



Sustainability Ambassadors



Literacy



Healthy Citizens



Cultural Explorers



Designers



Mathematics



Careers Pathfinders



Scientific Investigators



Digital Learners



Global Enquirers



Engineers

**Subject: Computing Unit: Creating programs and looking for errors**

**Year Group: Yr2 Term: Assessment period 2**

**Medium Term Plan:**

How can I find errors in programs?

**Essential Vocabulary**

algorithm  
debug  
program  
app  
repeat  
commands  
predict

**Big Concepts**

Programming – Examples: Use iPad to create short animation clip in Scratch or Daisy Dinosaur;  
decomposition : break down tasks and identify coding blocks needed; debug – look for errors in program when it doesn't work as intended.  
Sequence – Example – writing sequence of instructions to control object on screen.  
Repetition – use repeat block to improve program

## Curriculum Coverage

### **Flag any content that might not have been covered during school closure**

Understand what algorithms are and how they are implemented on digital devices – this should have been covered at the beginning of Spring Term in Year 1.

### **Retrieve Essential knowledge to support learning of big unit concepts**

Retrieval of what algorithms are and how implemented on digital devices.

### **Subsequent National Curriculum Coverage**

Write and debug programs that simulate virtual events (Yr 3)

## Sequence of Teaching and Learning

**Notes: Use logical reasoning to predict the behaviour of simple programs.**

Pupils will review understanding of what algorithms are and begin to create simple programs using the Daisy the Dinosaur app on iPads. Most of this unit will be pupil led in that they will be exploring the app and investigating how they can control the movements of the character. There are a set of resources to accompany this unit from Primary Computing.co.uk which are held in the google folder, these include lesson plans, badge images for the pupils etc. For non-specialist subject teachers it is strongly recommended that you follow these lesson plans and use the resources included. However; please feel free to adapt to suit the needs of your class. It is recommended that pupils work in pairs when using the iPads – teachers/TAs should gather evidence of progression by taking photographs, of code, pupils using the app and documenting a sample of Q&A from pupils in the floor books.

|                          |   |  |
|--------------------------|---|--|
| <b>1<br/>&amp;<br/>2</b> | <p>Recall: To review what an algorithm is and to be able to write an algorithm.</p> <p>This may require 2 lessons depending on whether class covered algorithms in Year 1.</p> <p>Resources from Year 1 unit can be used to cover learning missed – if pupils have not used programming app Daisy the Dinosaur in Year 1 the resources can also be used instead of Lesson 3</p> | <p><b>Memory recall: Who has heard the word algorithm before? What is an algorithm?</b></p> <p><a href="#">Lesson 1 resources from the Primary Computing pdf</a> located on google drive. This is a great way to introduce the unit, but teachers will need to bring in some bread, butter and jam as pupils will be writing an algorithm for a robot to make jam sandwich.</p> <p>The resources in the folder include pdf with lesson plan &amp; lesson resources and there is also a pdf of vocabulary.</p> <p><b>End point:</b> Pupils remember what an algorithm is and are able to write an algorithm that can be used to achieve a goal. Throughout this process, pupils could demonstrate logical reasoning by predicting what steps they need in their algorithm and explaining why.</p> |
| <b>3</b>                 | <p>NC: Create simple programs<br/>Use logical reasoning to predict the behaviour of simple programs</p> <p><b>L.O.</b> To create a program that controls Daisy the Dinosaur</p>   | <p><b>Memory recall: Write a list of apps they have used on iPads in school and what they were used for.</b></p> <p>Lesson 2 resources from the Primary Computing pdf located on google drive. During this lesson pupils will be exploring the app for a short time and then working in pairs predict what will happen when 5 commands are dragged into the programming area. Then pupils using repeat – please see lesson plan.</p> <p><b>End point:</b> Pupils are able to independently use the Daisy the Dinosaur interface and drag command blocks into the coding area. They are able to say what they think will happen.</p>  |

## Sequence of Teaching and Learning

**Notes: Use logical reasoning to predict the behaviour of simple programs.**

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|----------|--|---|
| <b>4</b> | <p>NC: Create simple programs<br/>Use logical reasoning to predict the behaviour of simple programs</p> <p><b>L.O. To be able to use the ‘when’ command in a program</b></p> | <p><b>Memory recall: Can pupils give a list of commands they used previous lesson in the Daisy the Dinosaur app</b></p> <p><b>Lesson 3 from the Primary Computing pdf</b> – pupils are introduced to the ‘when’ command. The when command allows ‘selection’ within their program Please see pdf which explains why ‘selection’ is an important element of programming. As previously all resources are available within the pdf</p> <p><b>End point:</b> At this point in the unit, pupils should be able to use repeat confidently and have experience of exploring the outcomes of their programs – finding out what happens when they use certain commands.</p>   |
| <b>5</b> | <p>NC: Create simple programs<br/>Use logical reasoning to predict the behaviour of simple programs</p> <p><b>L.O. To write a storyboard for Daisy the Dinosaur</b></p>      | <p><b>Memory recall: Can pupils give an example of when they would use a ‘when’ command in Daisy the Dinosaur app.</b></p> <p><b>Lesson 4 &amp; 5 from the Primary Computing pdf</b> - Pupils begin to write a program to achieve an outcome, so they are now thinking about what they want their program to do, how they will get there and have to check for errors.</p> <p><b>End Point:</b> At the end of the unit pupils should be able to write a simple program to control Daisy the Dinosaur, they should be able to show that they have thought about how they will achieve their goal and checked for errors as they created the program. Once they run the program if it does not work then they will have reviewed the command blocks to look for errors. (debugging)</p> |

# Skills for Life

Resilience

Communication

Being  
Safe

Team-working

Problem  
Solving

Self-motivation

## Real World Links including pupil experiences:

Decomposition – breaking problems into smaller sections

Debugging – looking for errors and correcting them

Writing instructions

Logical thinking

## Skills for Life/ Core Values:

Being safe  
Responsibility  
Courage  
Excellent

Resilience  
Problem solving  
Communication  
Being safe  
Self-motivation

## Influential Figures:

## Plan for deliberate Reading opportunities:

Checking their work, reading the text that they have written out loud.