Lesson 24 - Activity Sheet 2

Setting the Scene

Now that you have started making the physical model it is time to start combining the micro:bit, the hardware and the model and then test that all the features work as intended.

This involves testing that both the program code and the hardware work as intended. You will also need to make sure that you have met the requirements of the Success Criteria which are listed below.

## Success Criteria

* The micro:PET must respond to its environment and surroundings
* The micro:PET must respond to user interaction
* Use some of the micro:bit hardware that has been covered in previous lessons (Halo, Sound, Servo etc)
* Use the micro:bit to control the features and responses
* Look engaging and fun

Getting Started

**Testing the micro:PET**

A simple method to test the micro:PET is to produce a test plan and then methodically work through each of the features and interactions. Record the outcome, does it work, does it work as intended? Complete the table below to support you with the testing process. The test table can be used to refer to next lesson and decide which problems to focus on. It also enables you to ask other learners or your teacher for specific help, rather than just stating that, ‘it is not working’.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Number** | **What Are You Testing?** | **What Should Happen?** | **Outcome of Test** | **Action required** |
| *Example* | *Speech module* | *The micro:PET should say ‘hello’ when it is switched on* | *It said Hello* | *None* |
| *Example* | *LED lights up* | *LED lights up in eyes as it gets dark, night vision!* | *LED not working* | *Code used Pin 3, but LED attached to Pin 1, change code* |
| **1** |  |  |  |  |
| **2** |  |  |  |  |
| **3** |  |  |  |  |
| **4** |  |  |  |  |
| **5** |  |  |  |  |
| **6** |  |  |  |  |
| **7** |  |  |  |  |
| **8** |  |  |  |  |
| **9** |  |  |  |  |
| **10** |  |  |  |  |

## Pro-tip

Using a test plan like the one above helps to keep the tests on order and the results recorded. Remember that you can test the function of the micro:PET in two areas. For example, 1) *The micro:PET should say ‘hello’ when it is switched on* and 2) *The micro:PET should not say ‘hello’ again after the first time the micro:PET is switched on*.

## Stretch Task

Another method of testing the micro:PET is to give it to another learner and ask them to play with it. You can show them what it is supposed to do, however it is better to just see what they do and what issues they come across. Invite them to provide you with some feedback, which will help you to refine and improve the micro:PET.