Programming Toys | Debugging Bee-Bots

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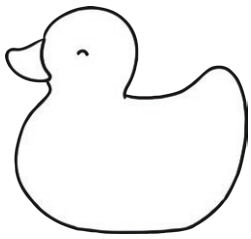
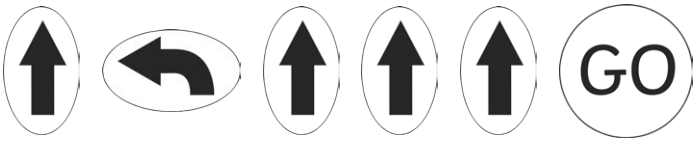
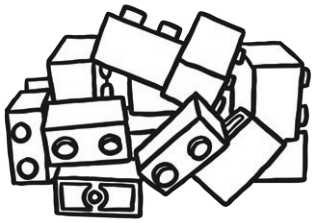
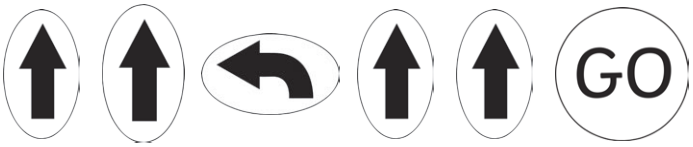
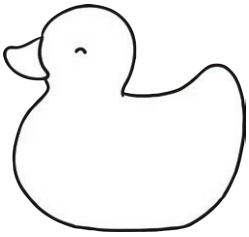
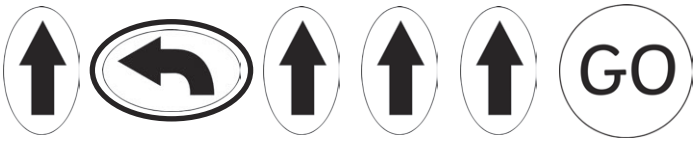
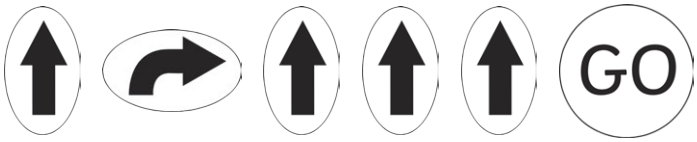
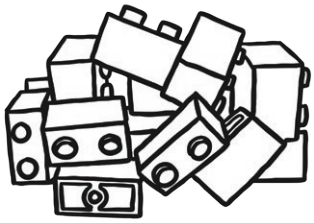
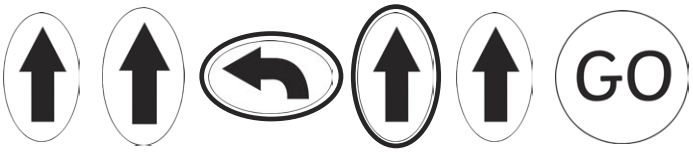
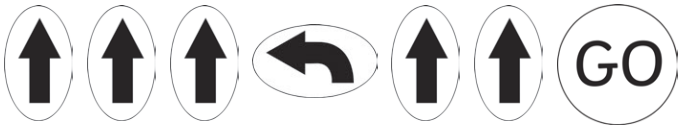
Debug My Bee-Bot

I've written some instructions for how to get to different toys, but something seems to go wrong each time!

Can you circle where you think I've gone wrong and write or draw a new set of instructions in the box next to them?

My instructions:	**Your new instructions:**
To get to the rubber duck:  	CLEAR GO
To get to the building bricks:  	CLEAR GO
To get to the orange books: Forwards Forwards Forwards Forwards Go	This time I wrote words instead of drawing arrows. Can you do the same for your instructions in this box? CLEAR GO

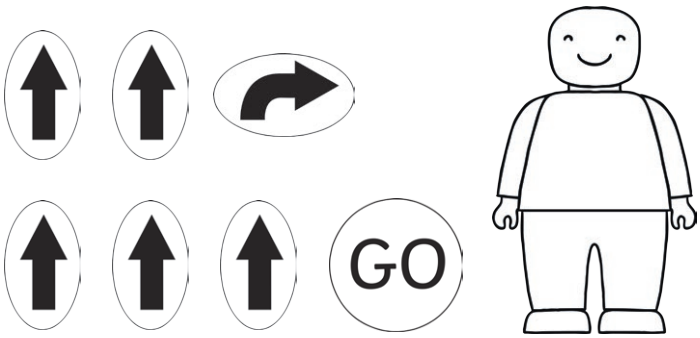
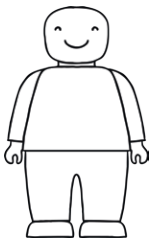
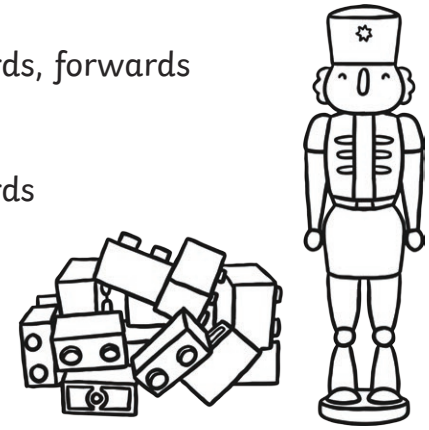
Debug My Bee-Bot **Answers**

My instructions:	**Your new instructions:**
To get to the rubber duck:  	CLEAR 
To get to the building bricks:  	CLEAR 
To get to the orange books: Forwards Forwards Forwards Forwards Go	*This time I wrote words instead of drawing arrows. Can you do the same for your instructions in this box?* CLEAR *Forwards* *Forwards* *Forwards* *Go* GO

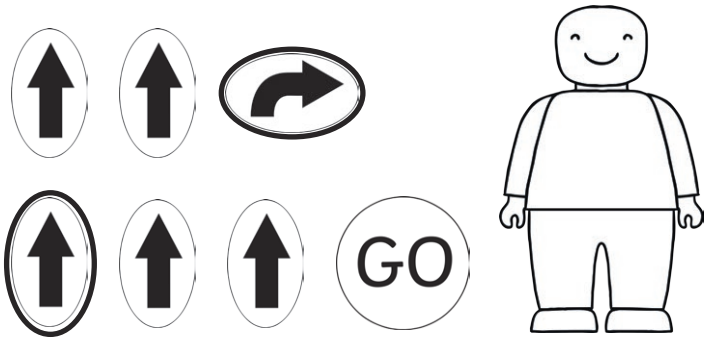
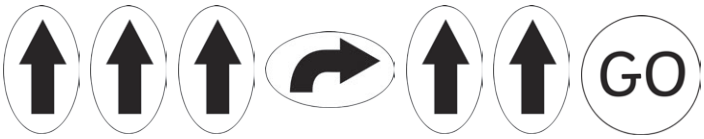
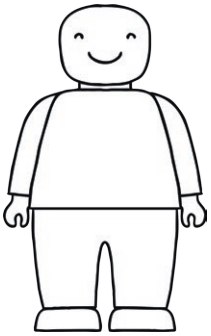
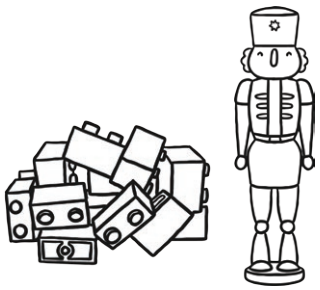
Debug My Bee-Bot

I've written some instructions for how to get to different toys, but something seems to go wrong each time!

Can you circle where you think I've gone wrong and write or draw a new set of instructions in the box next to them?

My instructions:	**Your new instructions:**
To get to the yellow brick man: 	CLEAR
To get to the yellow brick man without touching the orange books: Forwards, forwards Turn right, forwards Turn left, forwards Turn right Go 	This time I wrote words instead of drawing arrows. Can you do the same for your instructions?
To get to the soldier and then the building bricks: Forwards, forwards, forwards Turn left Forwards, forwards Turn left Forwards Go 	

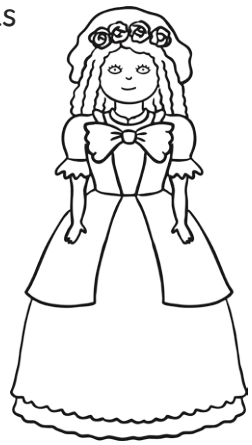
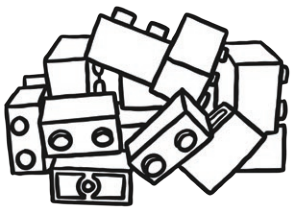
Debug My Bee-Bot **Answers**

My instructions:	**Your new instructions:**
To get to the yellow brick man: 	CLEAR 
To get to the yellow brick man without touching the orange books: Forwards, forwards Turn right Forwards Turn left Forwards Turn right Go 	*This time I wrote words instead of drawing arrows. Can you do the same for your instructions?* *Clear* *Forwards, forwards* *Turn right, forwards* *Turn left, forwards* *Turn right, forwards* *Go*
To get to the soldier and then the building bricks: Forwards, forwards, forwards Turn left Forwards, forwards Turn left Forwards Go 	*Clear* *Forwards, forwards, forwards, forwards* *Turn left* *Forwards, Forwards* *Turn left* *Forwards* *Go*

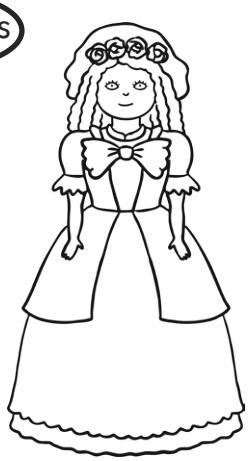
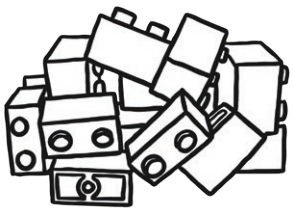
Debug My Bee-Bot

I've written some instructions for how to get to different toys, but something seems to go wrong each time!

Can you circle where you think I've gone wrong and write or draw a new set of instructions in the box next to them?

My instructions:	**Your new instructions:**
To get to the teddy: Forwards, forwards Turn left Turn left Forwards Go 	CLEAR
To get to the doll without touching any books: Forwards, forwards, forwards Turn right Forwards Turn left Forwards Turn right Forwards Go 	
To get to the building bricks and then to the yellow brick man: Forwards, forwards, forwards Turn left Forwards, forwards Backwards Go 	

Debug My Bee-Bot **Answers**

My instructions:	**Your new instructions:**
To get to the teddy: Forwards, forwards Turn left Turn left Forwards Go 	CLEAR *Forwards, forwards* *Turn right* *Forwards* *Go*
To get to the doll without touching any books: Forwards, forwards, forwards Turn right Forwards Turn left Forwards Turn right Forwards Go 	*Clear* *Forwards, forwards* *Turn right* *Forwards* *Turn left* *Forwards, forwards* *Turn right* *Forwards* *Go*
To get to the building bricks and then to the yellow brick man: Forwards, forwards, forwards Turn left Forwards, forwards Backwards Go 	*Clear* *Forwards, forwards, forwards* *Turn left* *Forwards, forwards* *Backwards, backwards, backwards, backwards* *Go*

Programming Toys: Debugging Bee-Bots

Aim:	**Success Criteria:**	**Resources:**
Create and debug simple programs in the context of fixing incorrect Bee-bot instructions. I can debug a Bee-Bot.	I can check my work for mistakes to debug a program. I can start my programming sequence again if I need to.	**Lesson Pack** Bee-Bots - 1 per pair or group Whiteboards
	Key/New Words: Algorithm, debug, program, turn, left, right, clockwise, anticlockwise.	**Preparation:** **Debug My Bee-Bot Differentiated Activity Sheets** - 1 per child **Toy Cupboard Bee-Bot Mats** - 1 per pair or group

Prior Learning:	Children will already be familiar with Bee-Bot arrow controls and how to program more than one step in a sequence at once from lesson 4.

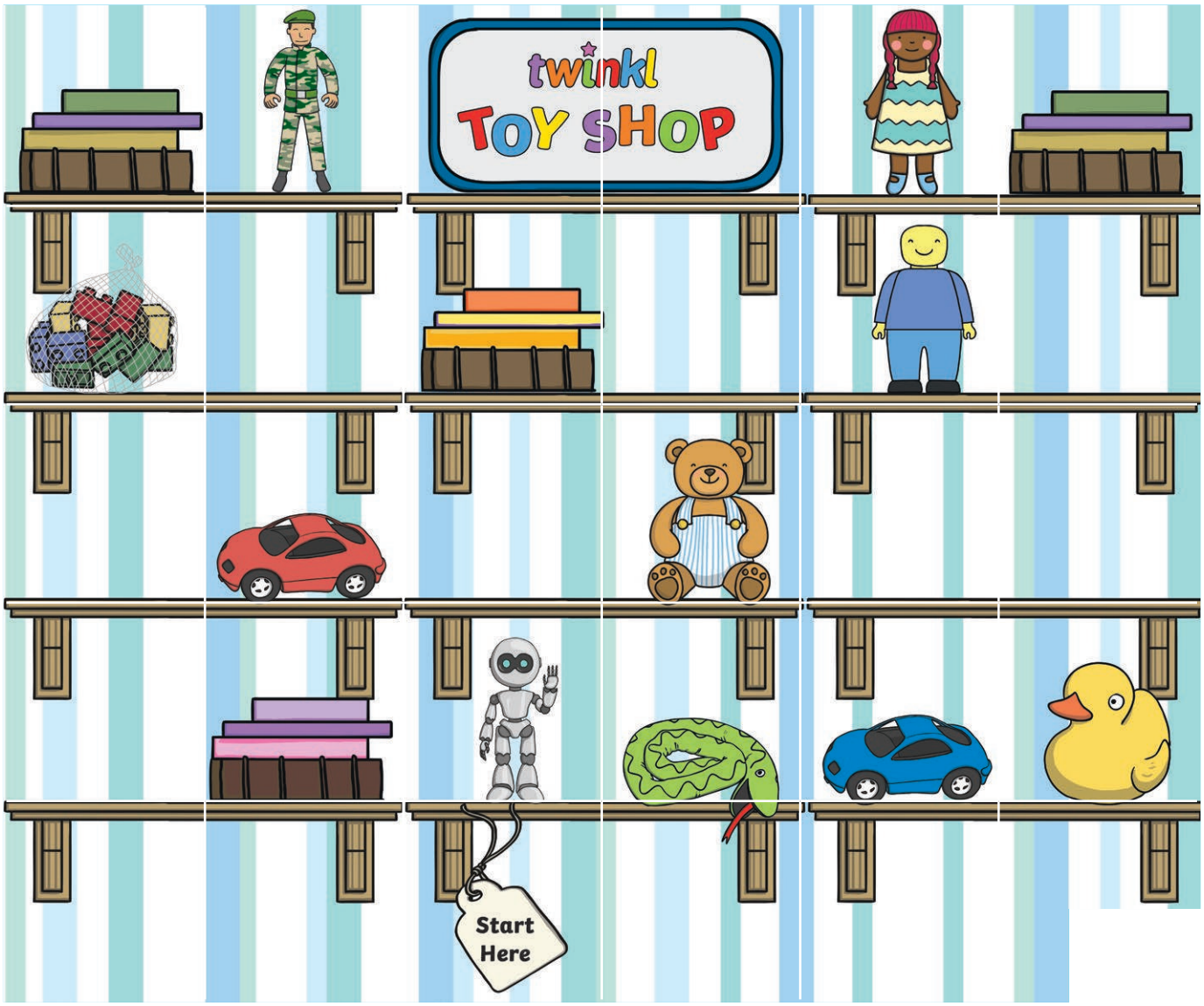
Learning Sequence

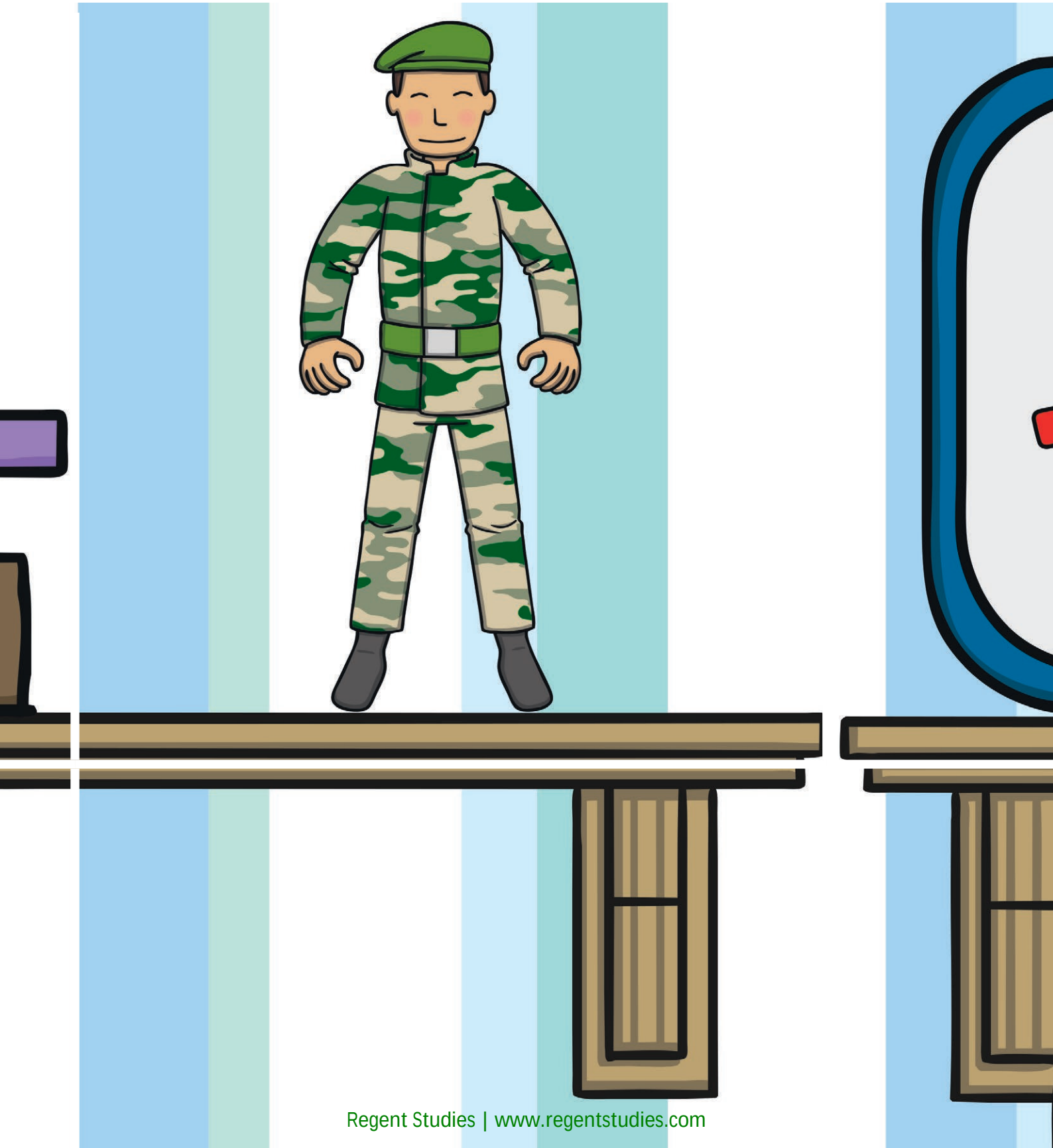
	Draw a Shape: Give the children a Bee-Bot per group and complete the task on the **Lesson Presentation**. Check that they all remember how to program using the arrow buttons, and ensure that all children understand how to program more than one step at once.	
	What Went Wrong? Give children time to answer the question on the Lesson Presentation. Show the line the Bee-Bot will take if it follows the instructions given. Can the children identify where the instructions went wrong? Ask the class for ideas on how to fix it. Can the children draw the correct sequence?	
	Debugging: Using the **Debug My Bee-Bot Activity Sheets** and **Toy Cupboard Bee-Bot Mats**, each pair should rewrite the incorrect sequences. The pairs use the Bee-Bot to check that their sequence is the correct one before moving on. Children draw arrows and then words to correct the sequences, aiming for one toy. 'Clear' is given. Children use arrows and then words to correct the sequences, aiming for 1-2 toys. They are reminded to write 'Clear'. Children use words to correct the sequences, aiming for 1-2 toys and using the backwards button. They should remember to write 'Clear' and 'Go'. There may be more than one mistake.	
	Half Turns: Ask the more confident members of the class to explain how to make a half turn. Demonstrate a half turn on the Bee-Bot by pressing the left or right button twice, and by pressing the backwards button.	

Taskit

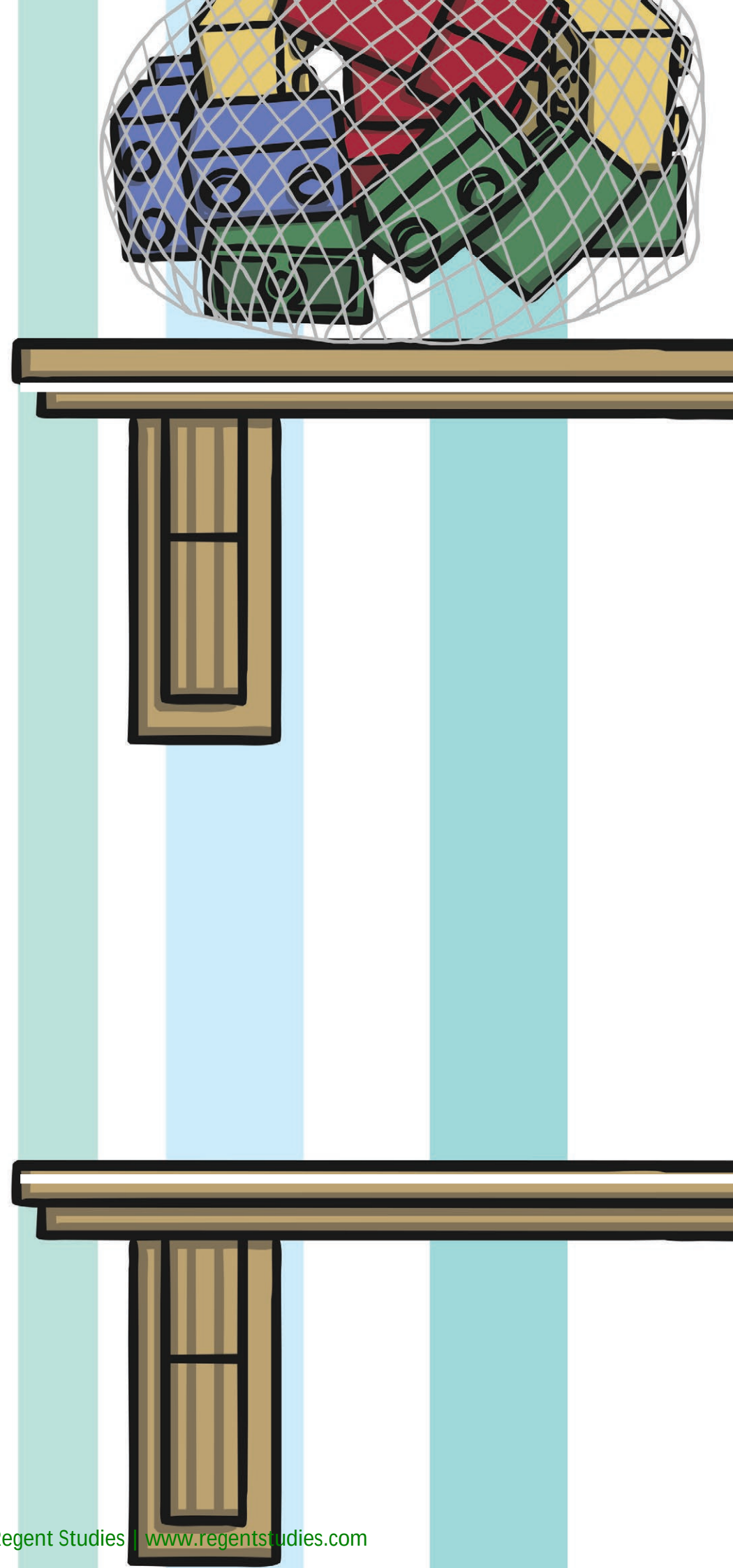
Designit: Can children think of a way that we could make a Bee-Bot draw a shape on paper? Can they design a program for a Bee-Bot that could do this job?

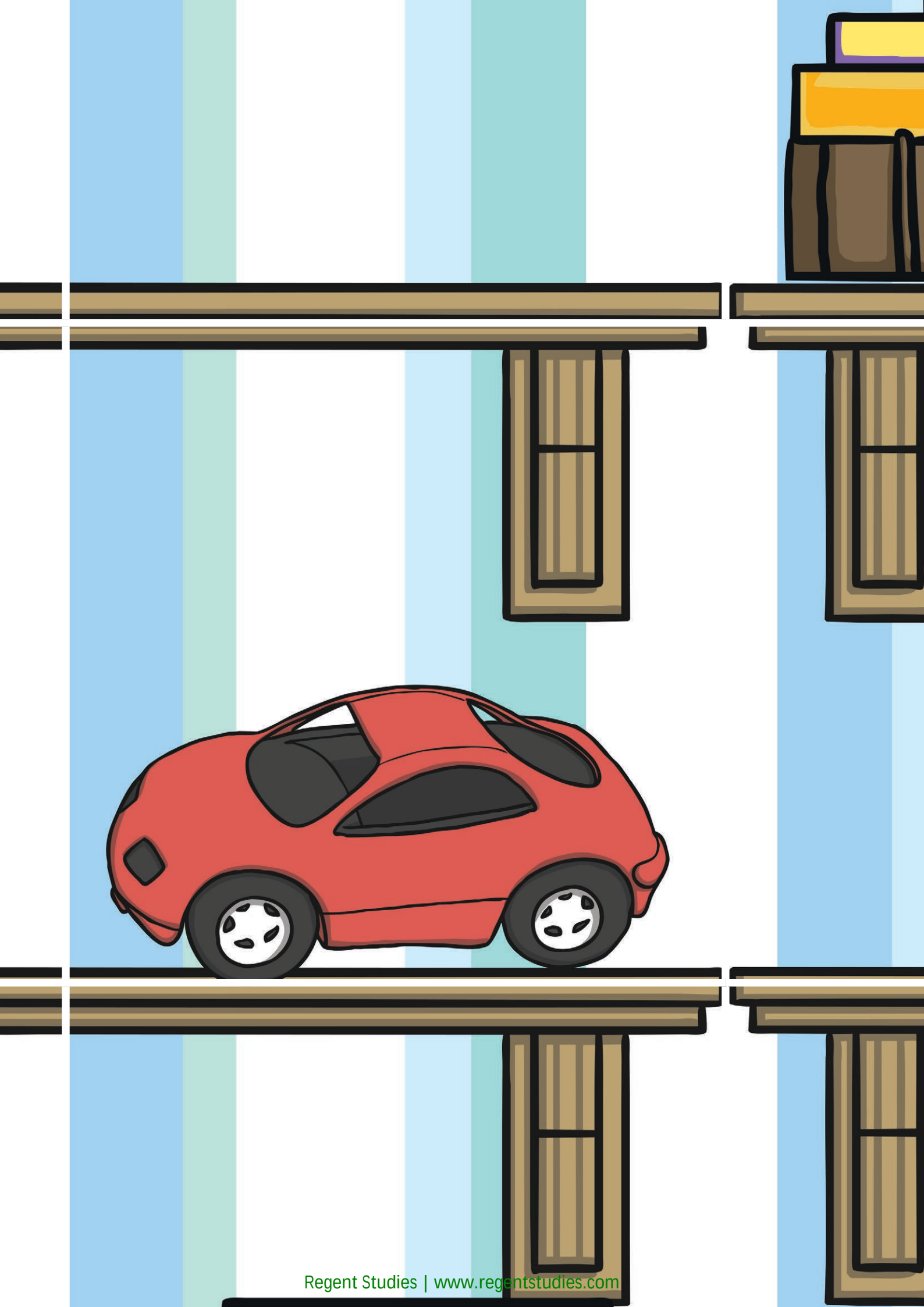
Playit: Using the Bee-Bot free app, children purposely program an incorrect sequence to see what happens, then pass to a partner to try to fix it.

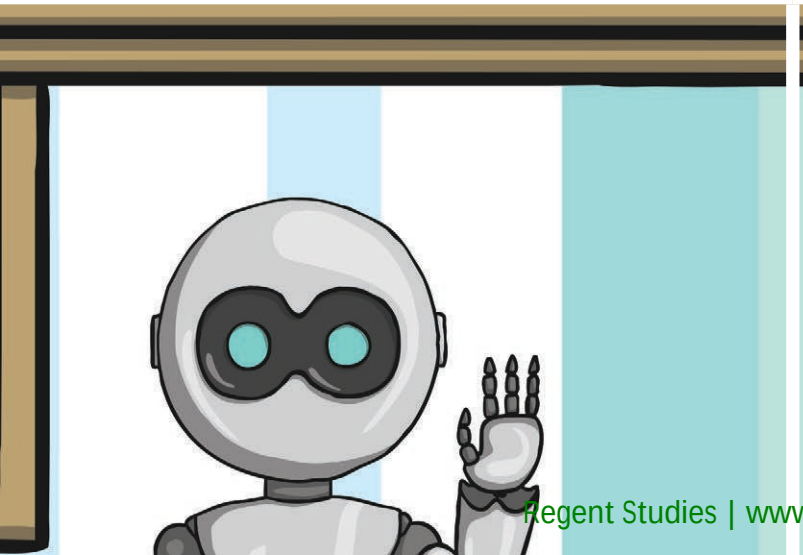

twinkl
TOY SHOP
Start Here

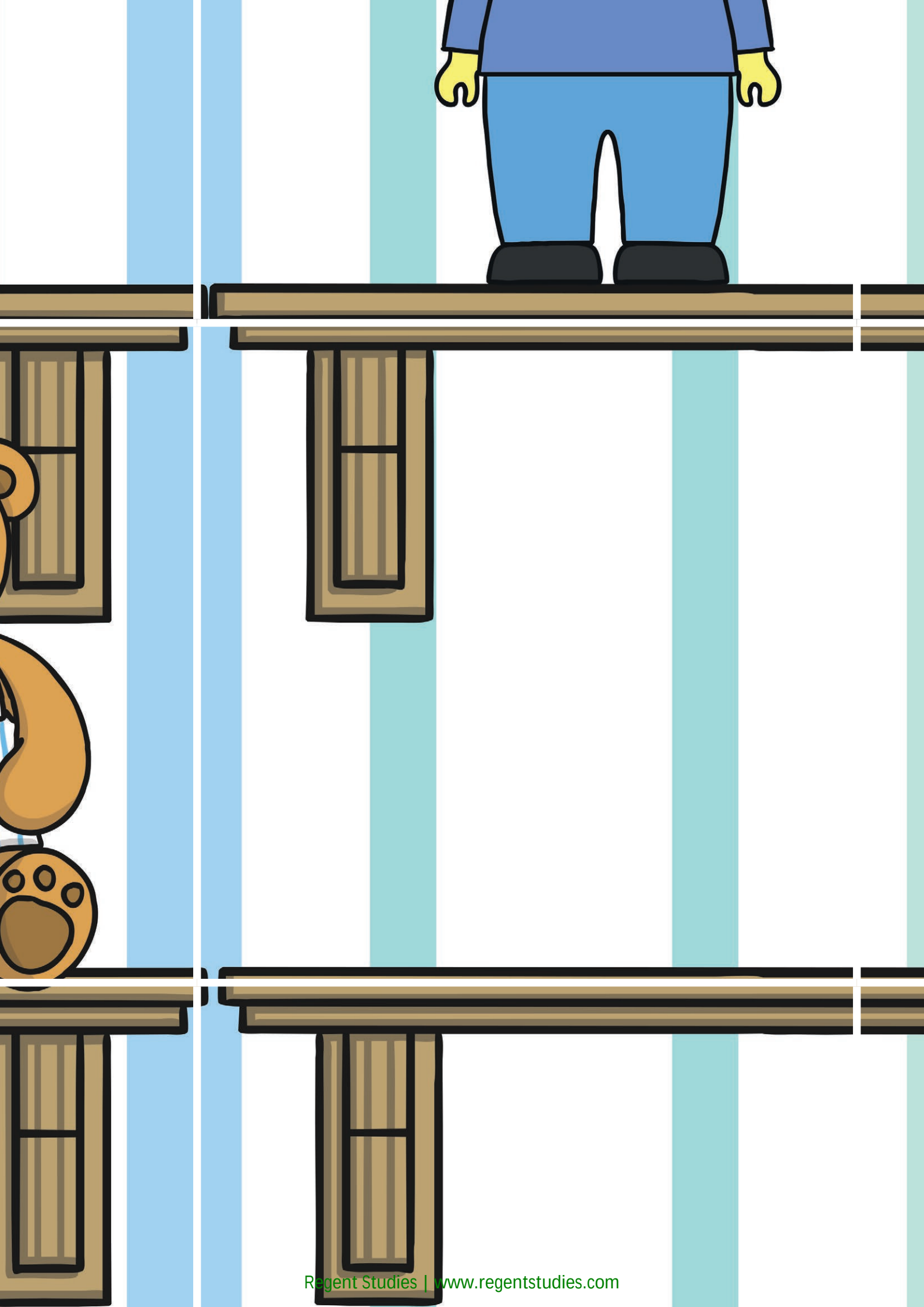


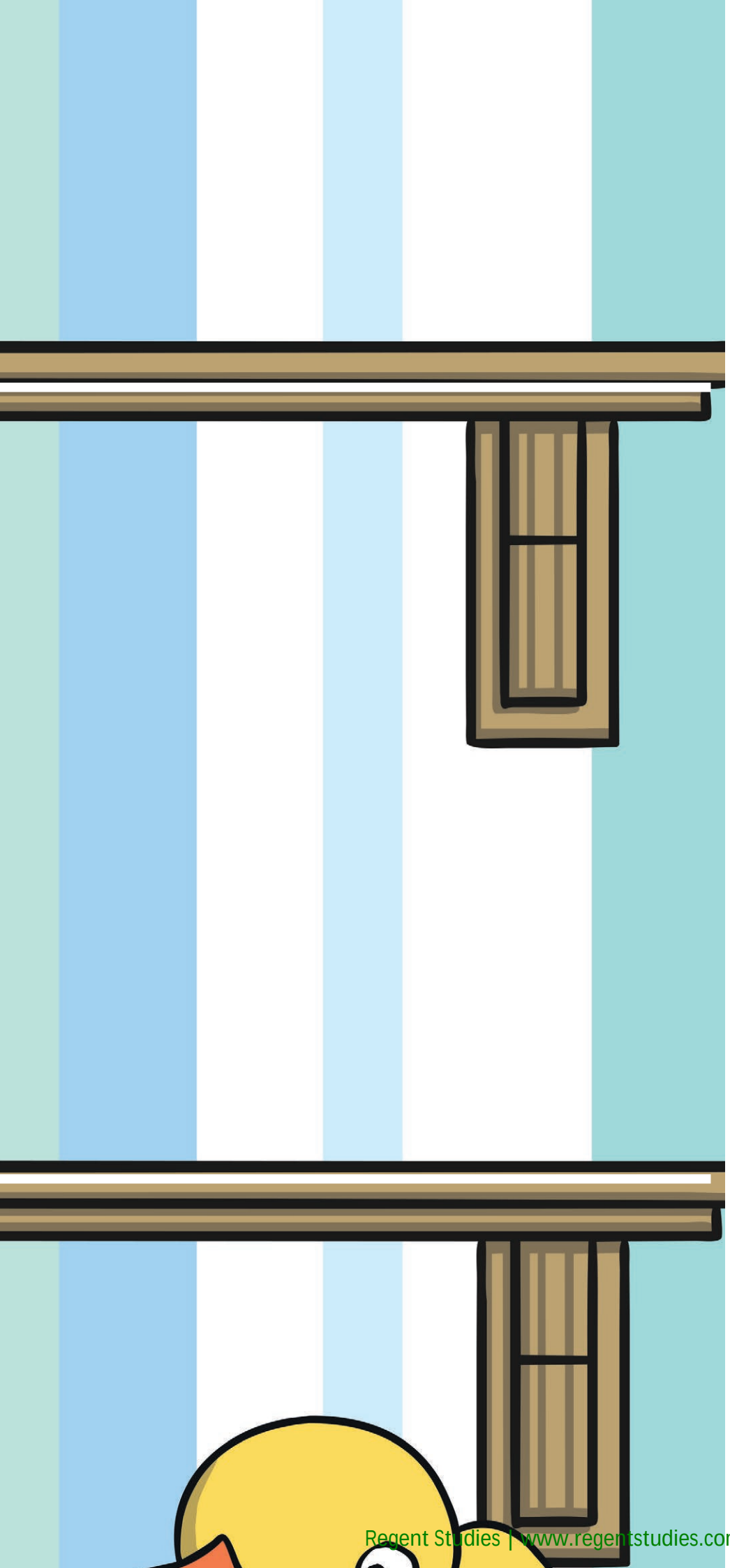
TOY SHOP











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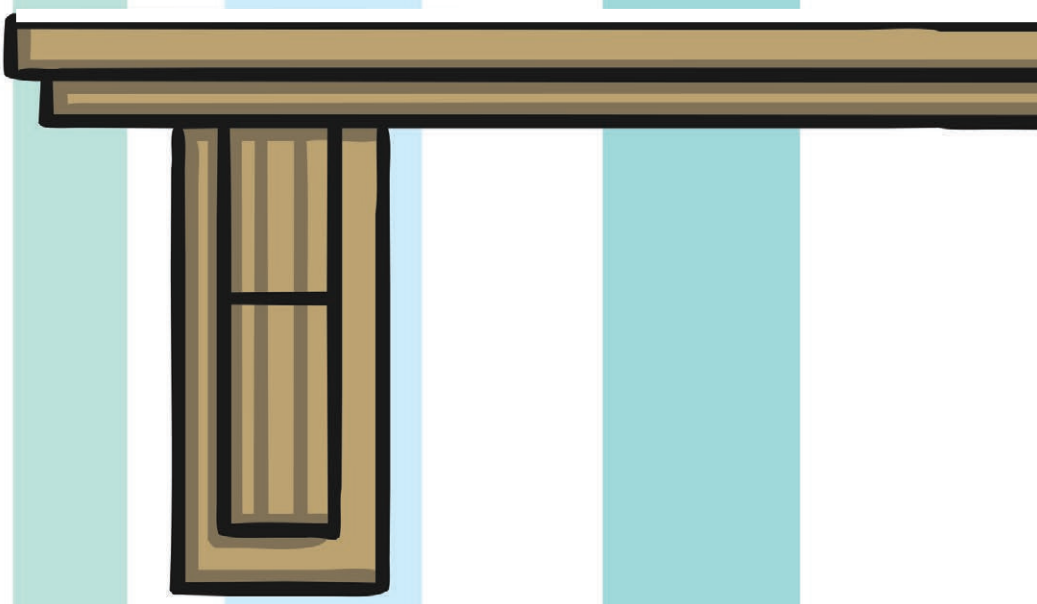

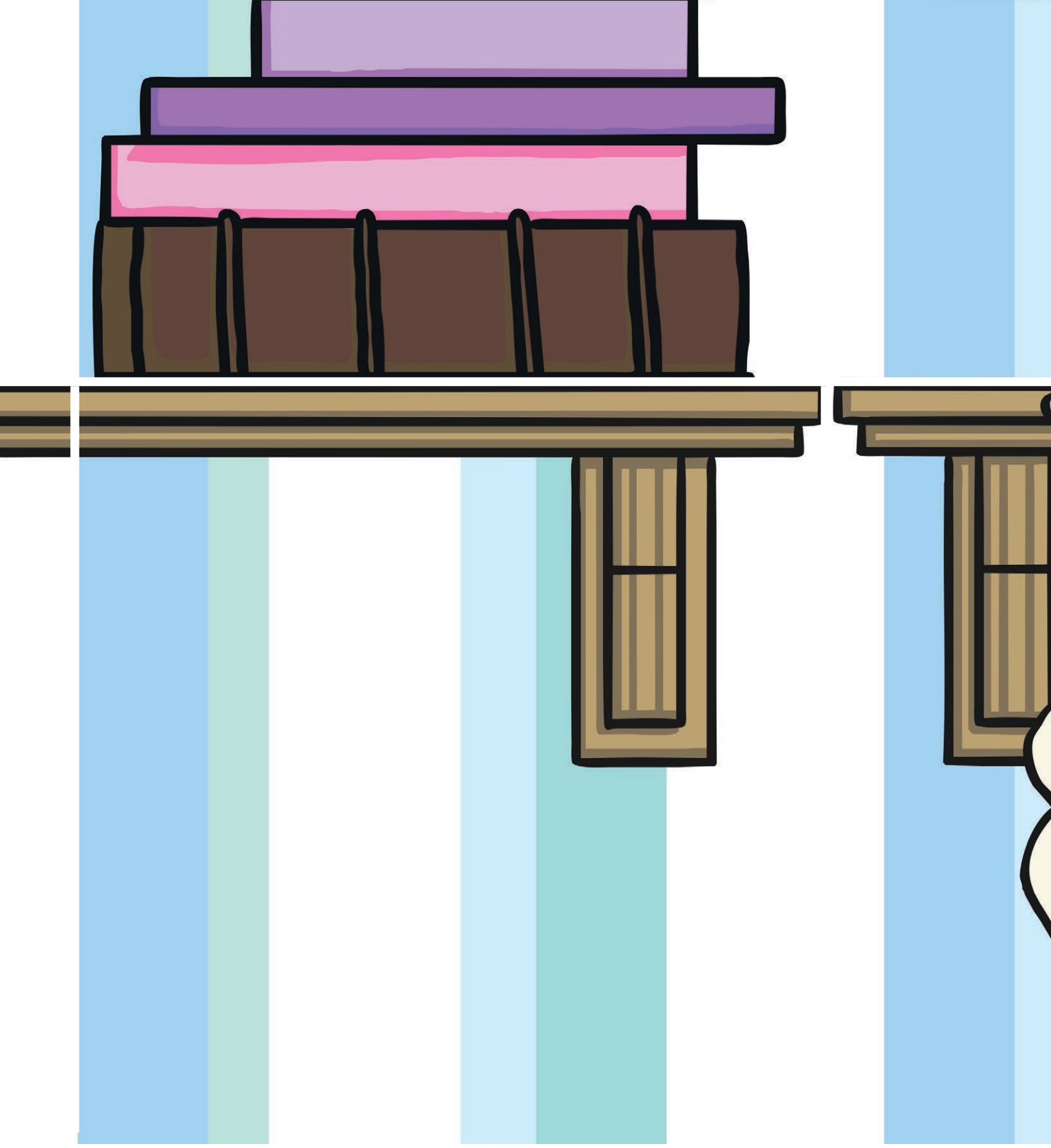

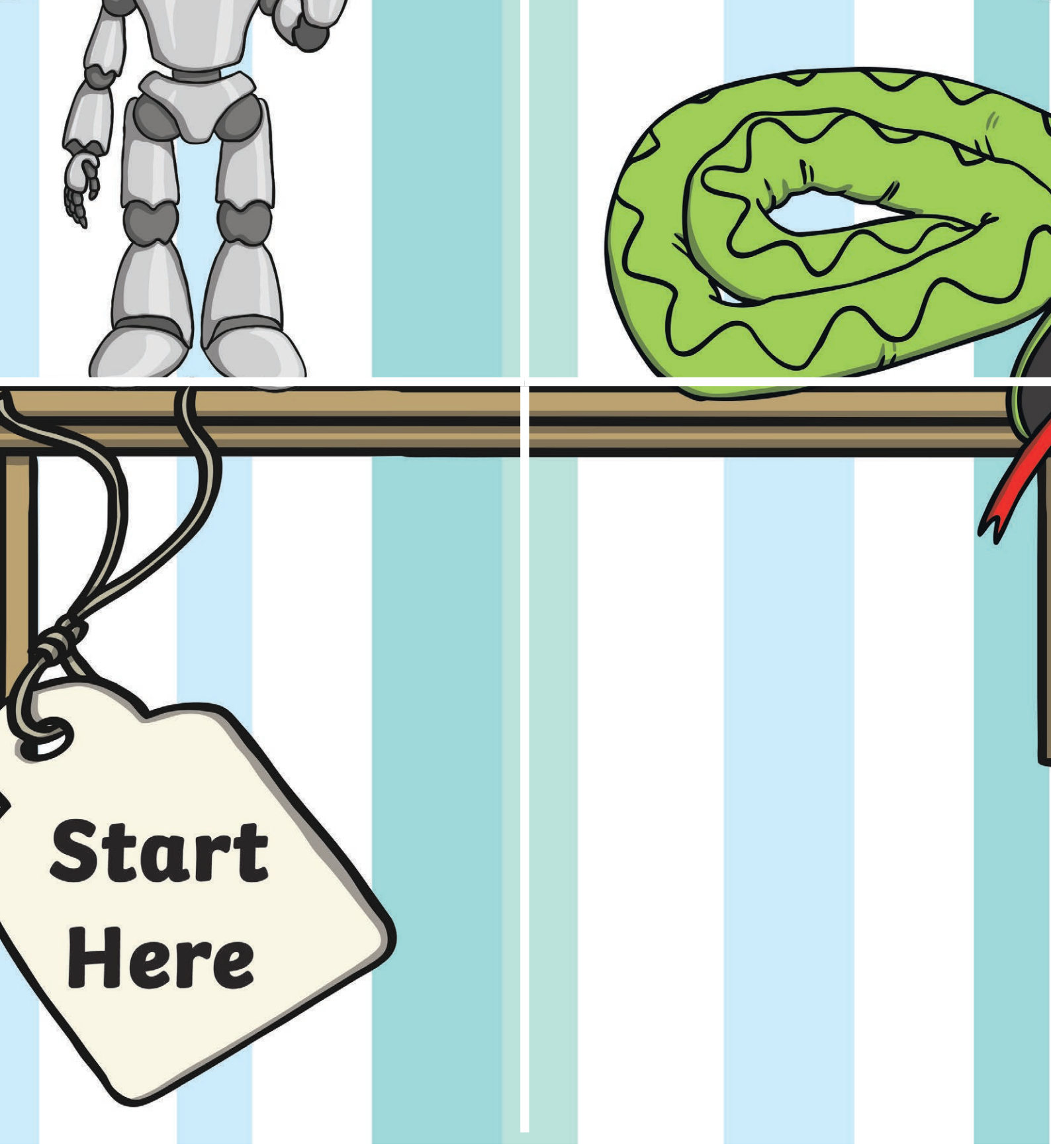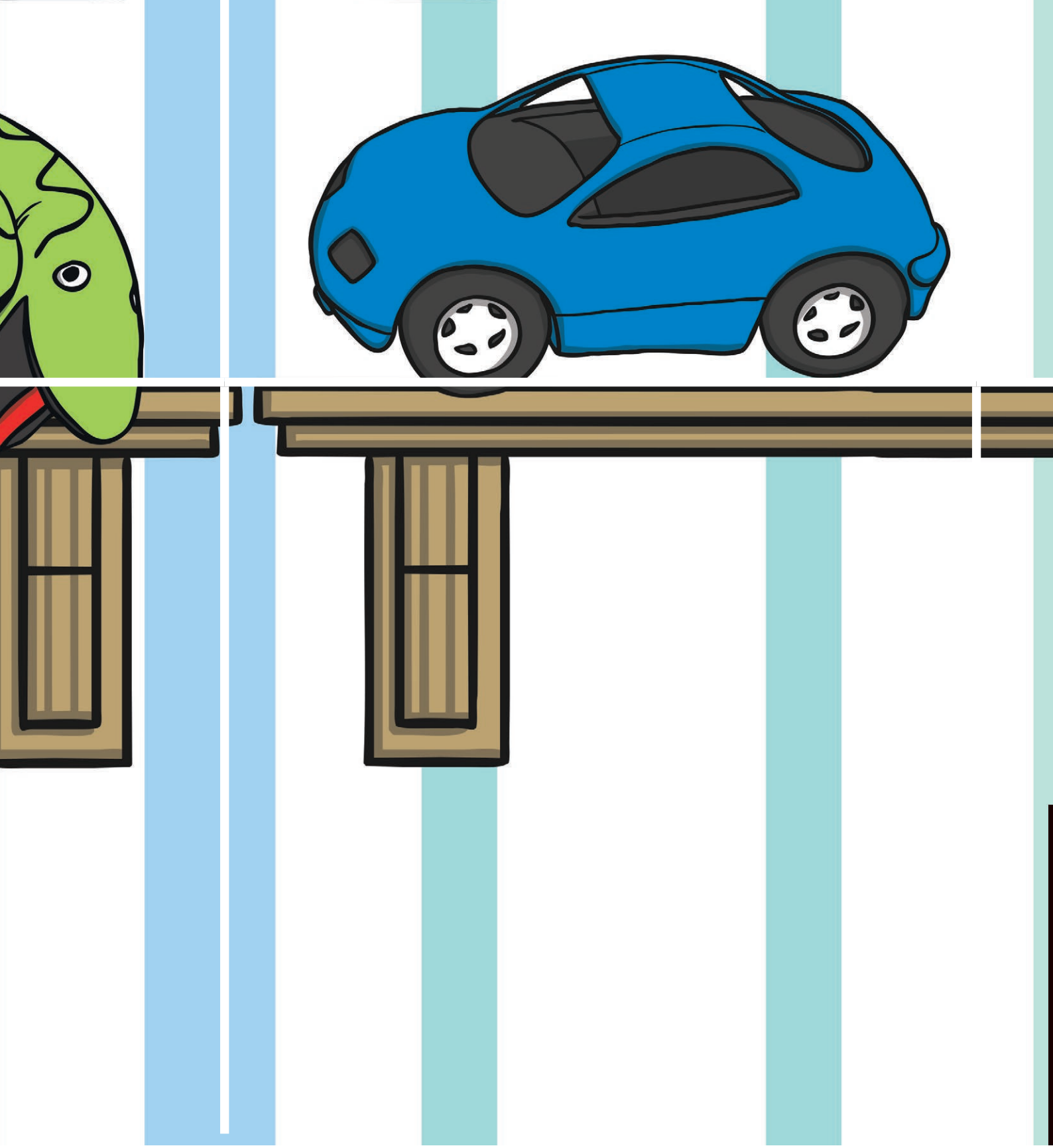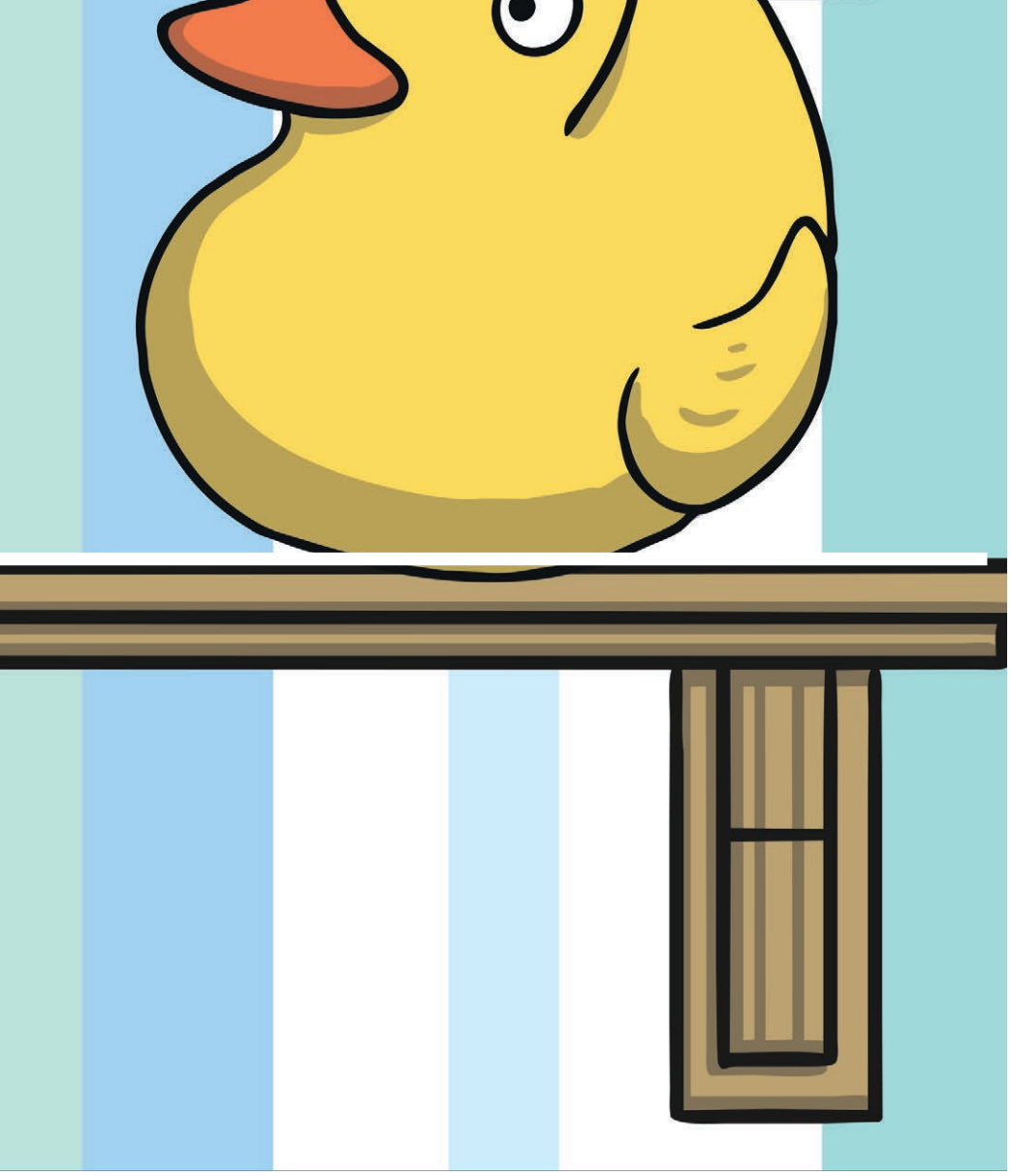
Start
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