

These guided activities would be good preparation for learning free code: 2Code Gorilla - [2go](#); [Football Game](#)
 This lesson is planned as a 40 minute lesson with a 10 minute homework activity. Please adapt it to your school's requirements.

School:	Class: Year 6	Lesson: 5 of 5	Subject: Computing	Date:
Lesson Overview	Objective, LOs & SCs			Free Code Activity
In this lesson students will learn about the use of functions in coding. They will complete a guided lesson that will teach them the basics of using functions in 2Code. They will also debug a program and organise it so that it includes tabs and functions and then, if they have time, they will create a program that uses functions.	<p>NC Objective: Work with variables and learn how to use functions.</p> <p>Learning Outcomes:</p> <ul style="list-style-type: none"> • I can use functions and know why they are useful in 2Code. • I can move code from one tab to another in 2Code. • I can debug a program and organise the code into tabs. • I can organise code in a program into functions and call functions to get rid of extra code in the program. • I can create my own program that uses functions (extension). <p>Success Criteria:</p> <ul style="list-style-type: none"> • I can explain what functions are and how they are used in 2Code. • I can explain how to move code from one tab to another in 2Code. • I can explain how I organised code in a program into functions to remove extra code and make it easier to read. • I can show how I made my own program using functions (extension). 			<p>Free Code Gorilla</p> <p>http://www.purplemash.com/app/code/openended/freecodegorilla</p> <p>Coding Principles: FUNCTIONS</p> <p>http://www.purplemash.com/app/code/codeprinciples/2codefunctions</p>

New Vocabulary	Link/s to other subjects	Differentiation	Assessment Opportunities	Resources Needed
Function Call (function) Tab	Literacy – descriptive language when writing up what they did and how it worked.	<p><i>Include students to be aware of and notes for support staff.</i></p> <p>SEN: to create simplified version of the program with support.</p> <p>LA: to work on lesson with support.</p> <p>HA: to create their own program using variables once they have completed the activity.</p> <p>Extension Activities: as HA but could create a more developed program.</p>	<ul style="list-style-type: none"> • Programs • Writing up of programs • Observing how ch work together 	<ul style="list-style-type: none"> • Offline resources pack prepared • Flashcards from resource pack – teacher, student • IWB • Internet connection • Exercise books

Introduction (10mins)	Activities (25mins)	Plenary (5mins)	Homework (10mins)
<p>In this lesson we will be learning about FUNCTIONS and how useful they can be in programming. Who knows what a FUNCTION is? Children should have a basic understanding of a function from vocabulary quizzes.</p> <p><i>A function is a block of code that you can call when you need it. This saves you rewriting the same block of code over and over again. Instead, you simply call the function each time you want it.</i></p> <p>Students should work on the guided lesson "FUNCTIONS" found in Coding Principles on the 2Code page in Purple Mash.</p>	<p>Review the definition of a FUNCTION and what the children have learned from working through the guided lesson. Open "PARROT MOVES" lesson on board and show children that there are blocks of code that are repeated throughout the code that make it very long and hard to read. By changing these blocks into functions, we could shorten the code and make it more manageable.</p> <p>All ch to open the lesson on their devices. They should create two new tabs and name the first Variables and the second Functions. Then they should drag the My Code tab to the end so that their tabs look like this: Variables, Functions, My Code. We will also learn how to move code between tabs. Click on the first piece of code in the lesson and then click on the purple "up" arrow that appears and select the Variables tab as it is a variable. (Tabs screencast)</p> <p>The majority of the code is already written in the lesson. You (the children) have to organise it into FUNCTIONS, remove the extra code and organise the code into the correct tabs. You also have to include the code necessary to call the FUNCTIONS. The finished lesson can be seen here.</p> <p>When children finish the lesson successfully, they can try and create their own program using functions. (<i>Work with variables and learn how to use functions.</i>)</p>	<p>Children should ensure that they've written their planning in their exercise books. Some children to come up to the front to show their programs and explain them.</p> <p>Quick memory game using flashcards to review vocab covered at the beginning of the lesson. You can also use online games (link 1, link 2).</p>	<p>Take exercise book home (or a copy of the code) and input the program into 2Code and save the program.</p> <p>Publish and print QR code to take in to school.</p>

