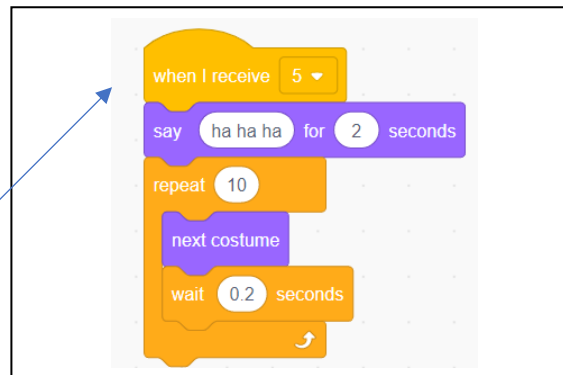
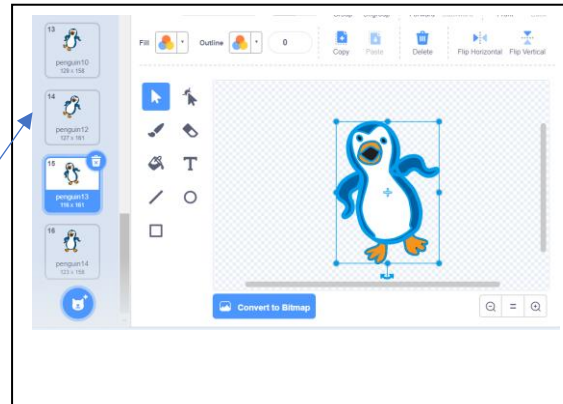


Year 4 Programming with Scratch from Algorithm to Code Knowledge Organiser

Key Learning	Self-Assessment		
	WT	A	WA
I can change the background			
I can upload a sprite from the sprite library			
I can change costumes of my sprites			
I can add the music extension block to a scratch file			
I can duplicate and edit sprites using the drawing tools in scratch			
I can create a sequence – a set of programming blocks to play a tune			
I can create a controlled count loop ' repetition ' – a sequence of instructions that is repeated a certain number			
I can add a forever loop to my code			
I can save my work (either to a computer or in my scratch account)			
I can create a broadcast message and use it in a block of code.			



Key words and prior learning from year 3 programming units

- Program** – a set of instructions in a language that is understood by a computer
- Code blocks** – the instruction 'block' that joins together to make a program
- Sprite** – name given for a character in computer software Visual or Scratch
- Debug** - Look at your program and find where there is a problem and fix it
- Unplugged** – this is a computer science activity that does not need a computer
- Visual** – block based programming language by J2e
- Repeat loop** – this is used in a program when we need to repeat something
- Nested Loop** – this is repeat loop with another repeat loop 'inside' it

New key words we will use in year 4 Scratch Programming from Algorithm to Code

- Scratch** –block-based programming language by MIT
- Controlled count loop** - this is used in a program when we need to repeat something a number of times
- Input** – this is an event that triggers an action/code block
- Costumes** – the way a sprite looks – these can be used to show movement
- Broadcast** – an input that can be used to trigger events

I know about these loops	Continuous loop example	Controlled loop example	Conditional Loop
<p>Design Level (Algorithm & objects)</p> <p>Language a human will understand,</p>	<p>Always loop step forward jump Loop all the time step forward jump</p>	<p>Do 3 times nod wave clap</p>	<p>Do until key is pressed Jump Hop Jump</p>
<p>Code Level How this might look as code</p>			

Who uses skills like these?

- Computer game makers
- Computer programmers when they design and make software to solve problem.
- App makers