Broomstick race (A)

Activity Structure – 45min

#	Activity	Timing
1.	Introduce project	5 mins
2.	New project & add spooky backdrop	3 mins
3.	Create characters	10 mins
4.	Code & test	12 mins
5.	Add medals (opt.l)	10 mins
6.	Debug & Demo	5 mins

Overview

In this playful magic-themed project, children learn how to manipulate the movement of various characters. They choose which broomstick should win, and make sure it completes the race first.

A great project for developing/reinforcing number sense, logical thinking and creativity. Can be extended by addition of medals which appear using different coloured message blocks as the characters cross the line.

Step by Step

1. In a new project, select a spooky background.

2. Delete the cat, and create a new character, tapping immediately on the paintbrush to draw our first broomstick and something to ride it.

3. Draw a simple broomstick using one or two shades of brown. Bushy part is usually on left so the broomsticks fly rightwards.

4. Create 1-2 more broomsticks, by adding a new character and selecting the broomstick previously drawn. Arrange starting positions partially hidden off to left of screen.

5. Children choose which broomstick will win. Code the first broomstick, talking about which kinds of blocks we need: blue movement blocks to cross the screen, and a green flag from the yellow blocks. What will go wrong with the others?

6. Code additional broomsticks, varying the direction (and speed if desired).

7. Test: which broomstick wins? Does it get to the finish line? Anything else we want to add in to make more fun? Adjust the numbers below blue blocks.

8. Full project: Add several blue movement blocks and orange speed modifiers per broomstick so it's not so predictable.. NB children can choose any blue movement blocks to make the race more fun!
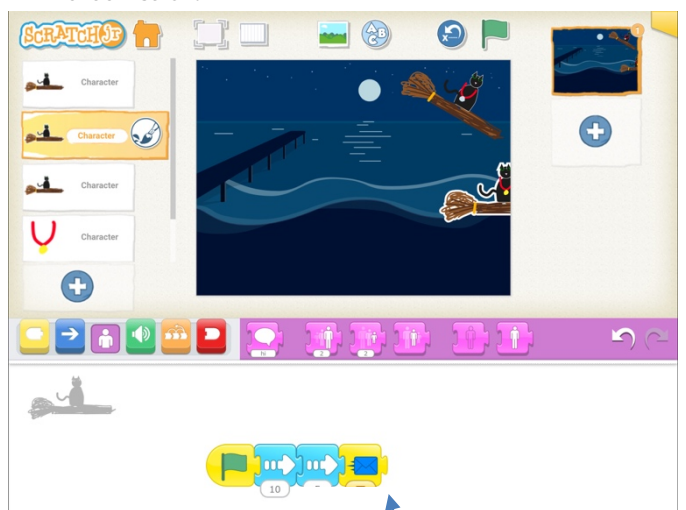
Project Plan

MAMA.codes

Basic project

1st broomstick:

2nd broomstick:

3rd broomstick:

Triggers silver medal

Extension: Gold Medal

Message received, medal appears
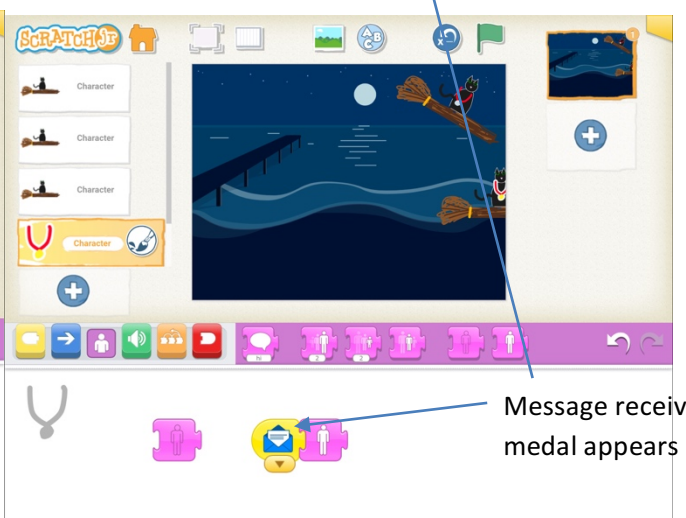
Younger children can draw only 1 or 2 broomsticks and just use one speed setting and one movement block for each.

Extension activities:

Children can draw additional character(s) of medals the characters can win when they cross the line. When the character finishes executing all the blue movement blocks and crosses the finish line, it sends a message to the medal to appear.

Children can be challenged to make the broomsticks tappable to put on a burst of speed: select desired broomstick, add new line with 'On Tap' yellow block, then closed message yellow block, then an orange speed block on quickest setting and a blue arrow block set to number to reach the finish line.