Scratch – Developing Games: Changing Costumes

Aim:	**Success Criteria:**	**Resources:**
Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. Improve the effect of the game by add further costumes and programming costume changes to sprites as a consequence to an event. I can program costume changes for a sprite.	I can design new costumes for an existing sprite. I can design code that switches from one costume to another. I can add appropriate effects to complement a change of costume.	**Lesson Pack** Desktop computers, laptops or tablets. (This lesson is intended for use in conjunction with Whiteboards and pens
	Key/New Words: Algorithm, sprite, backdrop, block, script events, sequence, levels, repeat, commentary, consequence, action, penalty test, debug, costume.	**Preparation:** Open Scratch website and load _ in advance. Differentiated **Changing Costumes Activity Sheet** – as required

Prior Learning: This lesson builds on Lesson 4 (Creating the Splat Game) and also prior units on Scratch programming.

Learning Sequence

Whole Class	**Initial Game Design:** Review what elements of the game each of the children managed to create in the last lesson. Ask what is wrong with the animation of the existing game, e.g. balloon doesn't burst, no sound made.	
	Costumes: Explain that each sprite can be animated by changing to a different 'costume'. The sprite can have many different looks and can be programmed to change from one to another as a consequence of any particular event. For example, the character may look different when jumping and the balloon will look different when it splats!	
	Changing Costumes: Demonstrate that some sprites in the library already have different versions that you can select. In addition, sprites we have created can be edited and new versions saved as new 'costumes'. Show the 'next costume' and 'switch costume' blocks in the Looks tab.	
	Try It Yourself: Can children program costume changes for their sprite? ★ Children input a simplified version of the script, as instructed on **Changing Costumes Activity Sheet**, making choices to edit particular values. ★★ Children are given instructions on the **Changing Costumes Activity Sheet** and must follow them to create the script, while making some of their own coding decisions. ★★★ Children use the open-ended prompts on the **Changing Costumes Activity Sheet** to write and develop their code. Individual solutions to creating each script may vary but trial and error should be encouraged.	
Whole Class	**Play the Game:** Choose children to show the design of their game. Play and evaluate, then look at the code. Test and debug. Appraise each other's games and suggest next steps. Can children test and debug each other's code? Save for future editing.	

Taskit: Try duplicating one of the character sprite costumes. Can you use your own paint skills to carefully edit the character and create another costume? You could change the expression of the character or move its arms or legs for jumping and landing!