Computing 24-25

Year 3 – Programming Purple Mash (Guard the castle)

Remember when: beebots, scratch,	**Key vocabulary**
By the end of the unit children must be able to: -make the knight move right -make the knight reach the right pillar then change direction -make the knight reach the left pillar then change direction -debug the error for the knight -make your own sequence Extension- explore princess and the frog	Left Right Pillar Knight Error Bug/Debug Sequence Object Blocks of code Highlight Delete Drag Click Background Action Output Control Event

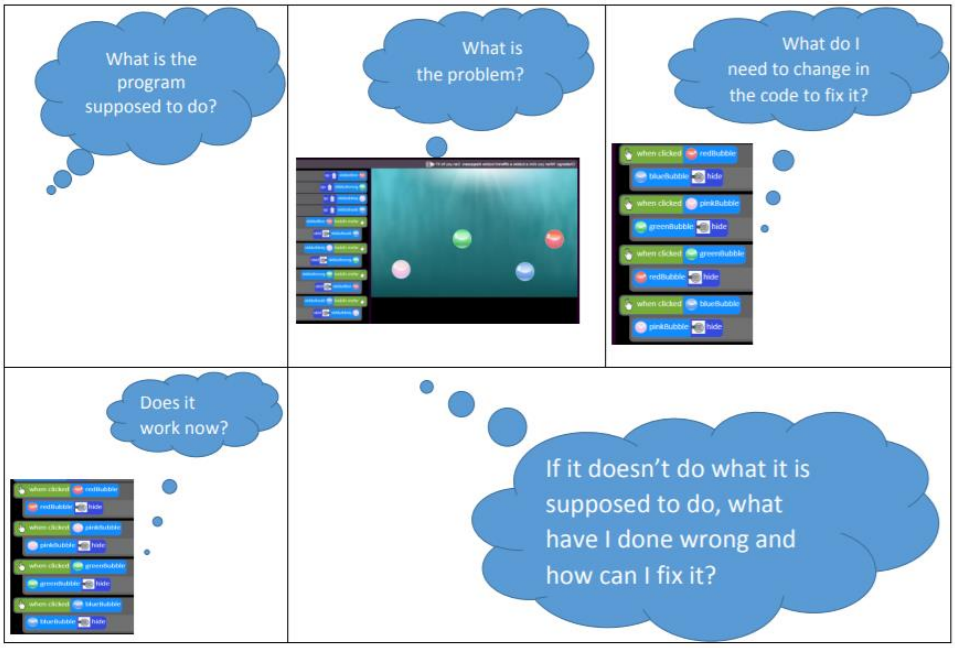
Prior learning in Year 1:	**Prior learning in Year 2:**
- move the fish right -move the crab left -debug the instruction to make the fish move right or left -make a little program to make the fish move when clicked Explore the bubble activity	-make the snail move forward 1 space - make the snails move forward - make the snails move in a random number -debug why a snail isn't moving -make up their own sequence Extension- explore the vehicles activity

National curriculum:
- 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.

Software

purple mash

Learning objectives Title / Focus	**Lesson outline**
Lesson 1- Guard the castle **LO-** To writing code to move the guard **Sticky Knowledge-** -make the knight move right -make the knight reach the right pillar then change direction -make the knight reach the left pillar then change direction	Remind the children about using beebots in year 1 and scratch in year 2. What can they remember? Explain that they are types of program where they can use technology to control something (also known as coding). Explain that they are going to be using a program called 2Code in Purple Mash. Explain and demonstrate on IWB that 2Code uses block coding to build up programs. This means blocks of code are dragged by the user onto the coding window and they fit together to build up the program. When a block of code is placed in the coding window, 2Code then offers the user a choice of appropriate functions to complete the line of code. The main section in the middle is the main code window. Code is written code by dragging blocks. An orange highlight will indicate where the command will go in the code window, this helps you to check that the command is in the correct place. Delete code by clicking the block to delete and then clicking on the bin in the bottom right-hand corner or by dragging the code to the bin. Once the code is placed, 2Code will indicate the next area to be coded. In the example above, the user has dragged the 'when clicked' block and now needs to select the thing to be clicked; the background or the turtle. To run the code, press the Play button at the top centre of the screen. Children shown how to move fish/snail - spend 10 minutes time recapping moving a fish or snail as these were not covered/covered in detail due to covid. Children focus the rest of the lesson on Guard the castle. Children work through the various challenges on the screen: make the knight move right

	-make the knight reach the right pillar then change direction -make the knight reach the left pillar then change direction
Lesson 2- Debugging Debug the error in Guard the Knight **LO-** To debug errors in a code **Sticky knowledge-** To debug the error for the knight	Recap Guarding the castle lesson. How did you make the guard …? Children spend 10 minutes exploring the knight. Introduce children to the idea that errors can occur in programs (known as bugs) and that in order to fix it, they will need to 'debug' the programs (look for any problems, fix and test them). Share the debugging process with the children on the IWB:  Extension: Children work through debugging challenges (chimp level)
Lesson 3- Design a sequence **LO-** To design their own sequence using Guard the Knight **Sticky Knowledge-** Make your own sequence	Children to make their own sequence using Guard the castle. Challenge the children to use 5 or more different commands. Extension: To explore Princess and the Frog.
Lesson 4- Free code chimp **LO-** To create a basic **Sticky knowledge-**	Assessment task Children are to use the free code chimp task to make the background, characters move and to change direction.

Working towards	**End of Unit Assessment** Working at Age related expectations	Working at a greater depth