computing	1-a	●
	1-b	●
	1-c	●
	2-a	●
	2-b	●
	2-c	●
	3-a	●
	3-b	○
	3-f	○
	4-a	○
	4-b	○
Design & Technology	1.1-a	●
	1.1-b	●

Australian F-10 Curriculum – Digital Technologies, Design & Technologies

● = Fully Addresses Benchmark ○ = Partially Addresses Benchmark

Curriculum Organiser	Benchmark Covered	Lesson 1.9
Digital Technologies	ACTDIK001	●
	ACTDIK002	●
	ACTDIP003	○
	ACTDIP004	●
	ACTDIK008	●
	ACTDIP009	○
	ACTDIP010	●
	ACTDIP011	●
	ACTDIP012	●
	ACTDIP013	●
	ACTDIP017	●
	ACTDIP019	●
	ACTDIP020	●
	ACTDIP027	○
	ACTDIP028	○
	ACTDIP029	○
	ACTDIP030	●
	ACTDIP031	○
	ACTDIP039	○
	Design & Technologies	ACTDEK001
ACTDEP005		○
ACTDEP006		●
ACTDEP009		●
ACTDEK010		○
ACTDEP015		○
ACTDEP018		●