Programming Turtle Logo and Scratch: Repeat and Say Something

Aim:	**Success Criteria:**	**Resources:**
Understand what algorithms are, how they are implemented as programs on digital devices and that programs execute by following precise and ambiguous instructions. Create and debug simple programs Use logical reasoning to predict the behaviour of simple programs using Scratch. I can create an algorithm and use the repeat and say command.	I can write commands in the correct order. I can write a variable value where required. I can correct any mistakes. I can use the repeat command. I can use the say block.	**Lesson Pack** Desktop Computer or Laptop. Scratch application *(installed or online).* Whiteboards and pens or books, pens and pencils for recording.
	Key/New Words: Algorithm, instructions, commands, sprite, block, move, add sound, repeat, say something.	**Preparation:** Differentiated **Activity Sheets** as required.

Prior Learning: Children will have used Scratch to create an algorithm to make a sprite dance in lesson 3.

Learning Sequence

	**Remember:** Ask children to quickly use move and play drum blocks to repeat the activity from the previous session. How would you repeat this algorithm? *Please note, if using Scratch 3, the 'play drum' programming block is now located within the 'add extension' option that can be accessed from the bottom left of the Scatch screen. Click on the 'music' extension and the appropriate blocks will appear. The block is now a different colour but has the same function.*	
	**Repeat:** Demonstrate the repeat block. How many times will it run? **Say Something:** Add the say block. **Watch Me Dance:** Demonstrate the algorithm in Scratch, depending on whether you are using the online version or application.	
	**Keep Dancing!** Children use the **How to Use Scratch Activity Sheet** to create the algorithm in Scratch. Can you change the algorithm so the Sprite moves backwards first then forwards? Can you change the sounds in the algorithm?  Children answer the questions on the **Repeat and Say Something Activity Sheet.**  Children answer the questions on the **Repeat and Say Something Activity Sheet** and begin to use the turn, point and motion blocks to create different effects.	
	**What will happen?** Show some algorithms. What do you expect to happen?	

Task*it*
Repeat**it:** Children can make algorithms using repeat.

Computing

Programming Turtle Logo and Scratch

Repeat and Say Something

Aim

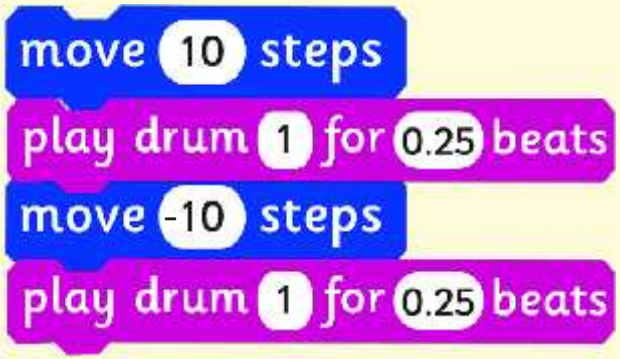
- I can create an algorithm and use the repeat and say command.

Success Criteria

- I can write commands in the correct order.
- I can write a variable value where required.
- I can correct any mistakes.
- I can use the repeat command.
- I can use the say block.

Remember

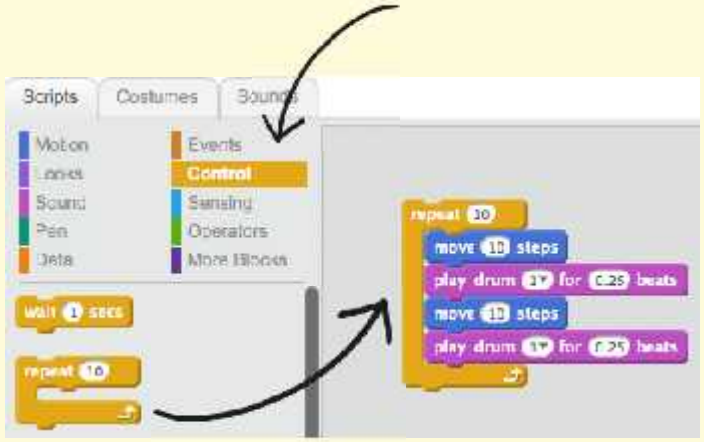
Use the move and drum blocks to repeat the algorithm from last lesson.



How would you repeat this algorithm?

Repeat

1. From the Control commands drag the repeat block and snap around your algorithm.

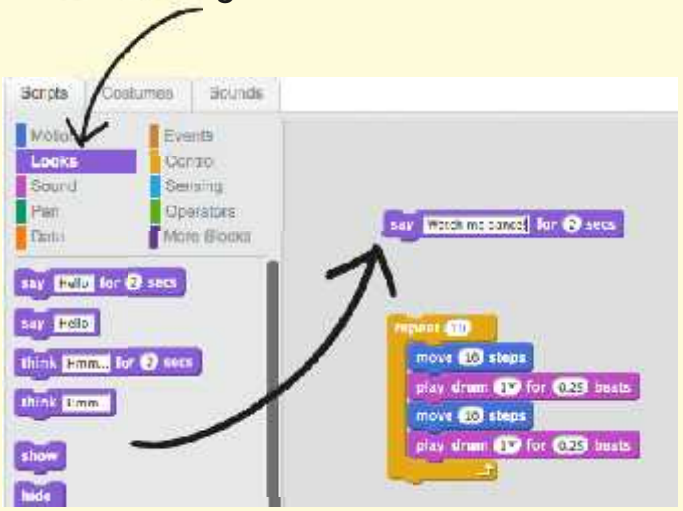


2. Click on the block to make the algorithm run.

How many times will the algorithm run?

Say Something

1. Change to the look blocks.



2. Drag a say block into the script area and snap to the move block.

3. Change "Hello" to "Watch me dance!"

4. Click on the block to see what happens.

Watch Me Dance!

Keep Dancing!

How to Use Scratch

Using repeat

1.

Drag out the repeat block and wrap it round the algorithm.

2.

Click on the blocks to run the algorithm.

3.

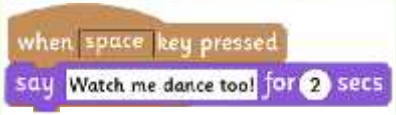
Change the number of times the algorithm repeats.

Adding a welcome

1.

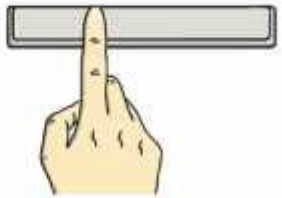
From the looks block, draw say something block and snap to the top of the repeat block.

2.



Change "Hello" to "Watch me dance"

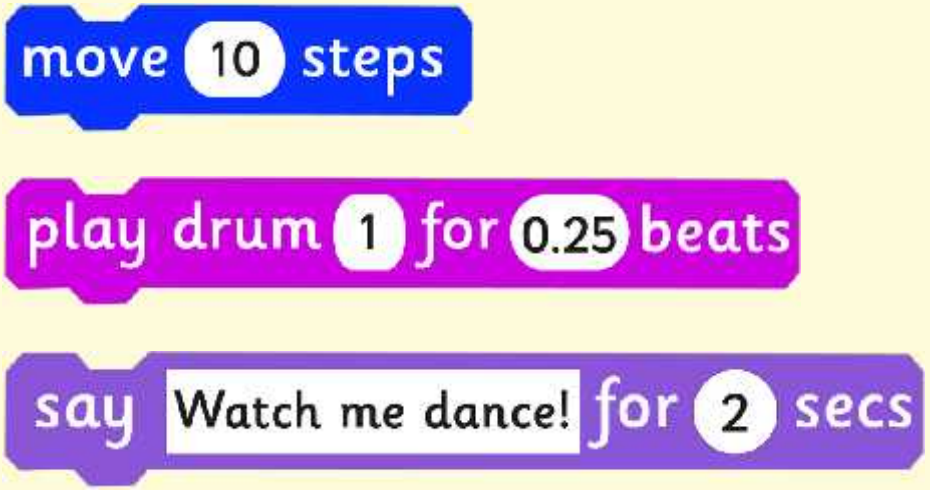
3.



Click on the block to run the algorithm.

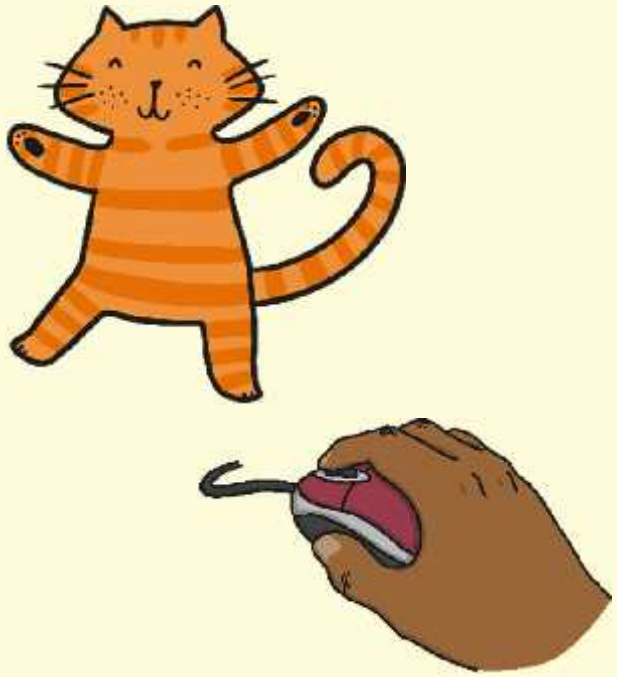
Can you?

Can you use other move, say and drum blocks to alter your algorithm?



What will happen?

What would you expect to happen if you clicked on these blocks?



Click on the algorithm to see it run in a browser.

Your Ideas

What other commands can you think of that might be useful in Scratch?

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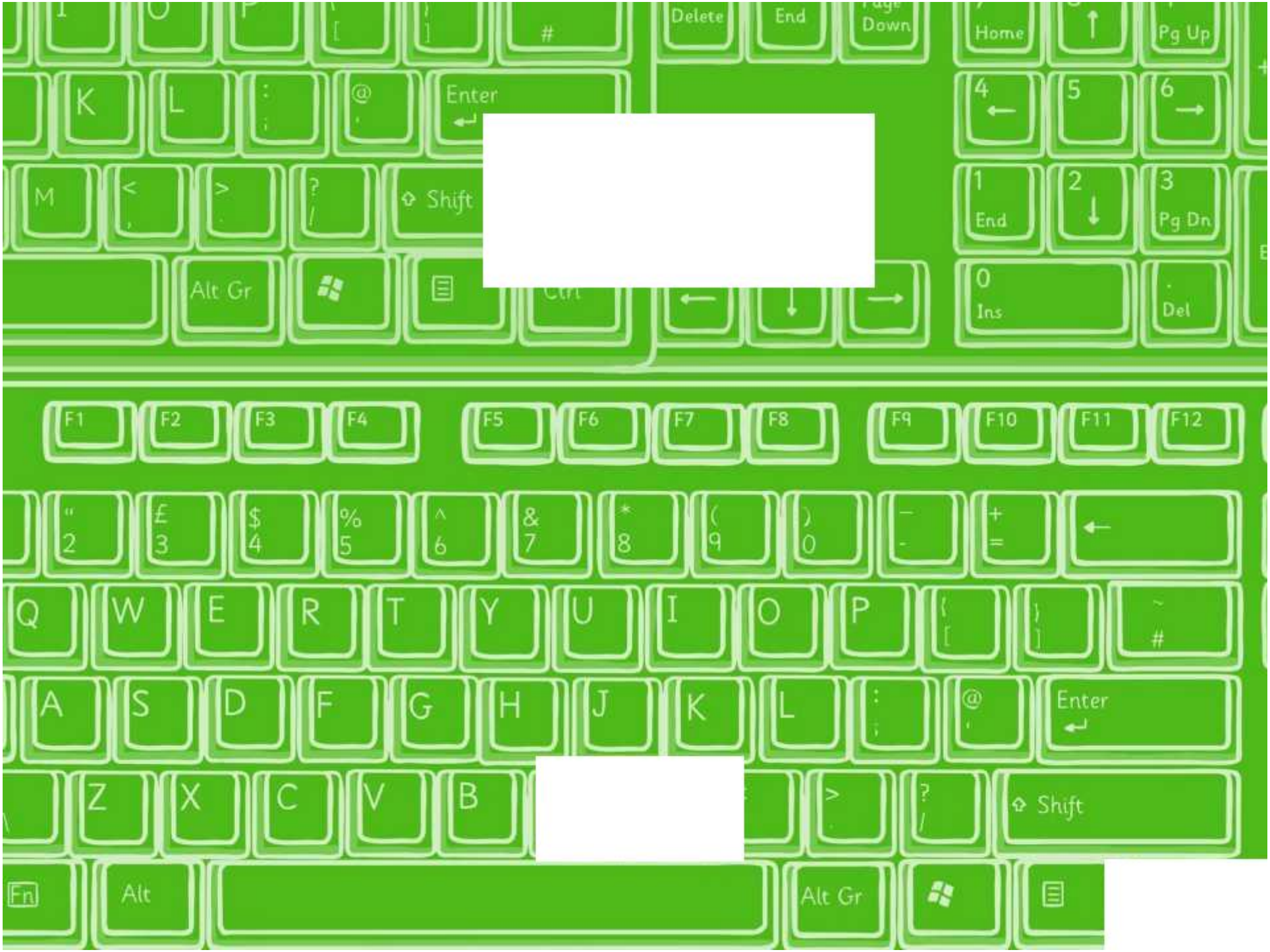
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Repeat and Say Something

I can create an algorithm and use the repeat and say command.

Open Scratch and use the repeat blocks to add a welcome and make the dance repeat. Now answer the following questions:

1. What happens if you change the variable (number) in the repeat block?

2. What happens if you change the variable (number) in the say block?

3. How would you get a move block inside repeat?

4. How would you get an algorithm in Scratch to repeat forever?

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1. What happens if you change the variable (number) in the repeat block?

_____

2. What happens if you change the variable (number) in the say block?

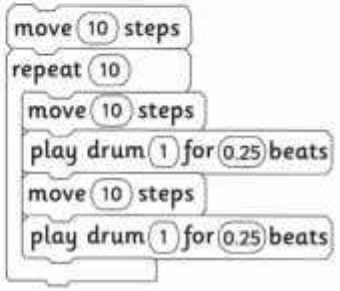
_____

3. How would you get the 10 move block inside repeat?

_____

4. How would you get an algorithm in Scratch to repeat forever?

_____



Now try...

- Using the Turn or Point blocks from the Motion blocks to your algorithm to create different effects.

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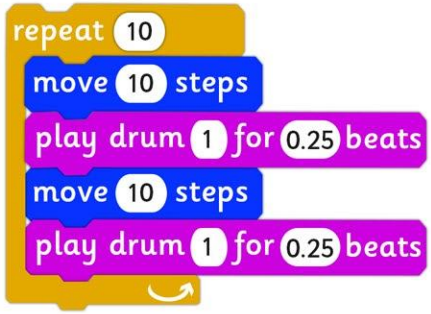
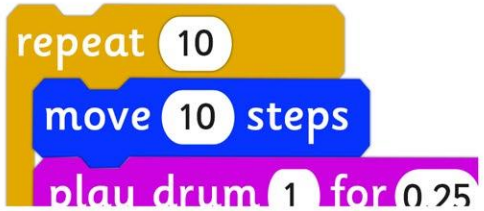


Click on the blocks to run the algorithm.

3.



Change the number of times the algorithm repeats.

Adding a welcome

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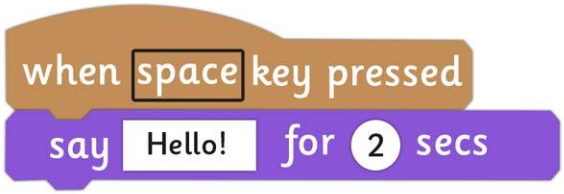

From the 'Looks block', draw 'Say something block' and snap to the top of the 'Repeat block'.

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Change "Hello!" to "Watch me dance!"

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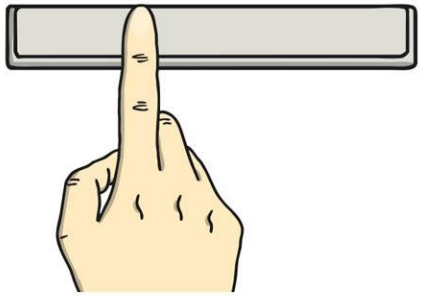

Click on the block to run the algorithm.

Repeat and Say Something

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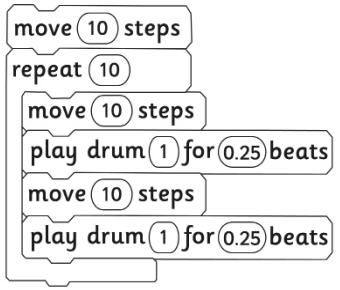

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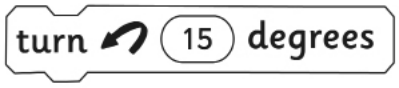

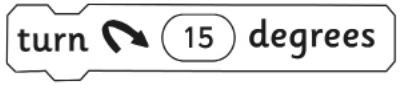

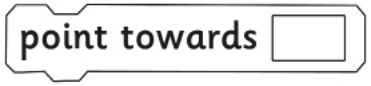

Avery Template: Name Badge Label, 8 per sheet | **Compatible Products**:15395, 25395, 42395, 45395, 48395, 5395, 8395, 88395, 85395.

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