Pocket Code module 1 - Science: Year 8
Lesson 4

DD _____ /MM _____ /YY _____

Context & Profile				
Title: Applying Pocket Code to Science Variables and creating an inventory		Timescale: 1hr	Year group/age: Yr8	No in group:
Relevant contextual information on learners:				
How does this lesson fit into the subject curriculum or the wider curriculum?		Prior learning of learners		
Science: Pupils can use appropriate language when discussing respiration. **Computing:** To create and plan a sequence of instructions developing coding practices. **Maths:** Algebra, use of co-ordinates.		Pupils have been introduced to the basic functions of Pocket Code. They have begun to understand and apply their knowledge with basic components of game design.		

The Learning			
Groups	Intended progress (Learning Objectives)	How will this progress be demonstrated?	Assessment of progress by…
All	Understand how to use variables, creating a program exploring an inventory. To reinforce understanding on how the diaphragm causes the lungs to inflate and deflate.	For homework it is expected that pupils have noted down their definition of an inventory in game design. By the end of the session pupils will have adapted a template to create a Science-based mini-game exploring variables which has some interactivity. This will be shown to their peers and teacher.	Pupils answering closed question through the use of the ***Correct or Incorrect*** game.

Organisation	
Resources: PPT or Screen casting with IWB 1 tablet per pupil **Support:** Vocabulary on board	Working with others: Learners:

Timings	Content		
To start with…		Cognitive/ Behavioural*	Learning scenario*
15 mins	**Quick starter: Correct or Incorrect – Broadcasting (11992)** pupils to answer quick-fire questions. - Use the broadcasting method of answering the questions to assess their understanding of broadcasting from the previous lesson. **Download:** *Variable Science Respiration (5398)* (*See – Variable program guide – Science for more information*) (*this works like an inventory – see if this fits with pupil's examples from the homework*) Show the program: Explain that you must collect the 'in' button to be able to inhale and inflate the balloon. Show the scripts for the objects – pointing out elements of the code. Discuss how the diaphragm is used in this process. **Download:** *Variable template (11864)* Explain this is the same program but the variable is not complete – change the value so the program works correctly (*See: Variable template guide for more information*). Pupils to change the look of the objects to either the inhalation button and balloon images or another appropriate set of images through exploring Pocket Paint and adding text where appropriate.	C/B	I/FG

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Timings	Content		
Main Learning			
25 - 35 mins	Pupils work independently to debug and adapt the variable template to reinforce understanding on how the diaphragm causes the lungs to inflate and deflate.	C	I/FG
Plenary / extension			
10 mins	**Extension:** Starting from the Variable template. Can the pupils create another set of images that relate to the differences between the air we breathe in, and out?	C	I/SG
	Plenary: Explain the respiration process in the program, whilst also describing the function happening within the program.	B	

*Cognitive/Behavioural Key: C - Cognitive
              B - Behavioural

*Learning Scenario Key: FG - Full Group
              SG - Small Group (including parners)
              I - Individually

LP 1004