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| <b>Subject</b> | Computing | <b>Theme</b> | Digital Creativity WeDo | <b>Term</b> | 5 |
|----------------|-----------|--------------|-------------------------|-------------|---|

### What should I already know?

- How to build a LEGO model.
- How to connect your model to a device.
- How to program the snail to show a flash of light.
- How to program a motor too turn at different speeds.
- How to program a motor to turn for a set length of time.
- How to program a motion sensor to detect motion.
- How to create and program Milo the Science Rover.
- How to create and program Milo’s object-detector arm using the Motion Sensor Input.
- How to create and program Milo’s messaging arm using the Tilt Sensor.
- How to create and program a device to move the plant sample.

### What should I know by the end of the unit?

- How to create and program a device that will sort recyclables according to their size and shape.
- How to build and program a truck to sort recyclable objects.
- How to modify the truck to sort the boxes
- How to use a motion sensor to sort

### Computational Skills and Enquiry

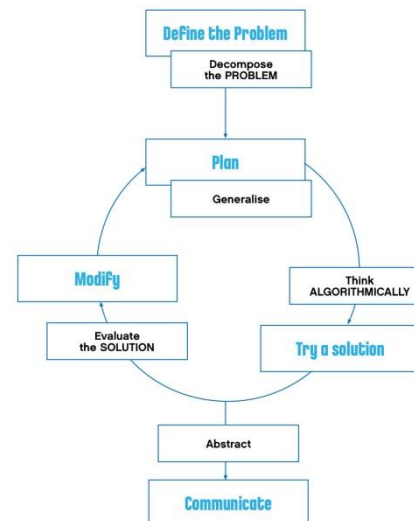
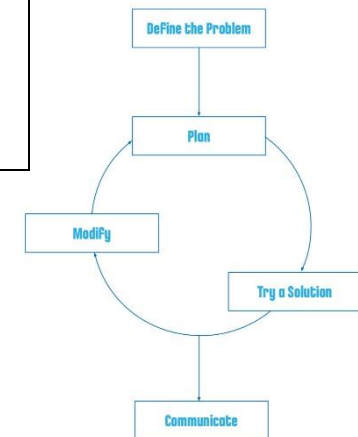
- To use Lego WeDo 2.0 to represent a sequential program design.
- To use the design to write to the code for the program.
- To design and write a program that simulates a physical system.
- To combine a motor in a program with selection.
- To debug simple programs.
- To follow simple steps to create a physical system.

### Key Vocabulary

|                 |  |
|-----------------|--|
| device          | The electronic element used to control the physical system. In this case it will be an iPad.       |
| input           | The commands and instructions the user puts “in” to the device.                                    |
| model           | The physical system made from Lego bricks that is controlled by the device.                        |
| motion          | Movement carried out by the model, controlled by the commands on the device.                       |
| motion sensor   | A physical element that can be added to a model. This detects motion.                              |
| motor           | A physical element that can be added to a model. This allows the model or a part of model to move. |
| object-detector | A physical element that can be added to a model. This detects object collision.                    |
| output          | The light/sound/movement that the model feeds “out” of the system.                                 |

### WeDo Projects completed

- Sorting Recycling
- Ocean Cleaning



### Computational Thinking

Ways in Which We Solve Problems

