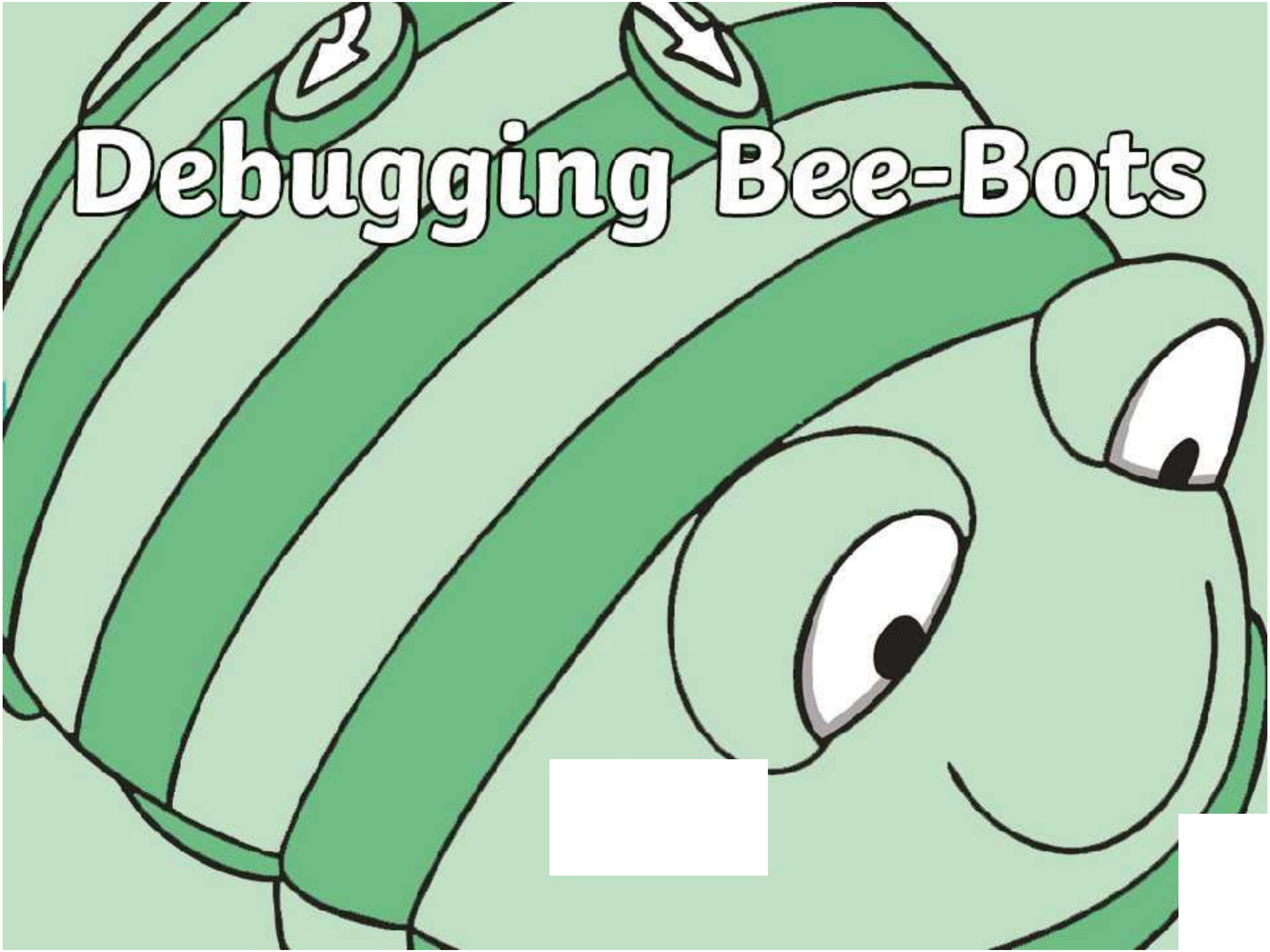
Computing

Programming Toys


Debugging Bee-Bots

Aim

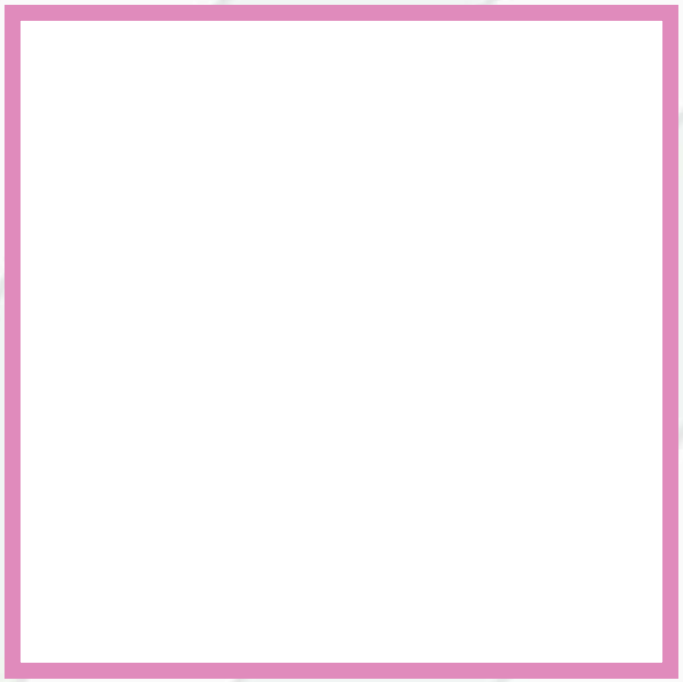
- I can debug a Bee-Bot.

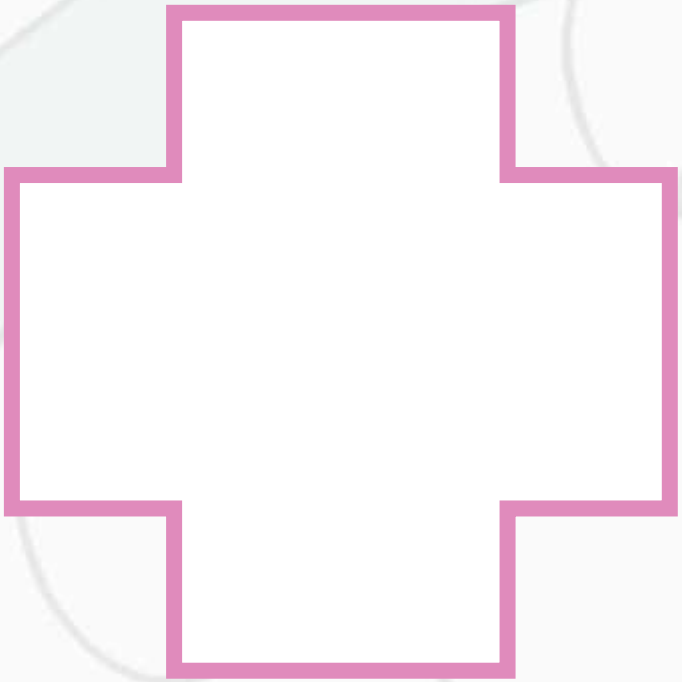
Success Criteria

- I can check my work for mistakes to debug a program.
- I can start my programming sequence again if I need to.

Draw a Shape

Can you make your Bee-Bot move in a shape? Try one of these:

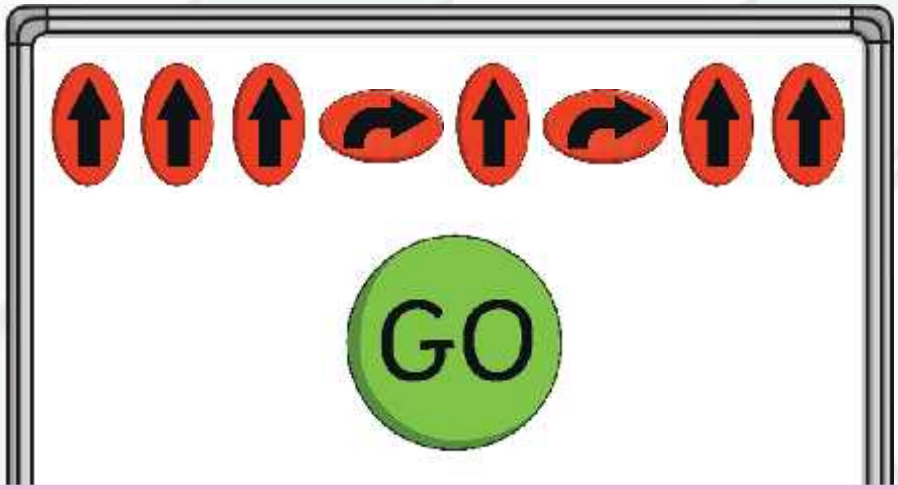


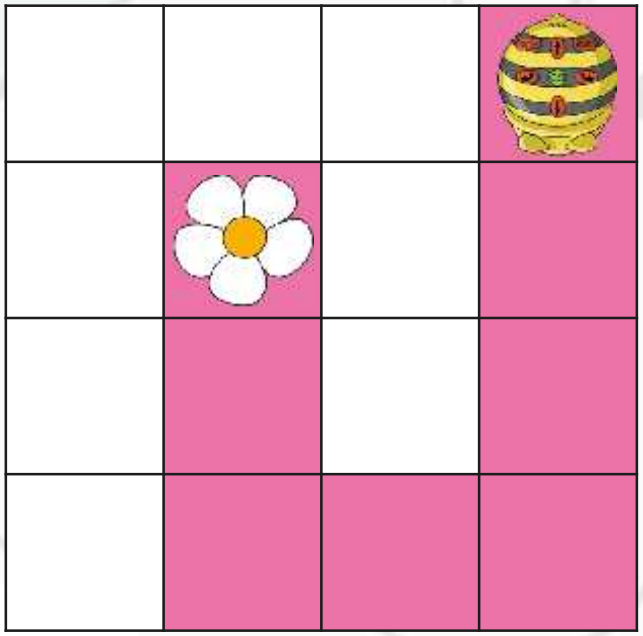


What Went Wrong?

I want to get my Bee-Bot to follow the purple path to the flower.
If I press the buttons shown, where will it end up?

Press GO to find out if you were correct.



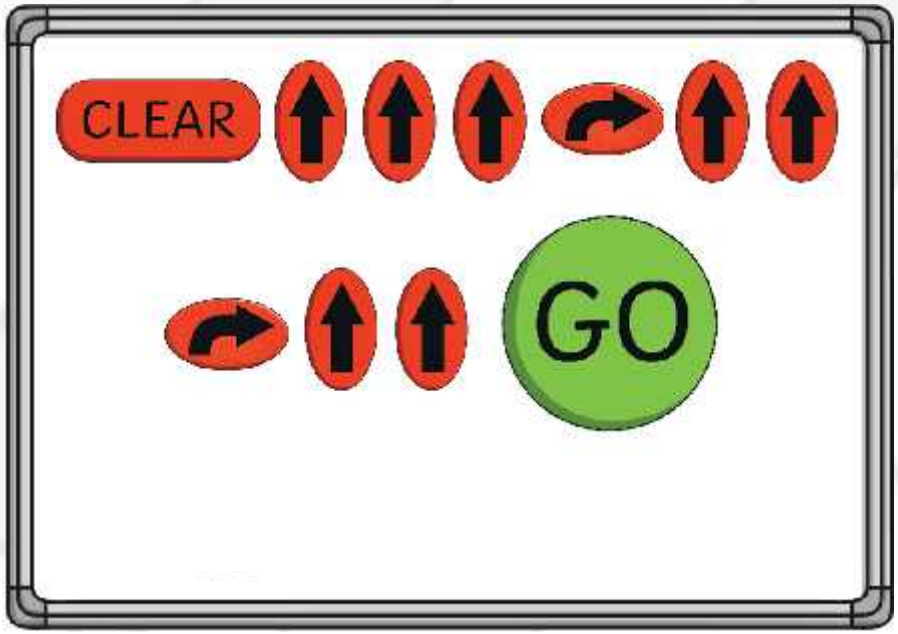


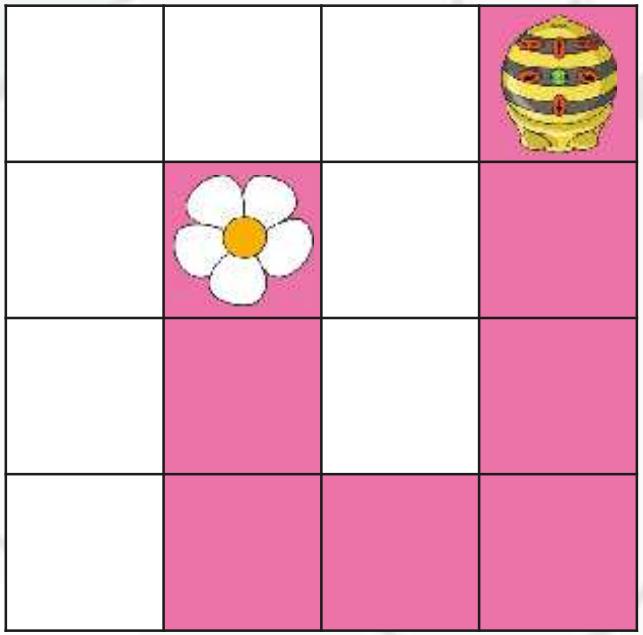
Can you draw the correct buttons to press, to reach the flower?

What Went Wrong?

What did you draw?

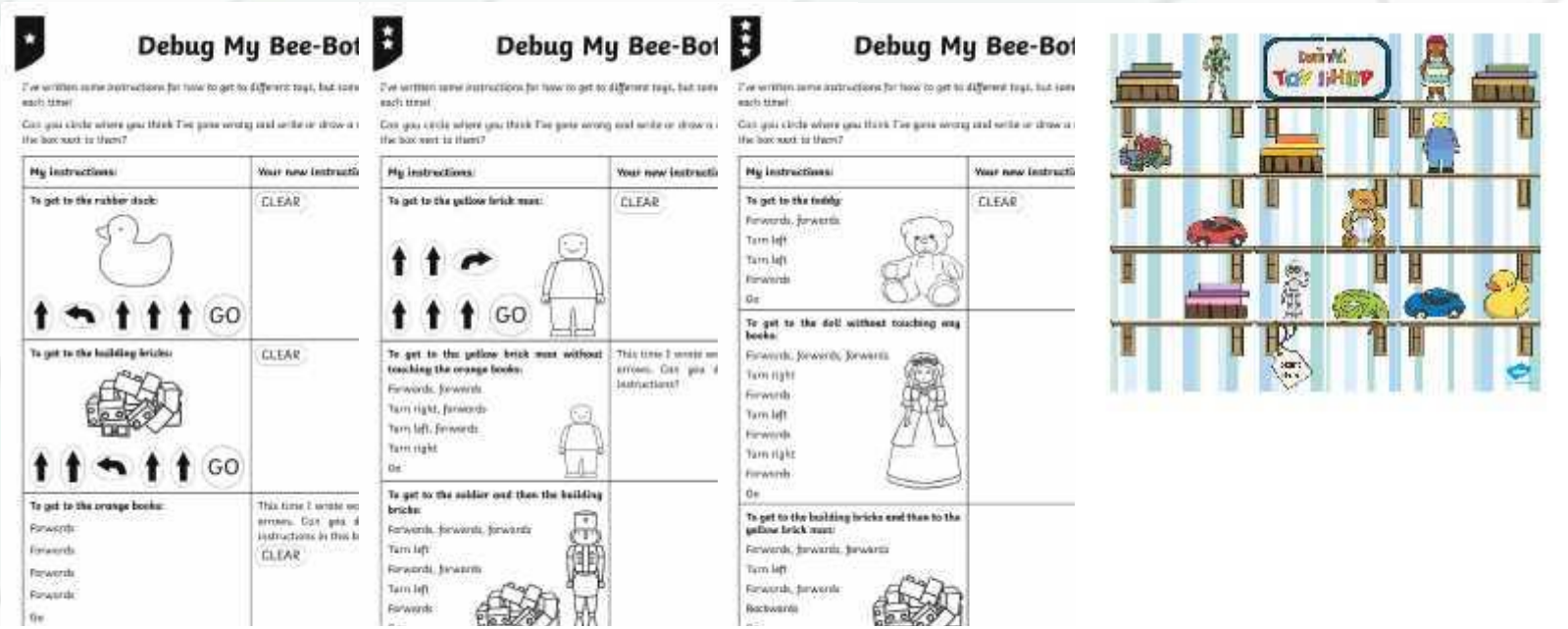
Did you remember to press CLEAR first?
That will clear your Bee-Bot's memory.





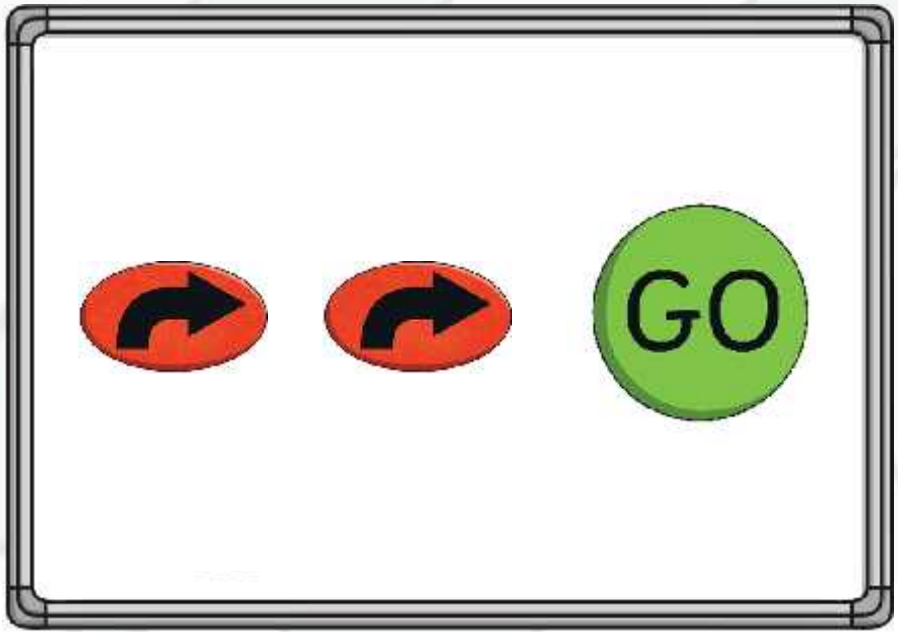
Debugging

Look at the instructions for each Bee-Bot on your sheet. Can you work out where I have made a mistake and fix it?



Half Turns

What if I need my Bee-Bot to turn around and go back again?
Some people in here have been practising that today.



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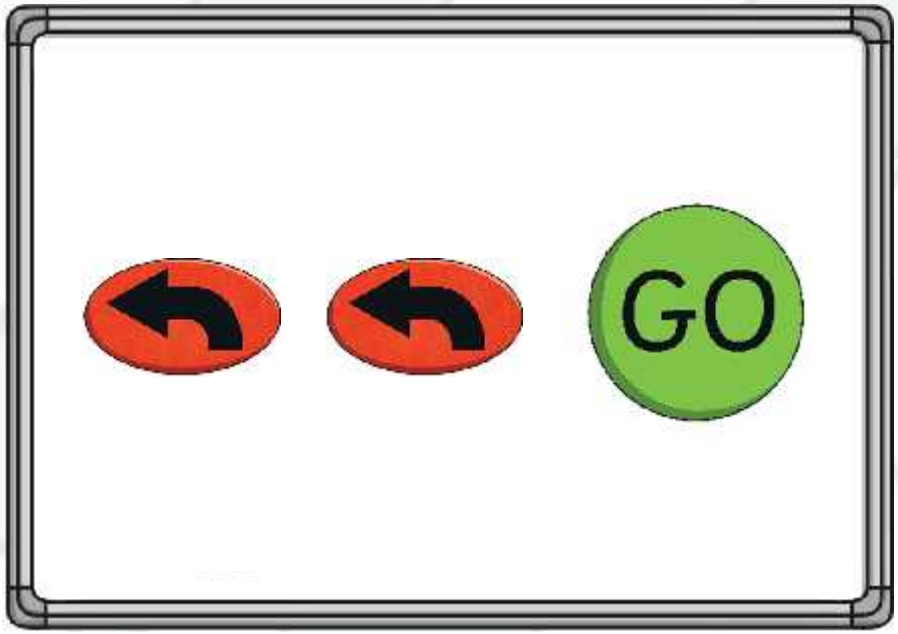

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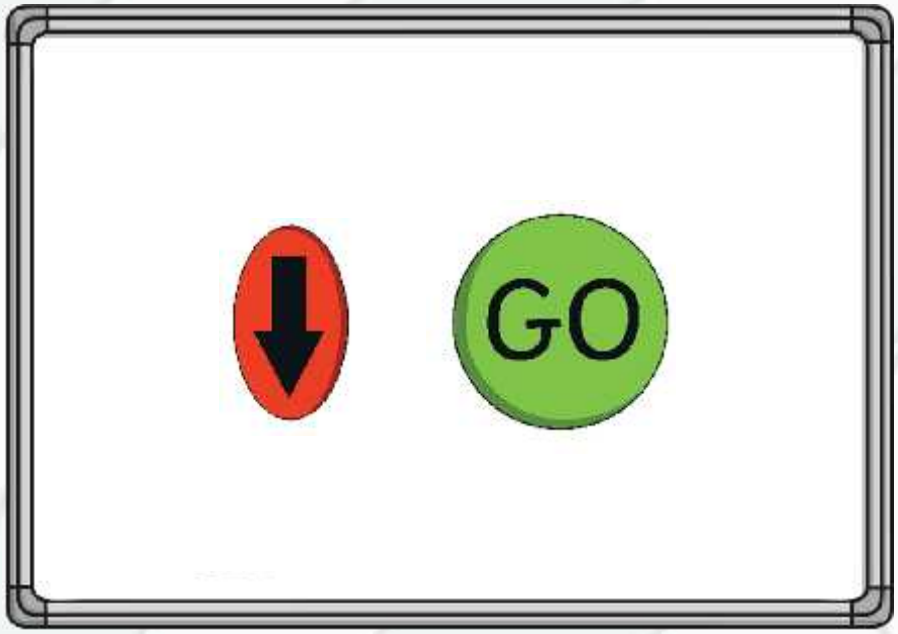

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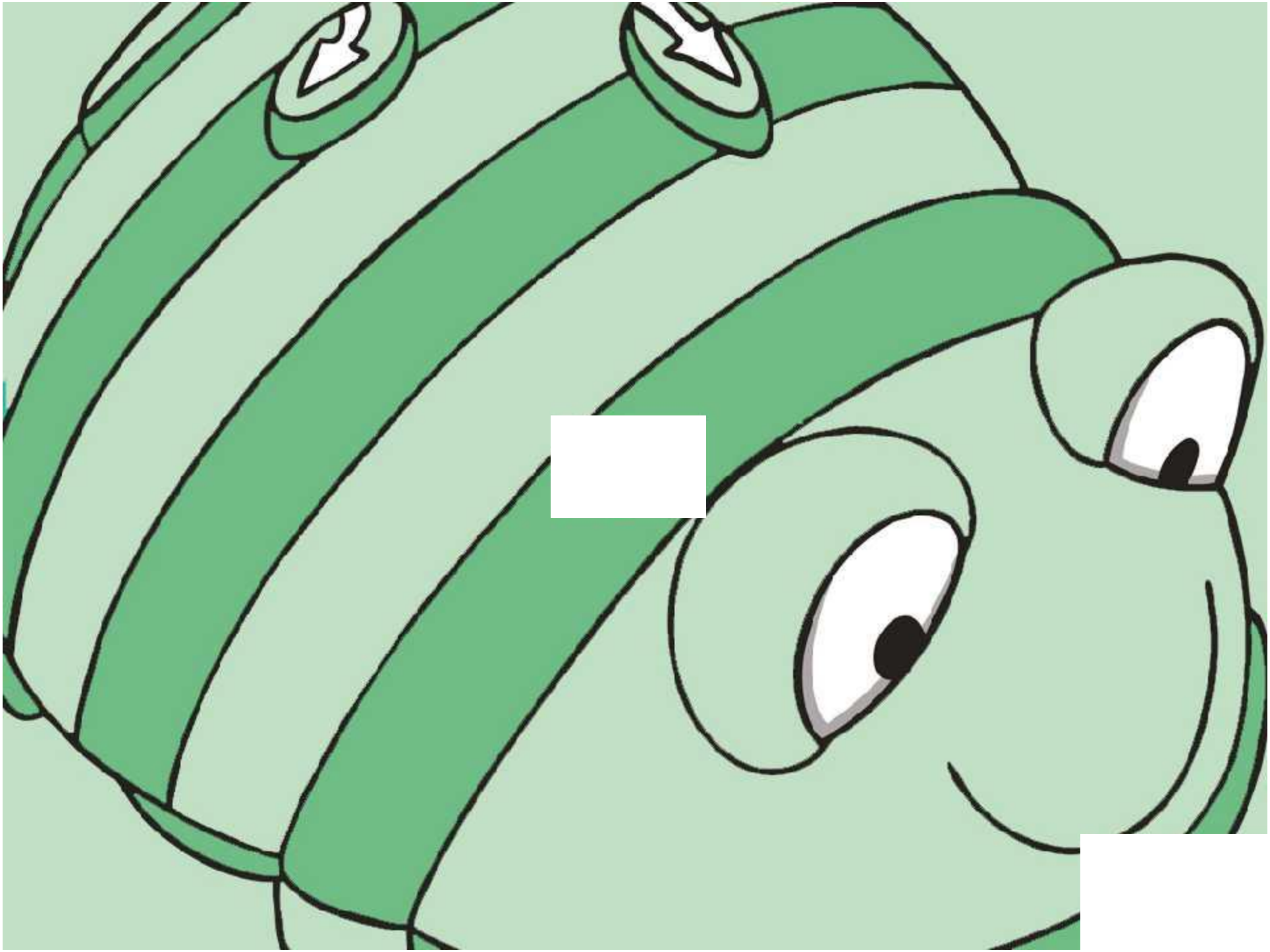

Programming Toys: Building Bricks

Aim:	**Success Criteria:**	**Resources:**
Understand that programs execute by following precise and unambiguous instructions. Create and debug simple programs. Use technology purposefully to create digital content. Children will work within the context of following picture instructions for building shapes. I can create instructions using pictures.	I know what an algorithm is. I can create step-by-step instructions using pictures.	**Lesson Pack** Building bricks - 5 per pair Tablets with cameras - 1 per pair
	Key/New Words: Algorithm, photograph, instruction, order.	**Preparation:**

Prior Learning: It will be helpful if children know how to take photos on your chosen device.

Learning Sequence

	**What Is an Algorithm?** Use the **Lesson Presentation** to define an algorithm. Ask the children to think about an algorithm for getting dressed in the morning, e.g. "What if you put on your coat before your jumper?" Click the link on the **Lesson Presentation** to show the children a video from BBC Bitesize. Highlight that when you write an algorithm, the order of the instructions is very important.	
	**What Is an Algorithm?** Using the **Lesson Presentation**, invite children to help you give picture instructions to a robot in order to brush his teeth. Point out that if you try to wet your brush before you turn the tap on, the robot will fail.	
	**Build and Snap:** Build a simple model using 5 building blocks and show the children how to take pictures of each stage, one block at a time. Show them examples of clear photographs using the **Lesson Presentation**. Can children identify what makes a good picture instruction step?	
	**Get Building!** The children should build a simple model using 5 blocks (you may choose to add or remove blocks to suit your children), taking a single photograph at each stage. Can children take a clear photograph for someone else to follow? They should then pull apart all their bricks and give their tablet, with the photos open, to another pair. Children must then see if they can follow the pictorial instructions given to them to recreate the model. Are the children able to follow instructions in order?	
	**Did You Do a Good Job?** Children show their model to the pair who took the pictures. Evaluate their success using the **Lesson Presentation**. Have the children built the final model correctly?	

Taskit

Whisperit: Chinese whisper building! Can children create a set of picture instructions to follow as a group, where one person completes a single step, then passes it onto the next person? Will the model still look like the picture at the end?

Explainit: Print out some picture instructions from the lesson. Children write an explanation of why photos can be better than a written instruction.

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

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