Master Chef

Activity Structure – 45min

Activity	Timing
Warm up Game	5 mins
Introduce Story and Project	10 mins
Main Activity	25 mins
Final test & debug	throughout
Share with group	5 mins

Overview
Children will create a fun animated scene in which they cook a delicious meal. It will then be judged by a Master Chef!
*This project involves quite a lot of drawing so do bear that in mind before deciding to teach it.

Learning Objectives
- To use message blocks with growing confidence.
- To confidently use the Scratchjr Paint Editor.

National Curriculum / EYFS Curriculum Links
- Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.

Warm up game: Buggy Code
- Tutor creates a line of erroneous code (use laminate blocks) for the children to read, correct and then act out. *What will happen when I run my code? Can you spot any mistakes / bugs? How could I correct them? Now what will happen when I run it?* Make it clear that making mistakes and checking our code as we create is an important part of coding that we call 'debugging'.
- This game could also be played on the tutor's tablet or using a whiteboard. Create some lines of code for the children to read, but add some deliberate mistakes for the children to identify and correct, e.g. forget to join the blocks, have no start block, join a 'wait' block to 'repeat forever', etc.

Introduction (discuss the project together, share ideas and create excitement)
- *Have you ever cooked with an adult at home? What did you make? Do you know what a recipe is?* Explain that a recipe is a set of clear, precise step-by-step instructions.
- A set of step-by-step instructions is sometimes called an **algorithm.** We also use algorithms when we're coding; we give our tablet a set of instructions (using the blocks) in order to make it do something.
- When we cook something it's important that we do the steps in a particular order, e.g. if I was going to bake a cake, I would need to mix the ingredients together **before** I put them in the oven.
- This is also true in coding - if I want my character to run across the screen, then say something I'd need to make sure I put my blocks in the correct order.
- Today we are going to code an animation where our character cooks something and then presents it to a judge to taste.
- Show the main project. Point out how the message blocks follow one after the other, and how for this project everything is happening in a specific order, i.e. the **sequence** of blocks is very important.
- *What will you make?* Encourage the children to keep it simple and not code a recipe with too many steps and ingredients!

Project Plan

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Master Chef

Main Activity Key questions and teaching

1. *What meal will you make? What are the four main ingredients?* The children could note this down on a piece of paper.
2. Select, edit or draw a room background. Give the children a set amount of time to do this.
3. Add your characters: you'll need to draw an 'oven', a 'cooking pan' and 3-4 ingredients.
4. Choose a person from the library to be the chef. *Are you going to take a picture of your face? Could you use the Paint Editor to make him/her look more like a chef?*
5. Let's code the cooking pan: on [Green Flag] code it to make a small, interesting movement. *Why is it a good idea to use the very slow speed block for the pan's movement?*
6. Now the chef: record an introduction to play on the [Green Flag], [sound recording: "Welcome to my Junior Masterchef Kitchen], [Wait 15], [Send Orange Message].
7. Code your first ingredient: [On receipt of orange message] appear, drop into the pan and disappear. *Will you also include a cooking sound effect?* Finish the code with [Send Red Message].
8. Second ingredient: [On Receipt of Red Message] code the second ingredient to appear, drop into the pan and make a sound. Repeat for the remaining ingredients.
9. Draw children's attention to this methodical way of working, pointing out the importance of **sequencing** the messaging blocks correctly.
10. Add a second page to your project then code the last ingredient to [Say: "All Cooked!"] [Go to Page 2].
11. Create page 2: add the background and select, edit or draw the following characters: chef, judge, table, and the finished meal.
12. Code the 'chef' to say what he has made. Send a final message to the 'judge' to trigger him/her to offer their opinion, e.g. 'Delicious! Well done young chef."
13. Note: the table and finished meal have no code.

Teaching points

- Encourage the children to copy-code the chef and first ingredient, then code the second and third ingredient with support. Can the children code the remaining ingredient(s) independently? Can they code the second page with little/no help?
- Use the message blocks in the colour order they appear in Scratchjr (orange, red, yellow etc.) rather than preferred colour to limit the chances of children becoming confused.
- Have the images of the characters that need to be drawn available for the children (see resources below)
- Encourage children to test and debug throughout.

Possible Extensions

- Create more ambitious effects (and code) for the various ingredients, e.g. crack eggs, sieve flour, pour milk, etc.
- *Can you add another character and code it so that it looks like the ingredients are being cooked or mixed together?*

To Simplify

- Have fewer ingredients.
- Limit the project to one page
- Give the children more support. If they are new coders allow them to work closely with an adult.
- If the drawing is tricky, limit it by using the fruit characters from the library to make a fruit salad.

Finishing up

- *Let's be our own judges. What did you really like about your project? What do you think you could have done better next time? What did you learn?*
- *Who found working in this methodical way helpful? Who didn't? It's fine either way and interesting to see how we all approach things differently.*

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