# Lesson 10 – Gestures and Movement

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| The Big Picture – Why Is This Relevant? | Learning Objectives |
| * Gestures are used everywhere, swiping through apps, enlarging an image, closing a program, playing games, controlling rollercoasters. | * Understand what a gesture and a movement are * Know how to read a gesture on the micro:bit * Apply gestures and responses in a program * Apply the use of selection * Apply the use of lists |
| Engagement – How Can I Engage Learners? | Assessment for Learning |
| * Use gestures as a funny / practical way to introduce the topic. * The responses program for each fortune telling machine can be humorous and engage Learners. * Student can add various responses to the gesture such as displaying an image, text or music. | **Expected Progress:**   * Learners collect gesture information from the micro:bit * Learners program a response to the gesture   **Good Progress:**   * Learners use selection to program several responses   **Exceptional Progress:**   * Learners combine with the random module to program random responses * Learners add responses to more two or more gestures |
| Links to KS3 Programme of Study | |
| * use 2 or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions * understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems | |
| Key Concepts | Key Words |
| * Gestures * Movement * Responses to movement * Selection, random module, selection, music module, lists | * Gestures * Movement * Event * Response |
| Differentiation | Resources |
| Ensure that Learners have completed the first example program in the activity and that it is working correctly. This will support their understanding and also provide a starting point for Learners to build on in the second activity. | * Lesson 10 ppt * Lesson 10 Activity Sheet * Sample Python code * 1 micro:bit per learner * 1 USB cable to connect the micro:bit to a PC * A PC * Headphones (optional) * Access to [micro:bit Python Editor (microbit.org)](https://python.microbit.org/v/3) |
| Lesson Flow | |
| * Introduce the concept of gestures and movement * Demonstrate first gesture program * Learners build this program and then adapt for their own responses or gestures * Build fortune telling machine project * Activity two - Learners program and build their encryption device * Teacher intervenes where appropriate, Learners may require help with lists, random module, music, module, section and wiring up the speakers. * Learners test out each other’s project. | |
| Making | |
| There are no making activities in this lesson. | |