Programming Toys: Toy Shop Part 1

Aim:	**Success Criteria:**	**Resources:**
Understand what algorithms are and that programs execute by following precise and unambiguous instructions; create and debug simple programs in the context of programming a Bee-Bot (or similar programmable toy) to reach a set marker. I can program a Bee-Bot (or similar programmable toy) to move.	I can direct a Bee-Bot (or similar programmable toy) to a toy. I can program a Bee-Bot (or similar programmable toy) using the arrow buttons.	**Lesson Pack** Bee-Bots (or similar programmable toy) Whiteboards and pens Camera
	Key/New Words: Algorithm, debug, program, turn, left, right, sequence, clockwise, anticlockwise.	**Preparation:** **Toy Cupboard Programmable Toy Mat** - 1 per pair or group

Prior Learning: Children were introduced to using pictures and symbols to give instructions in the first three lessons of this unit.

Learning Sequence

	Symbols: Use the **Lesson Presentation** to introduce the children to a Bee-Bot (or similar programmable toy) and discuss what the different buttons do (and why these symbols have been chosen). Use the following slides to practise choosing the correct buttons to achieve a movement. You may also wish to use a real Bee-Bot (or similar programmable toy) in the classroom and ask children to help you to replicate the movements on the **Lesson Presentation**. If needed, continue to practise as a class, predicting the movement of the Bee-Bot (or similar programmable toy). Can children direct the Bee-Bot (or similar programmable toy) correctly?	
	Programmable Toy at the Toy Shop: Show children the **Toy Cupboard Programmable Toy Mat**. Show them how one square on the mat is equal to one press of the forward arrow on the Bee-Bot (or similar programmable toy). Complete the practice task on the **Lesson Presentation**.	
	Toy Shop Task: In pairs or groups, children direct their Bee-Bot (or similar programmable toy) to a toy on the mat. Children pick their own starting challenge level from the **Lesson Presentation** and move through the tasks when they are ready. Take photographs for evidence, if needed. Can children program a Bee-Bot (or similar programmable toy) using the arrow buttons? Children get to chosen toy, pressing and moving one instruction at a time. Children program more than one step at once, with the goal of programming all instructions in one go. Children direct the Bee-Bot (or similar programmable toy) to the toy while avoiding obstacles placed on the mat.	
	How Did You Do? Discuss and evaluate the children's success using the **Lesson Presentation**.	

Taskit

Playit: If you have access to tablets, allow children to freely play using the Bee-Bot (or similar programmable toy) app, free in the app store, to practise programming a single sequence.

Recordit: Children draw the arrows they pressed to reach their toy, and ask their partner to read and program the Bee-Bot (or similar programmable toy).

Computing

Toy Shop Part 1

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Toy Shop
Part 1

Aim

- I can program a Bee-Bot (or similar programmable toy) to move.

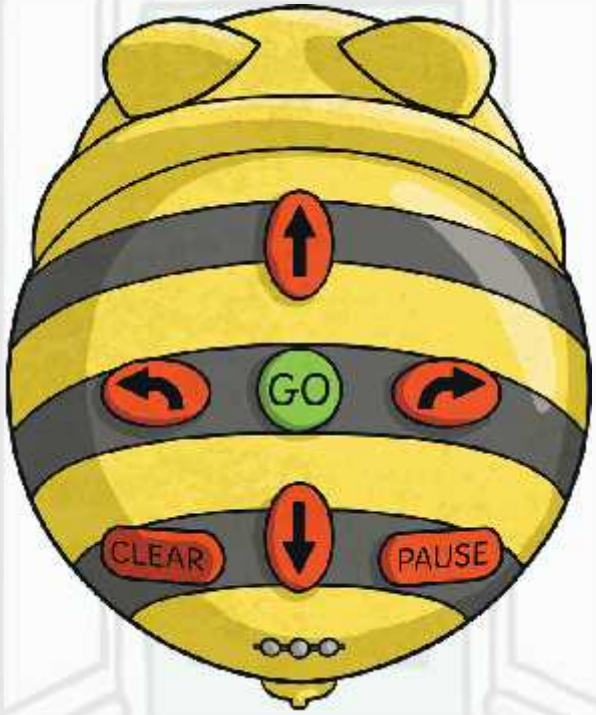
Success Criteria

- I can direct a Bee-Bot (or similar programmable toy) to a toy.
- I can program a Bee-Bot (or similar programmable toy) using the arrow buttons.

Symbols

This is a programmable toy.

Today we will be programming the toy (Bee-Bot or similar programmable toy) to move around a toy shop.

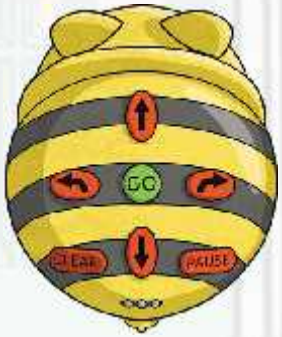


If you make a mistake, press this button and you can start your instructions all over again.

Symbols

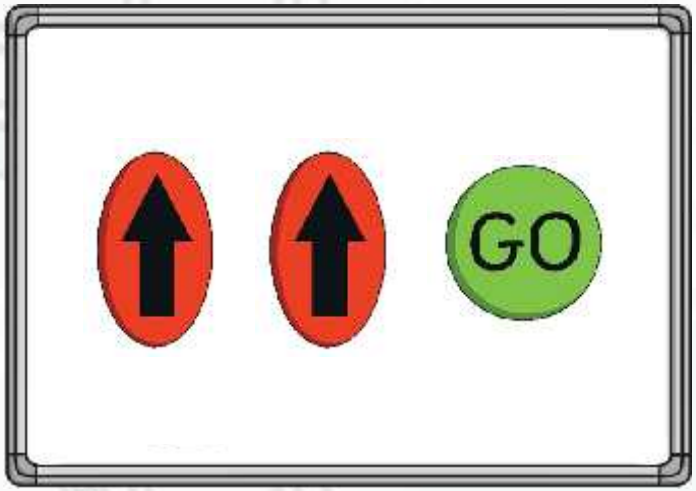
Draw on your whiteboard the buttons that you would have to press to make a Bee-Bot (or similar programmable toy) move like this.

Click "**Go**" to see the programmable toy move.



Symbols

Did you draw these instructions?



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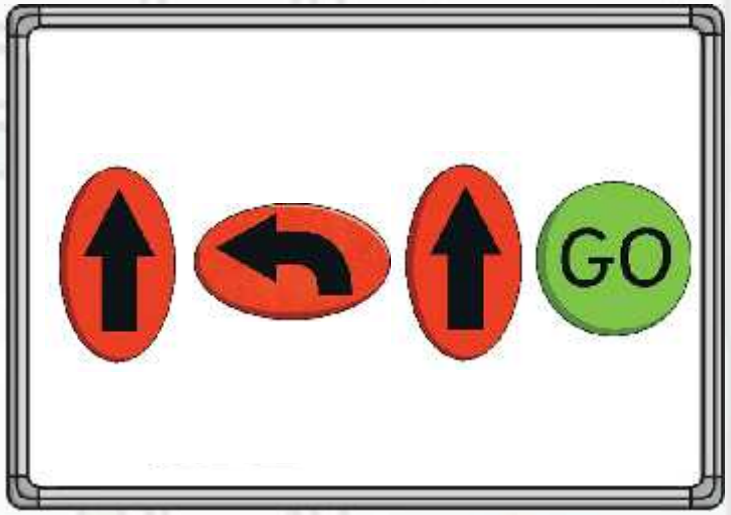

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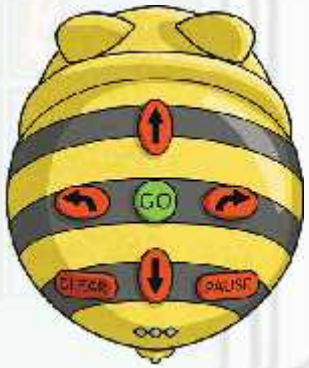
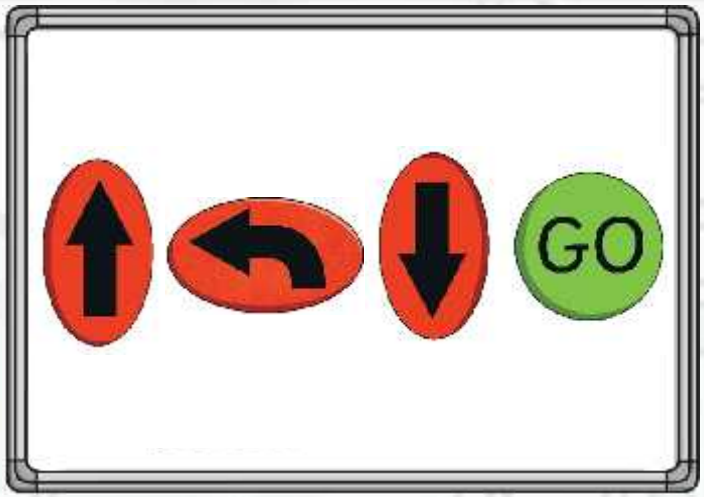


Symbols



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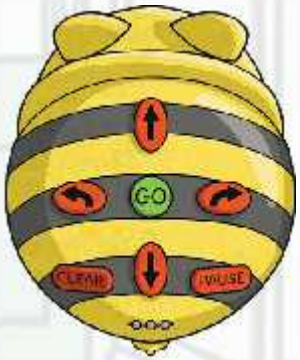


Symbols

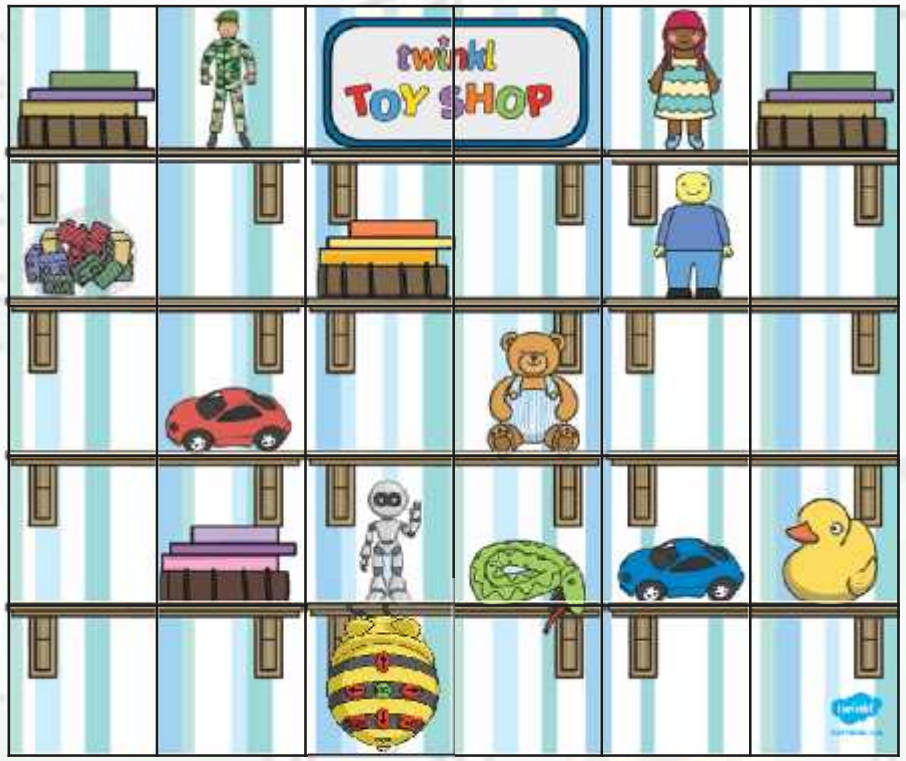
It's a good idea to press CLEAR before you start programming your toy with instructions, to make sure it hasn't remembered anything from the last time.

Programmable Toy at the Toy Shop

This is the Twinkl Toy Shop.

You need to direct your Bee-Bot (or similar programmable toy) to the right toy, starting from the label at the bottom.

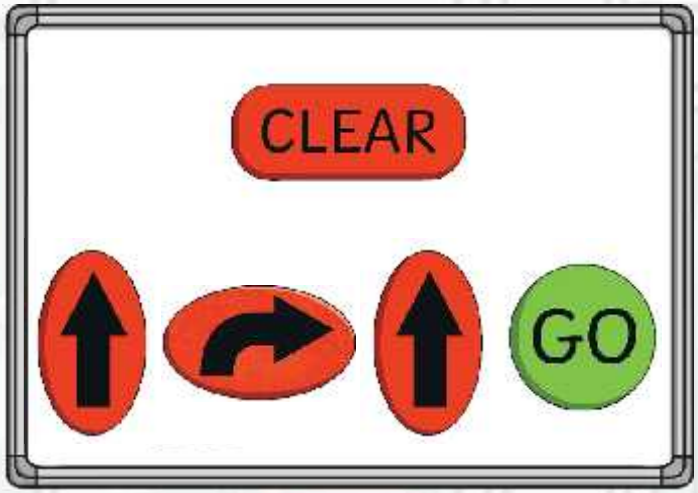
Can you draw on your whiteboard the buttons that you would need to get the Bee-Bot (or similar programmable toy) to the **snake**?

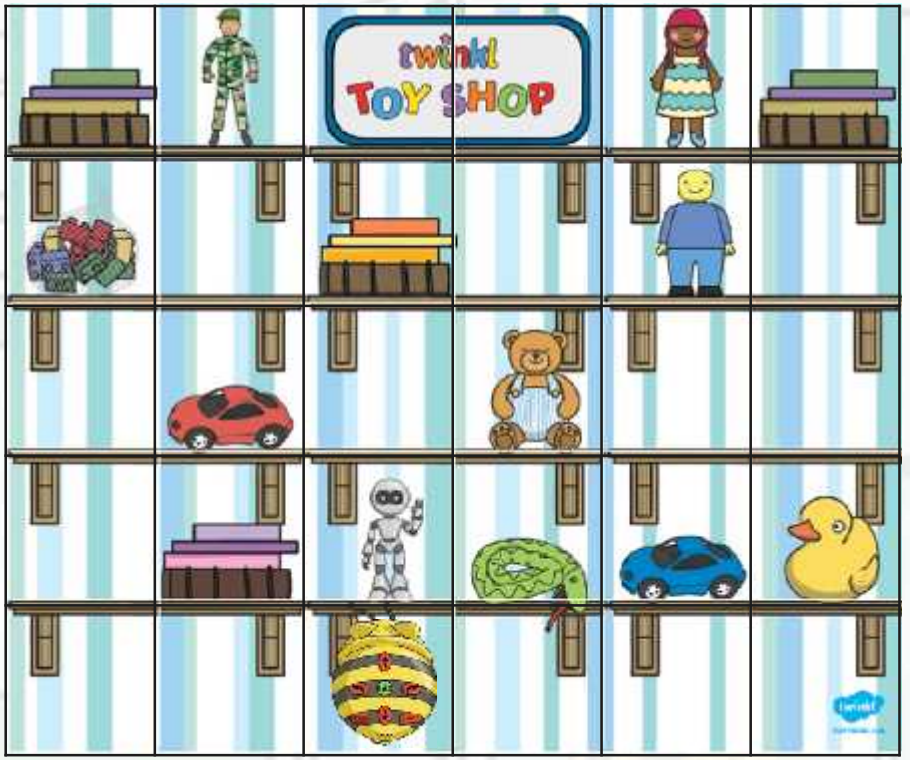


Remember to start here every time.

Programmable Toy at the Toy Shop

Did you draw these instructions?





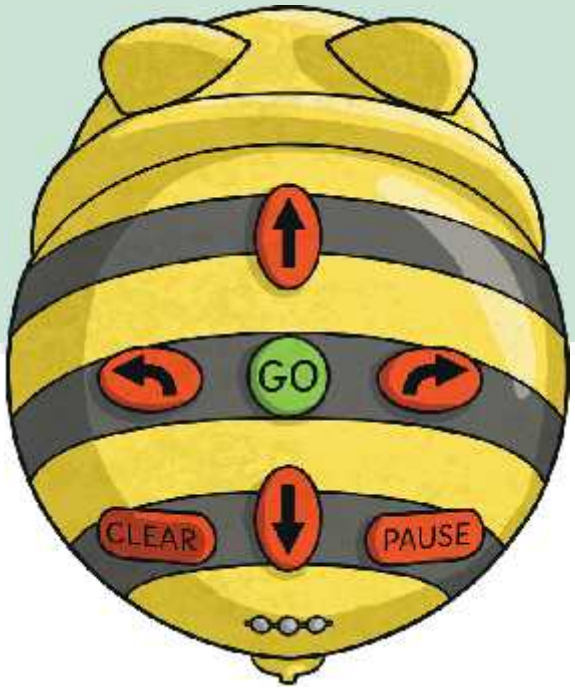
Did you remember to press CLEAR ?

Toy Shop Task

Take it in turns to program your Bee-Bot (or similar programmable toy).

Your partner will choose a toy on the mat.

Start from the label:



Press CLEAR .

Press the buttons for your instructions.

Press GO .

If you make a mistake, press CLEAR and start again.

Make sure everyone gets a turn.

Toy Shop Task

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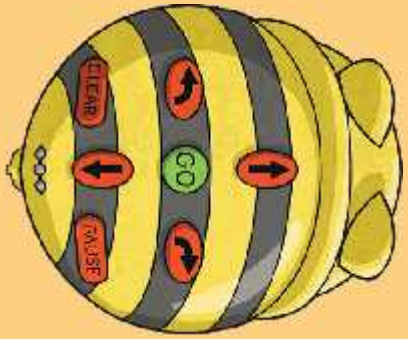
Get to the toy. Push one button at a time and press CLEAR.



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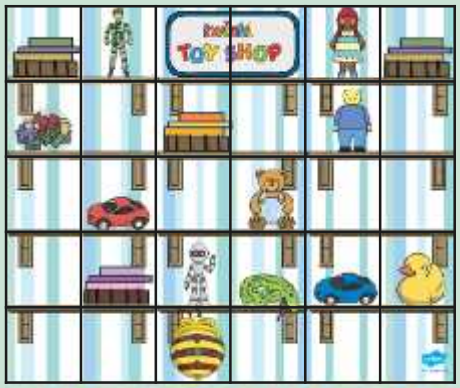
Get to the toy. Push all of your buttons before you press CLEAR.



★★★

Put an object on the mat. Can you go around it to get to your toy?

How Did You Do?

Which bit of programming was the trickiest?

How did you fix something if it went wrong?

Aim

- I can program a Bee-Bot (or similar programmable toy) to move.

Success Criteria

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TOY SHOP
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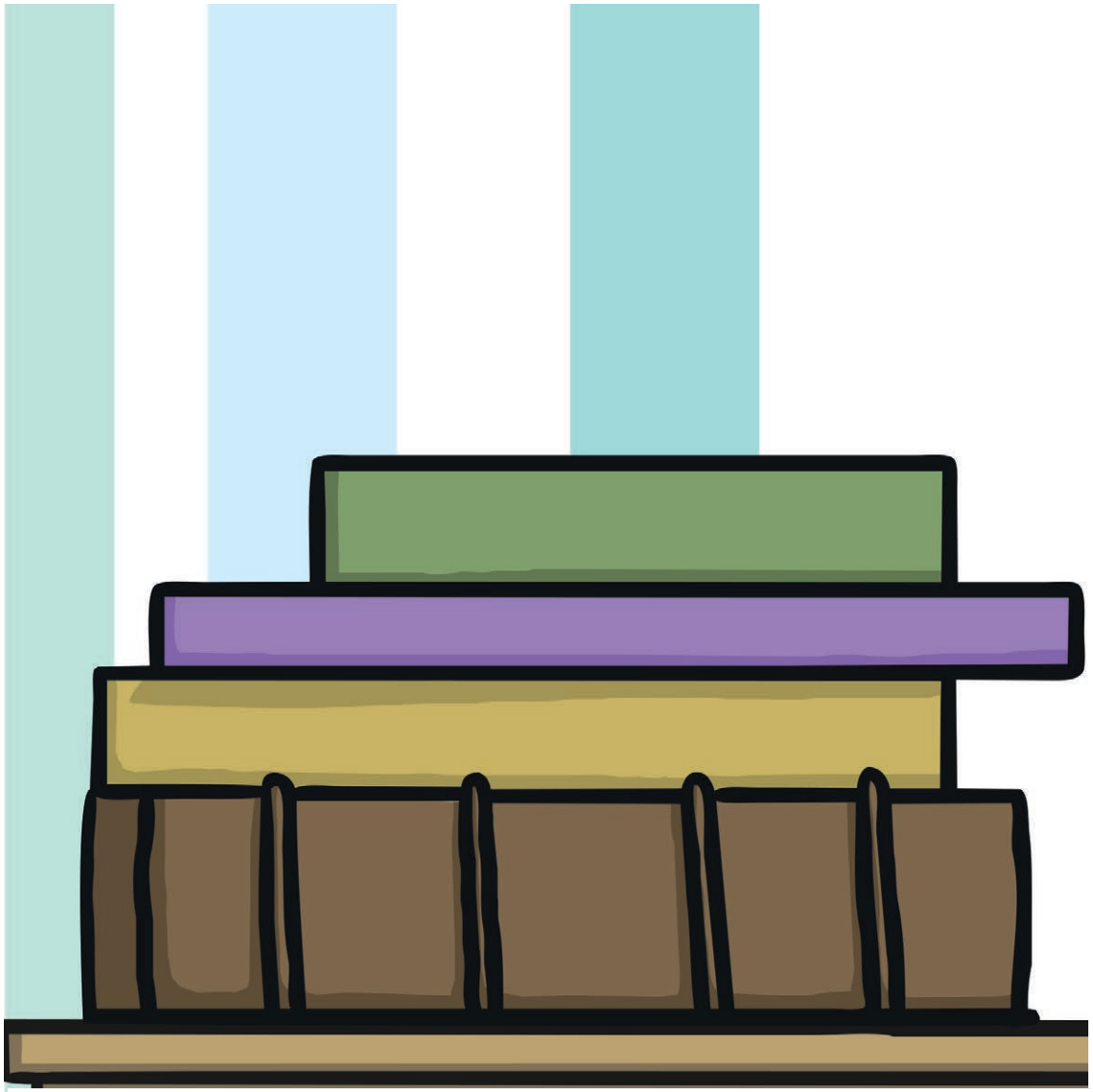

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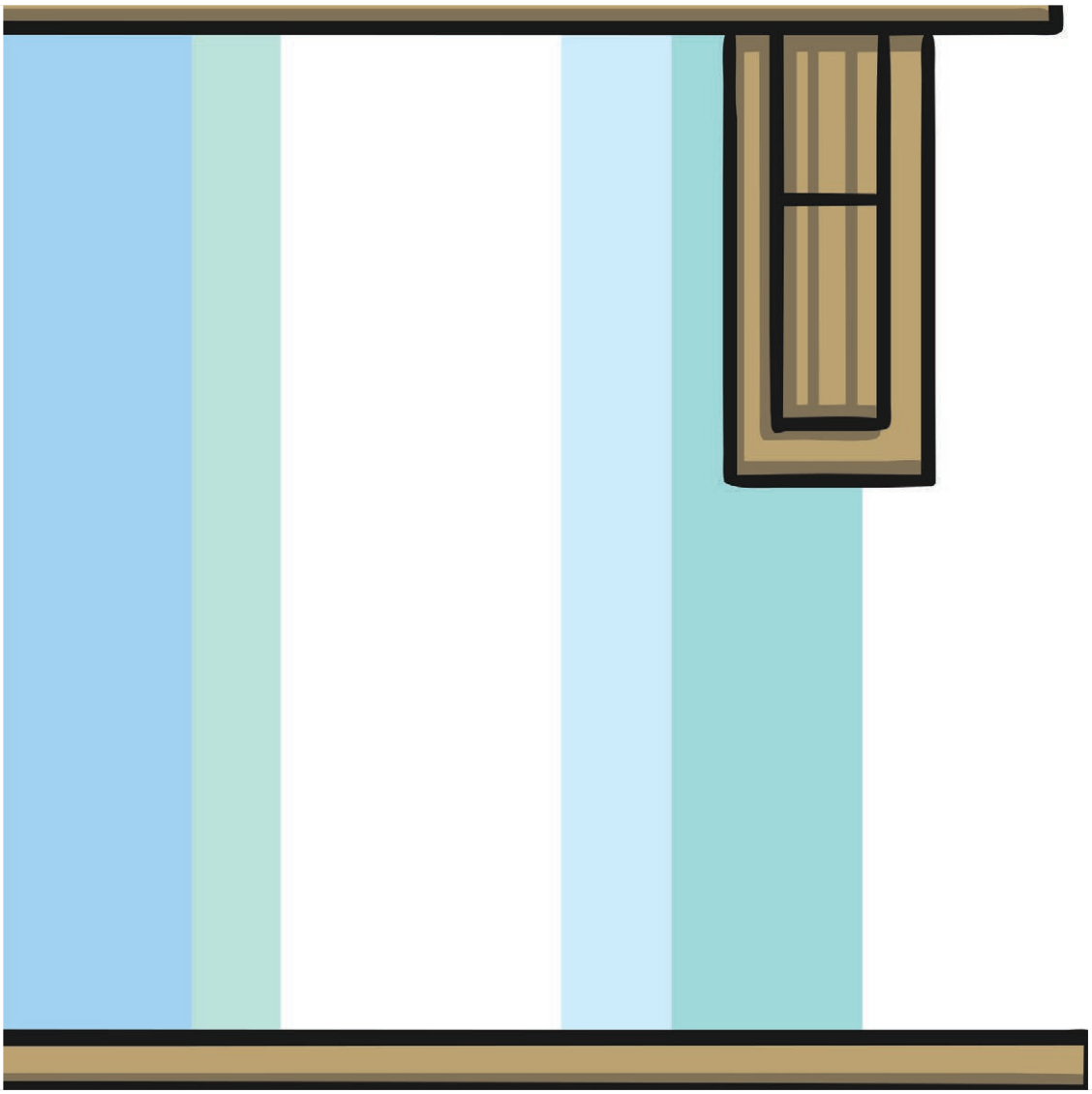

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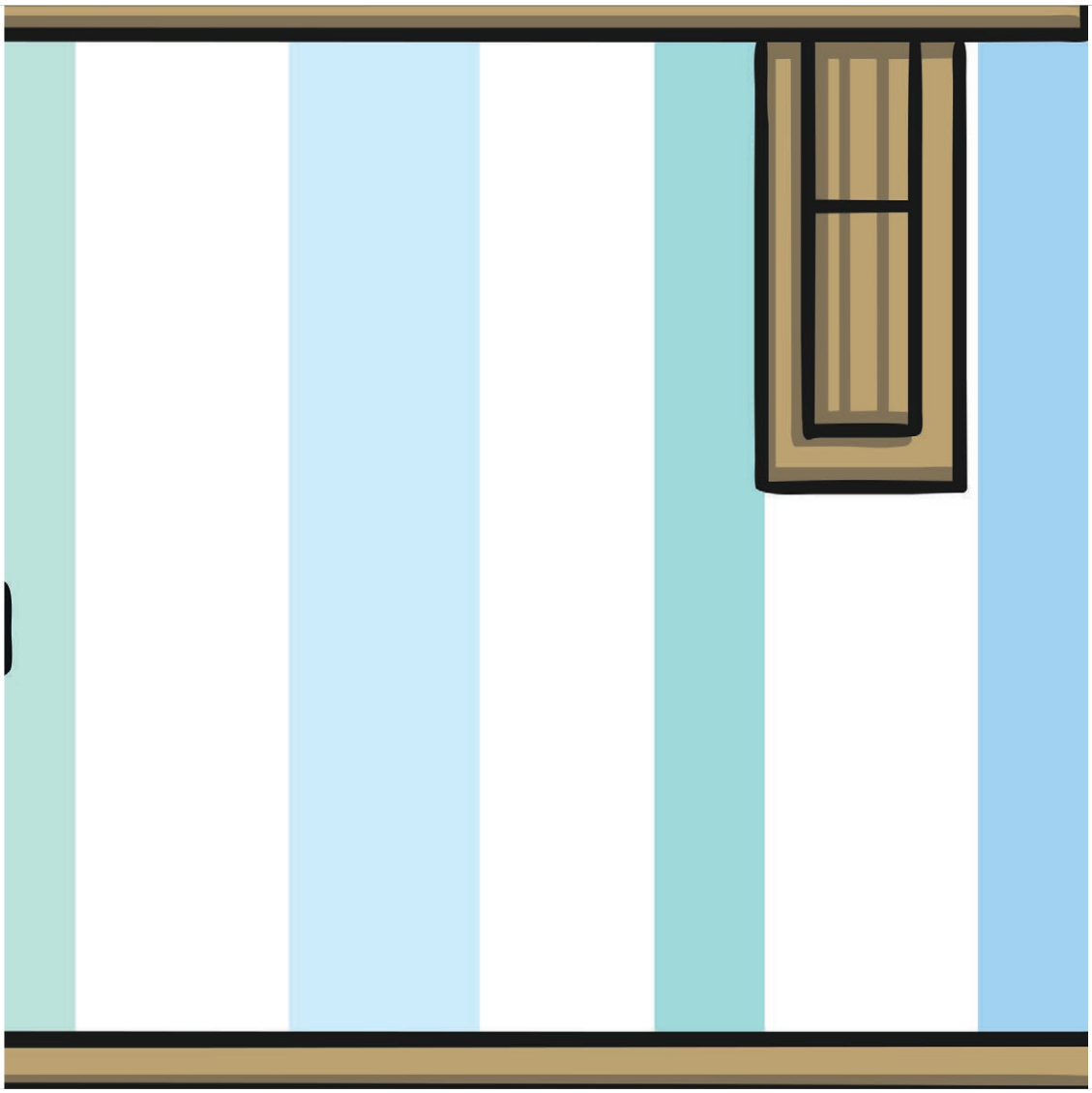

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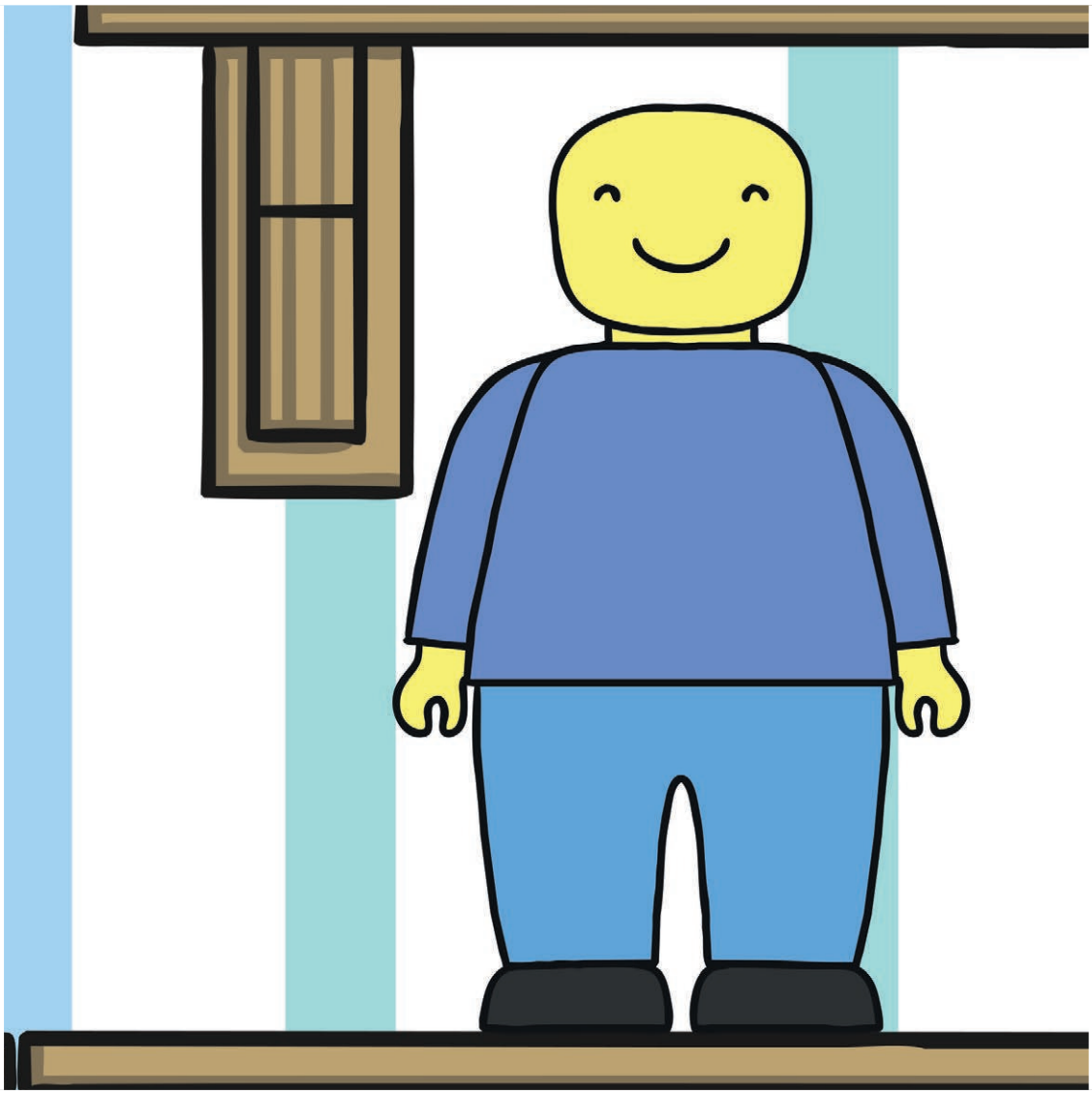

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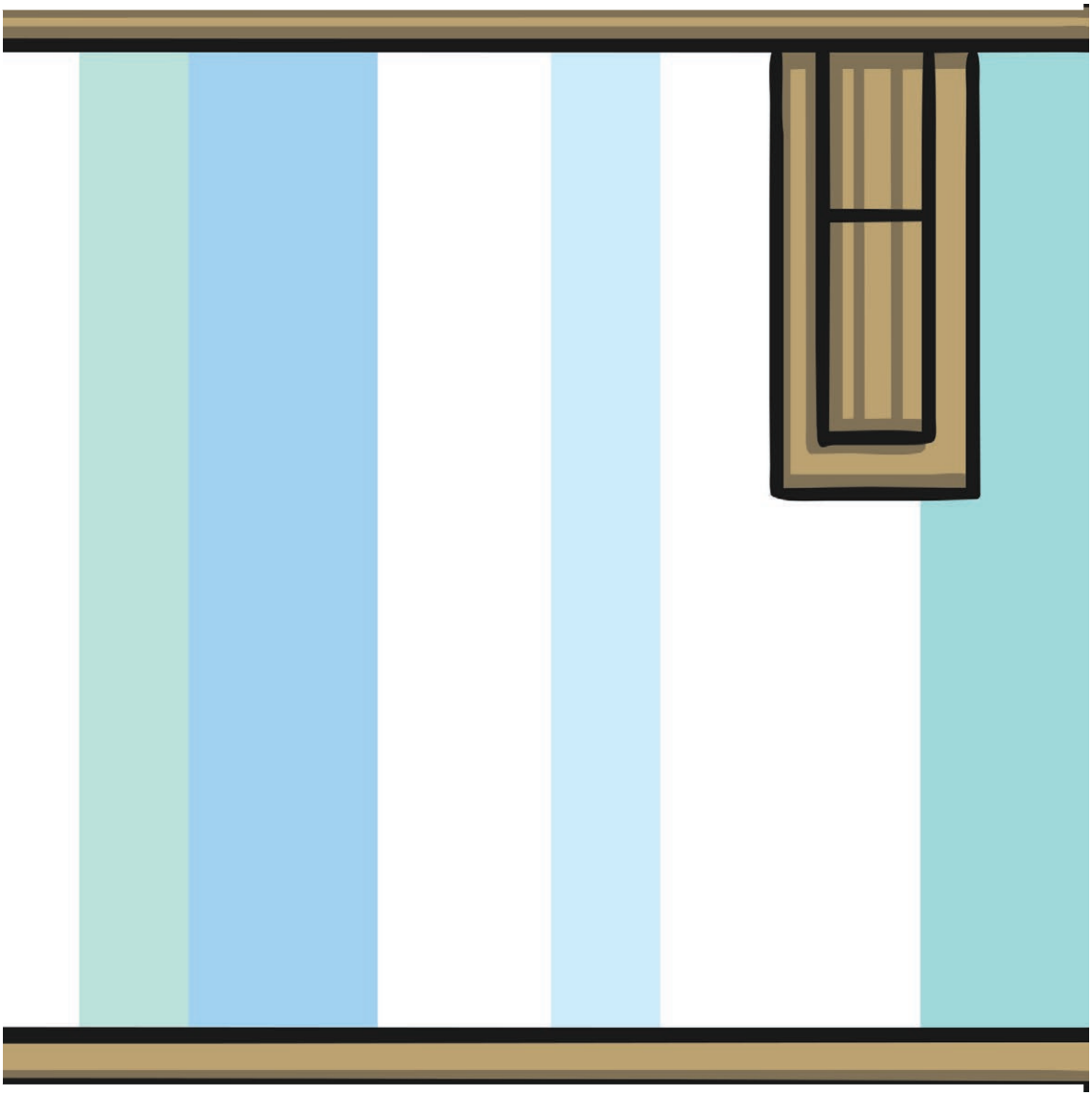

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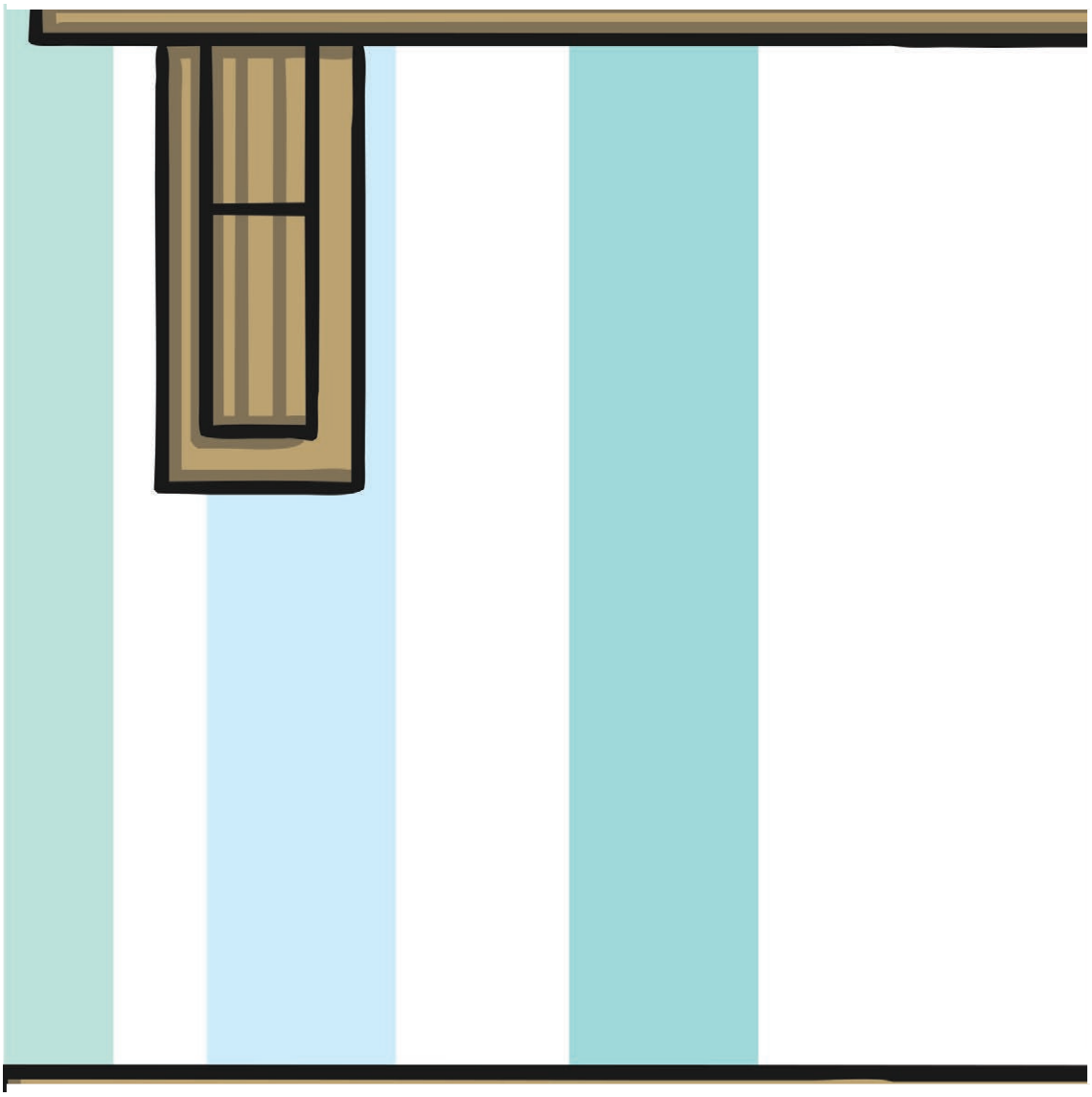

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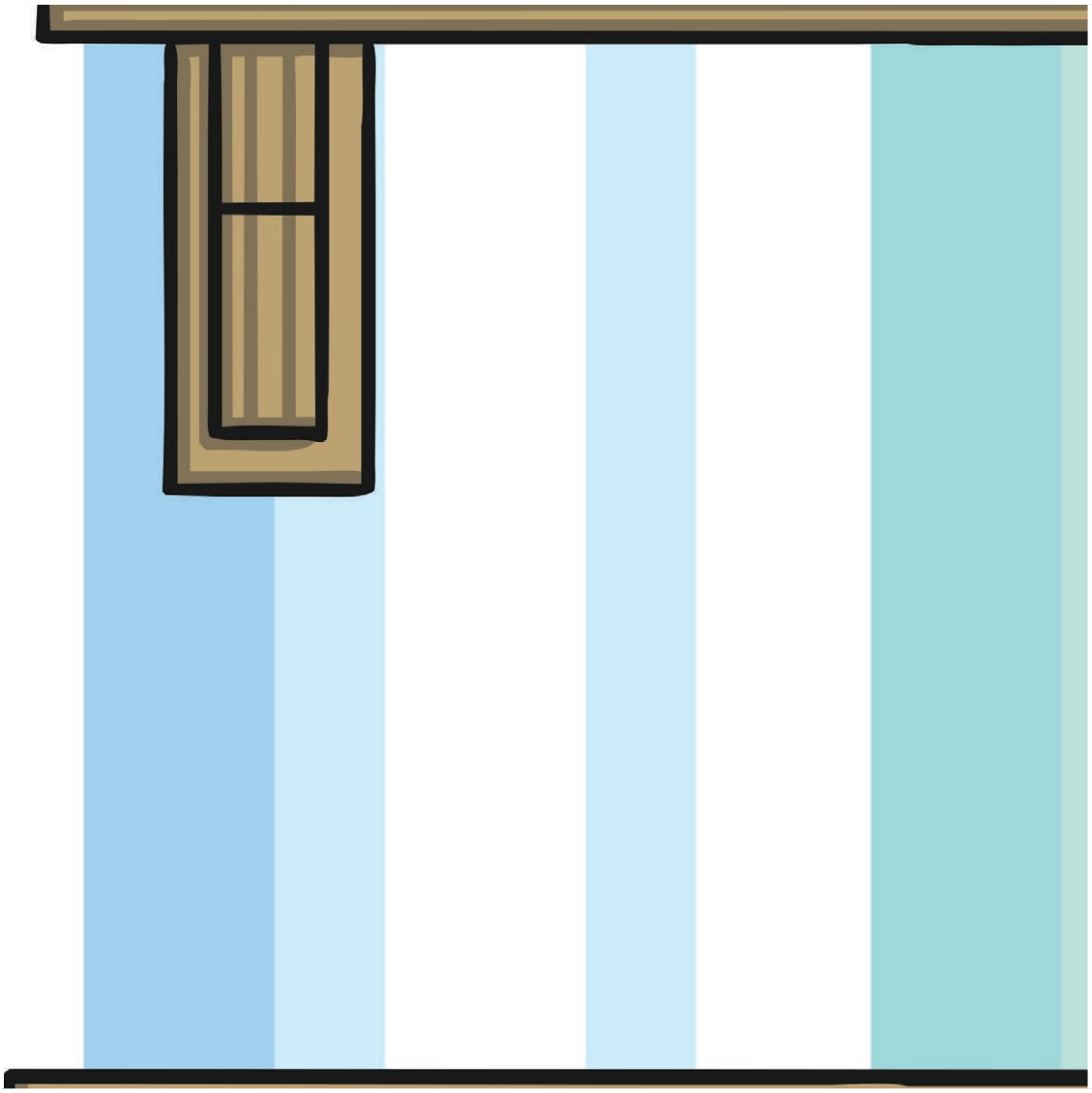

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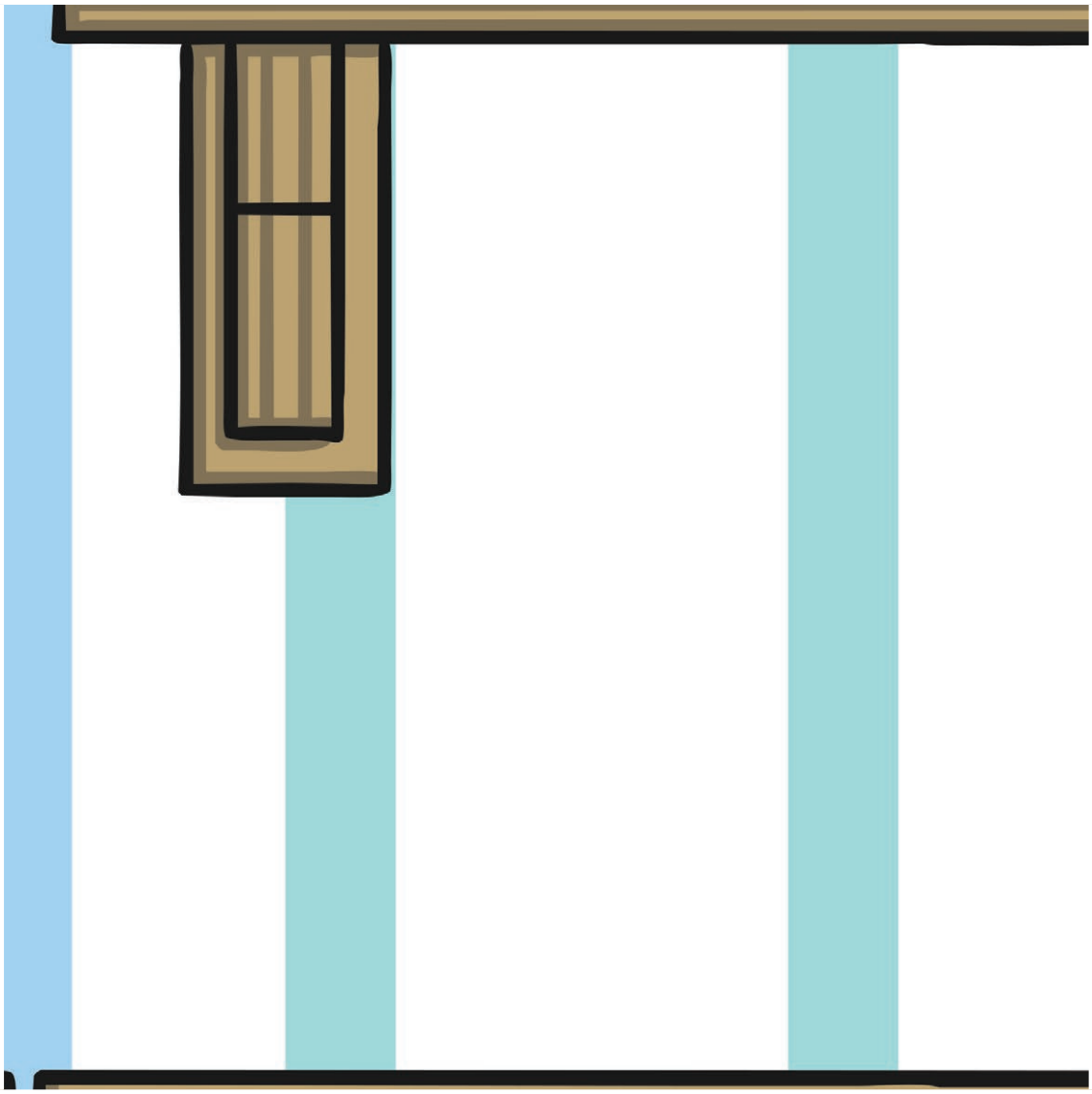

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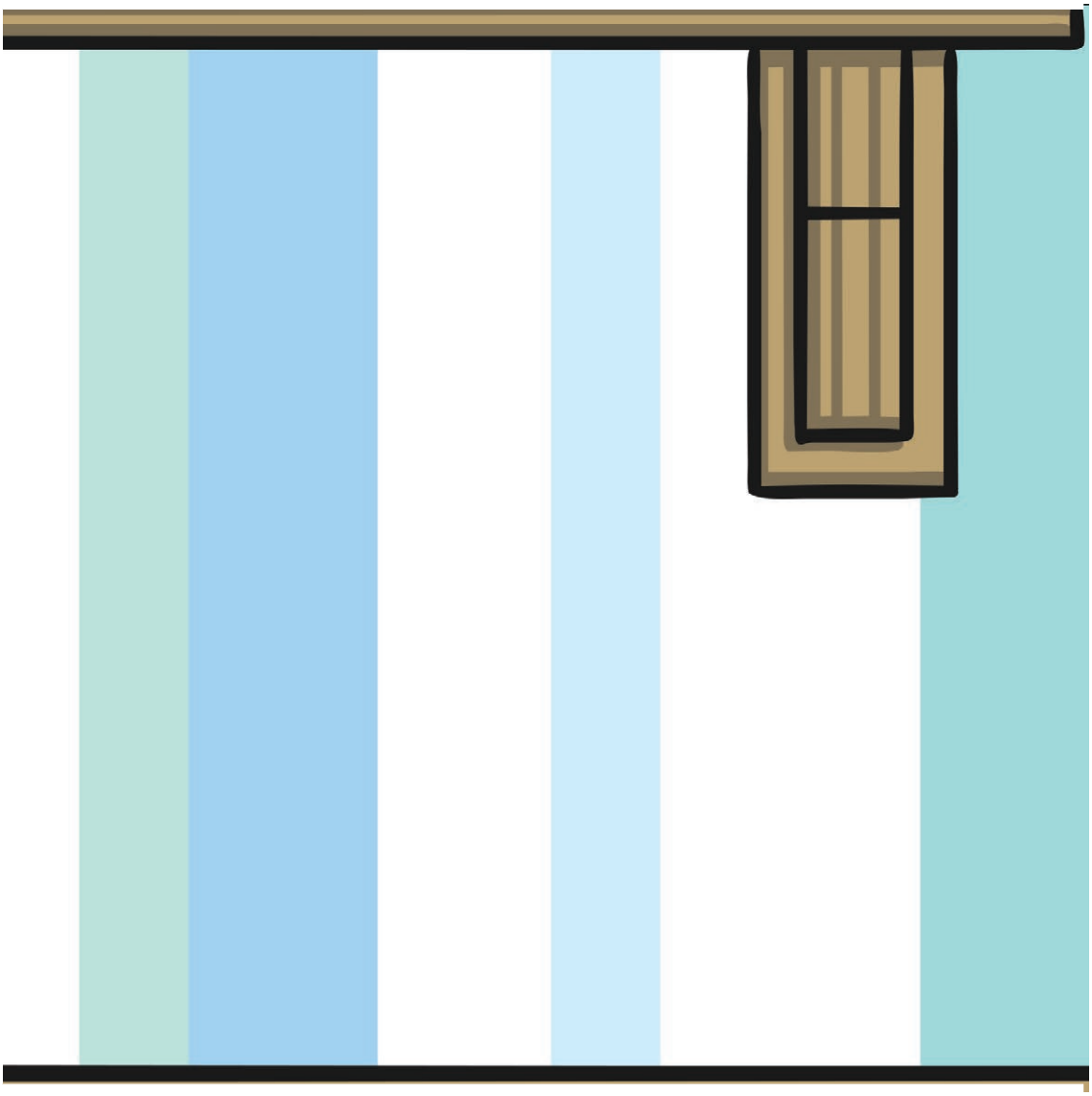

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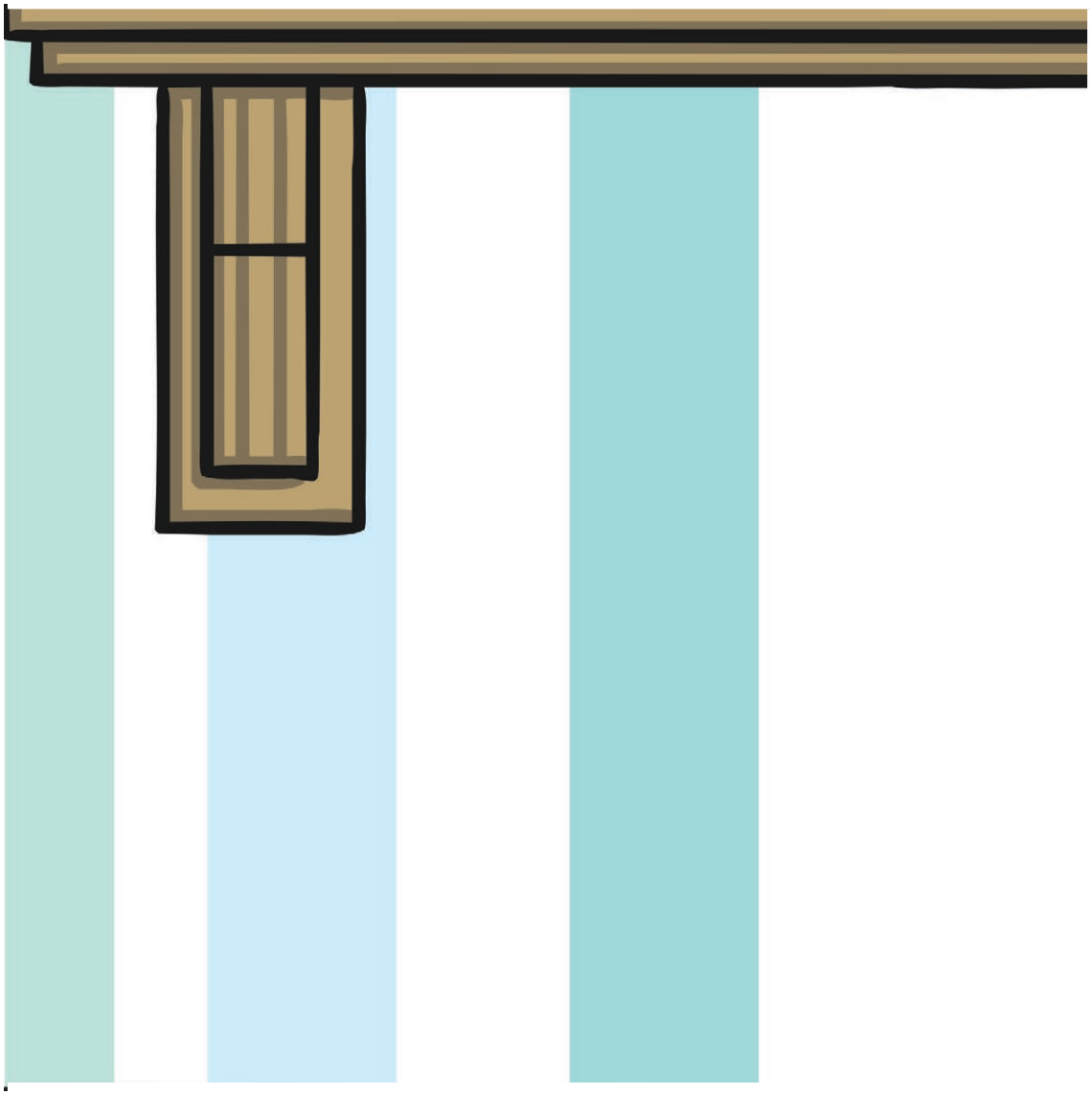

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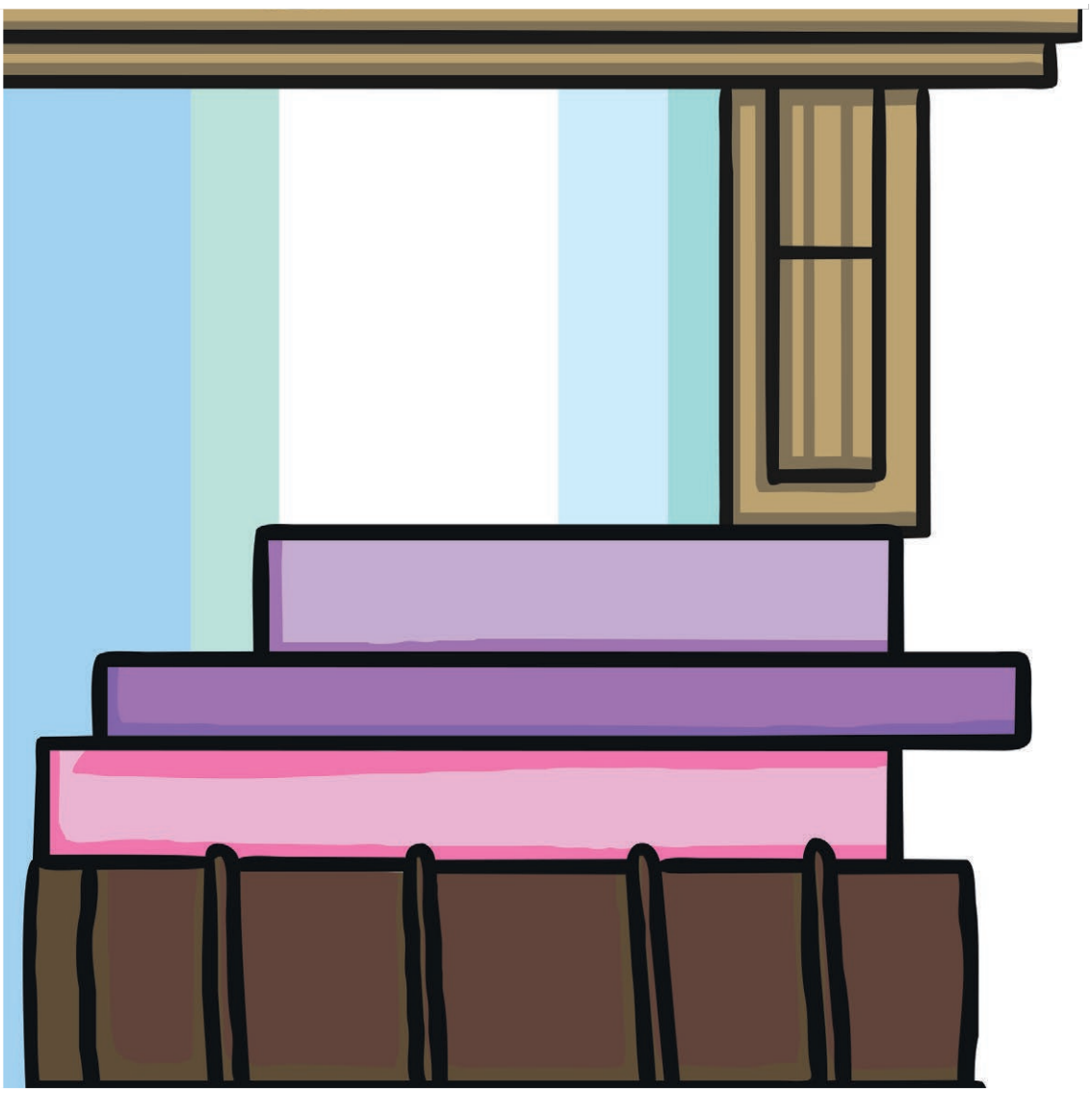

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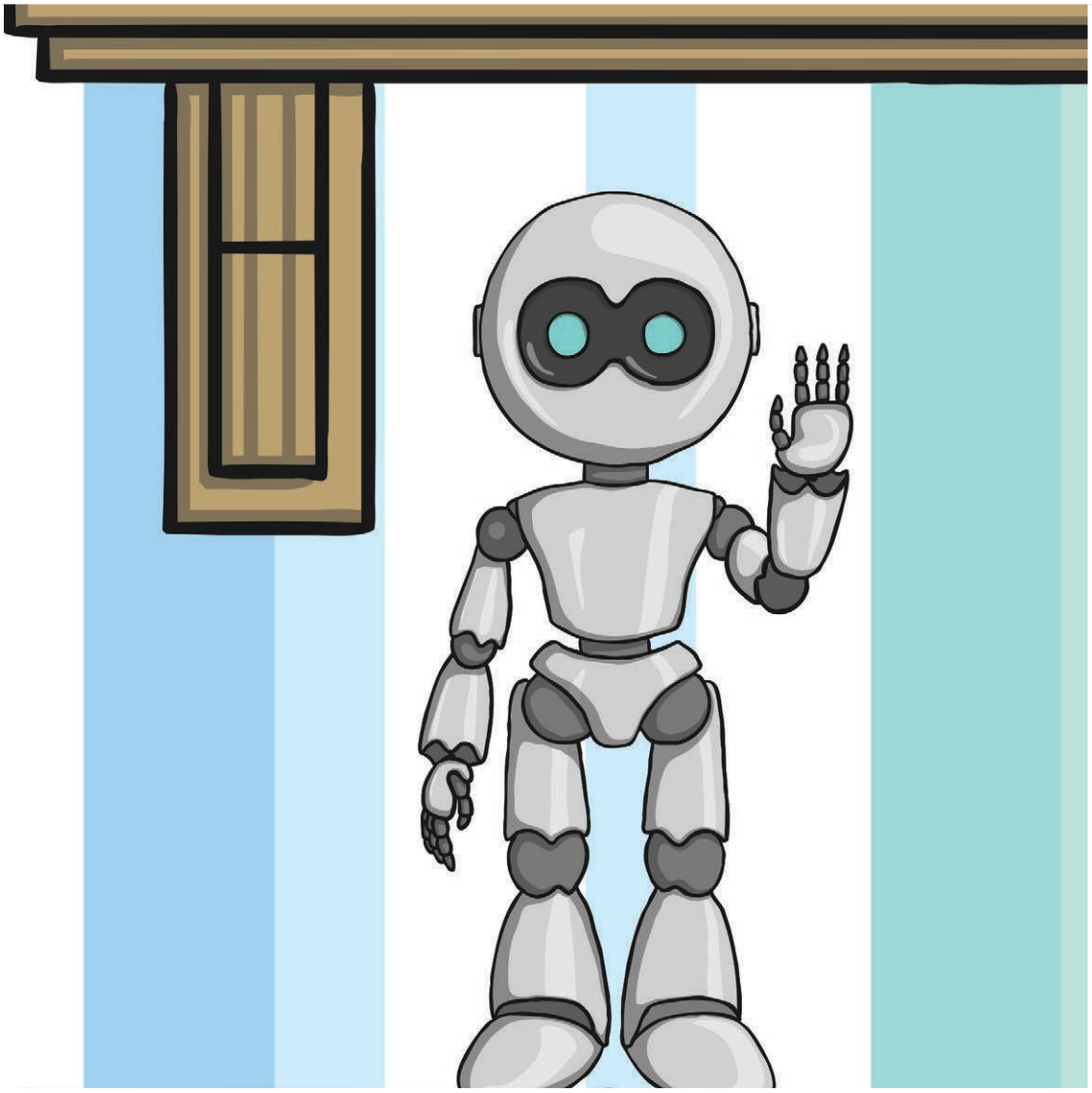

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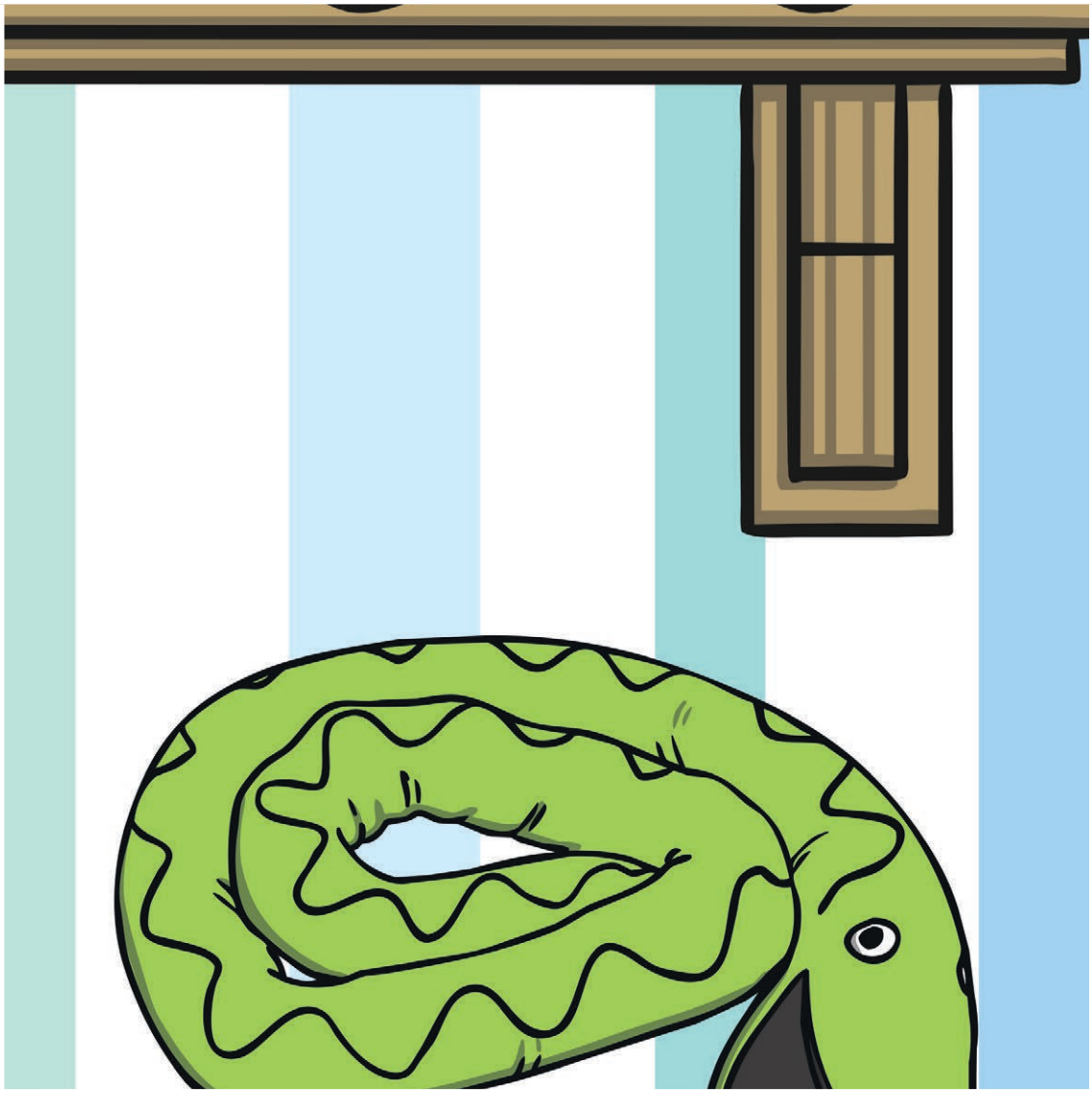

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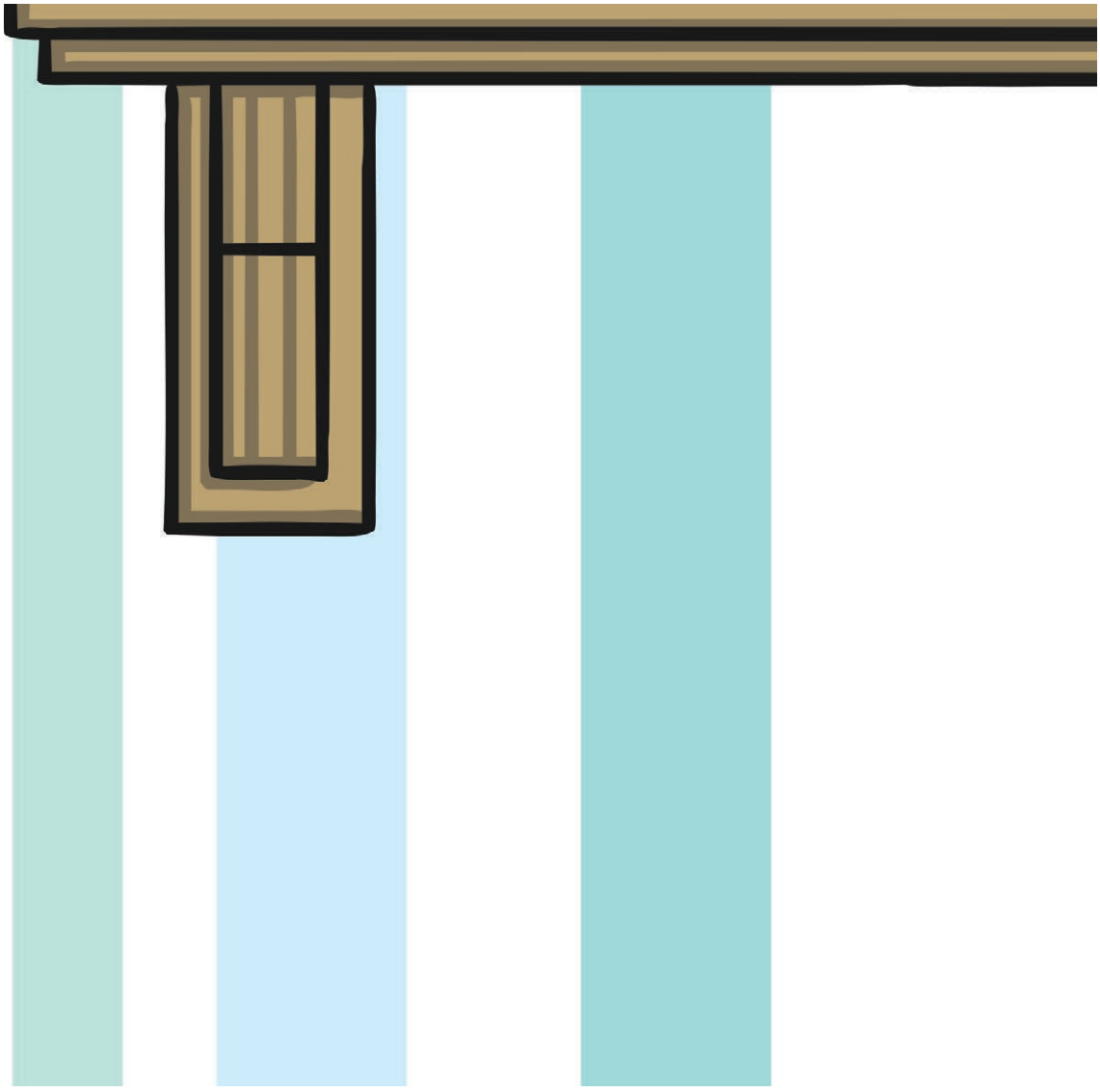

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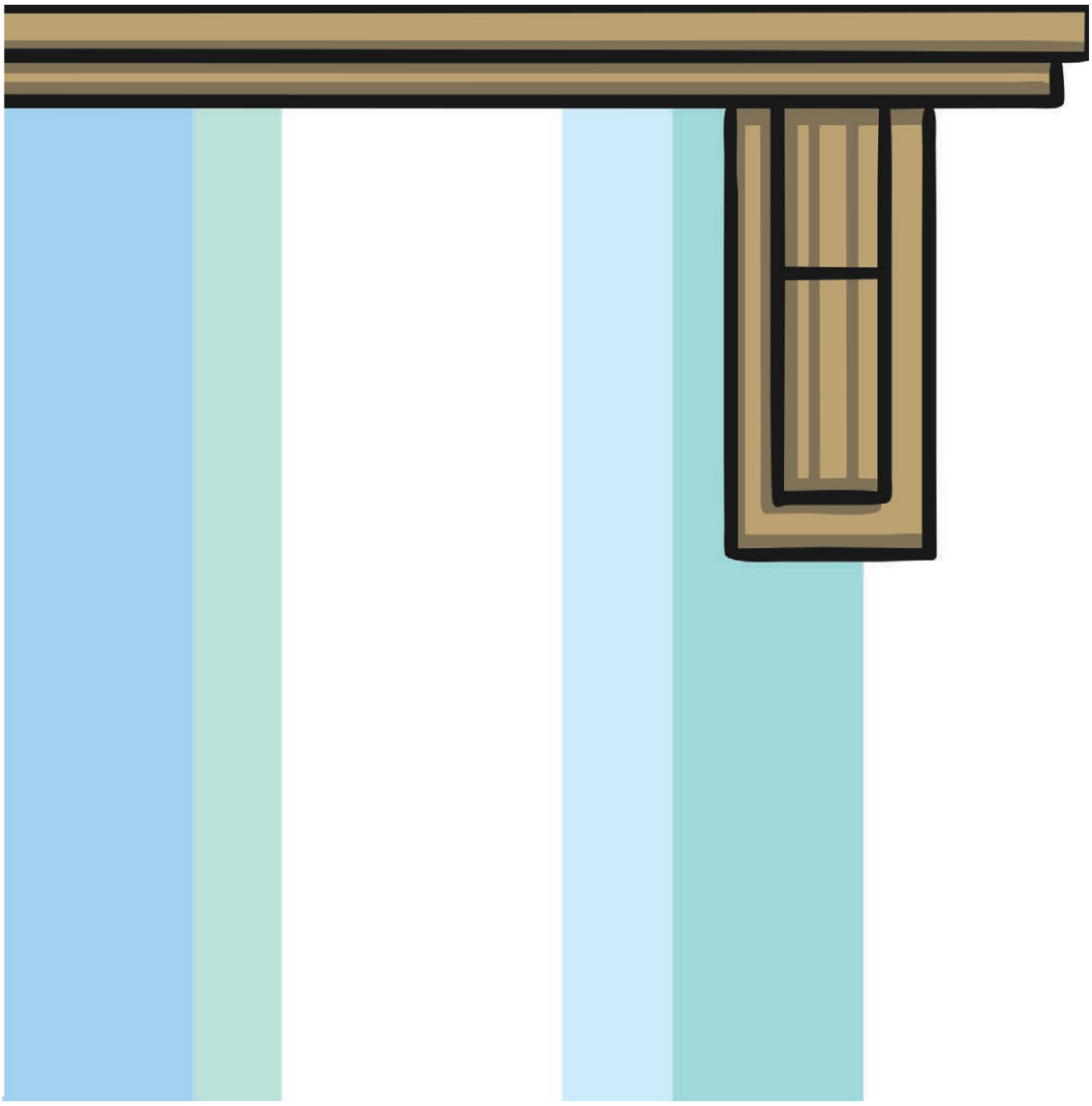

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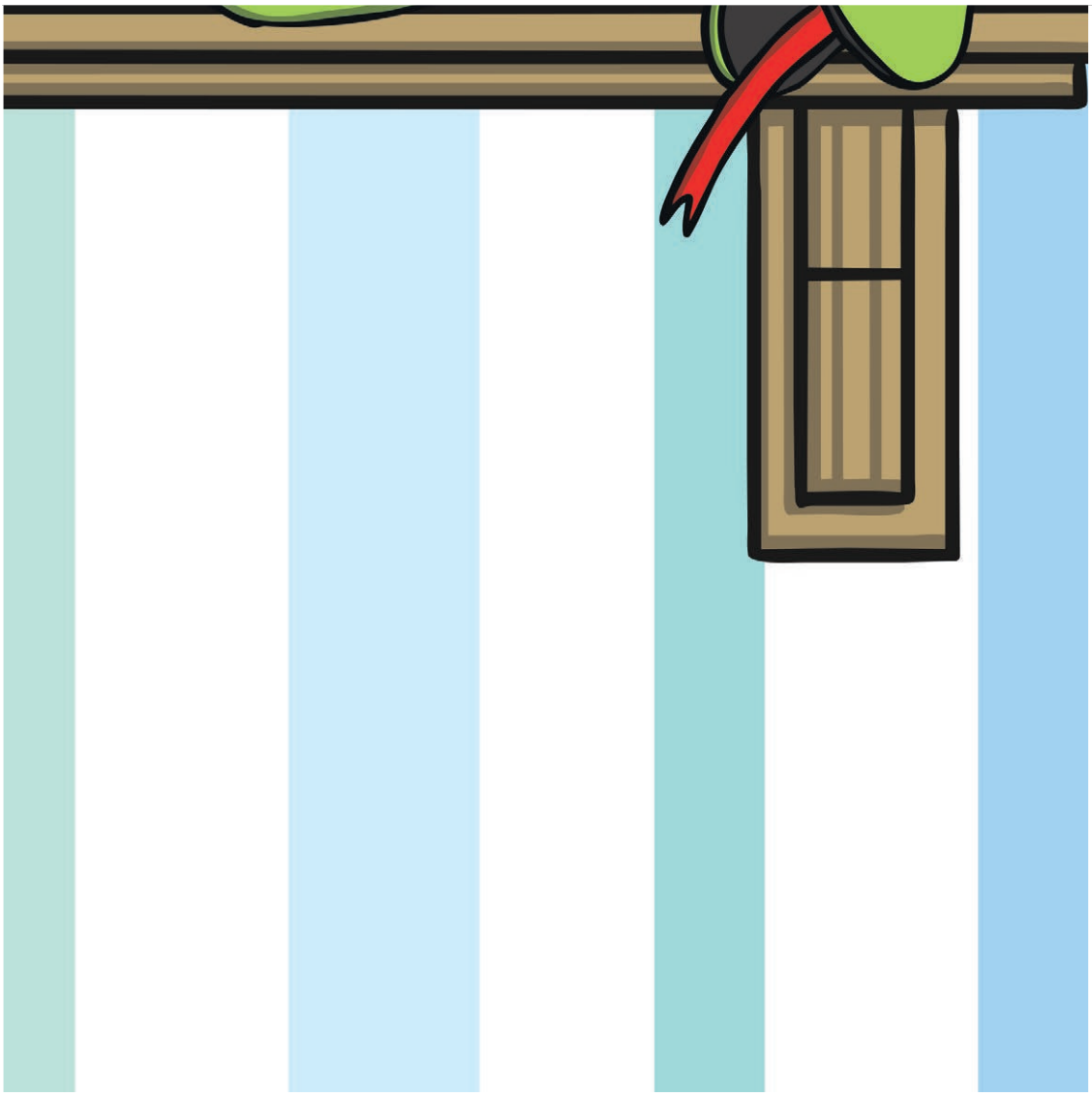

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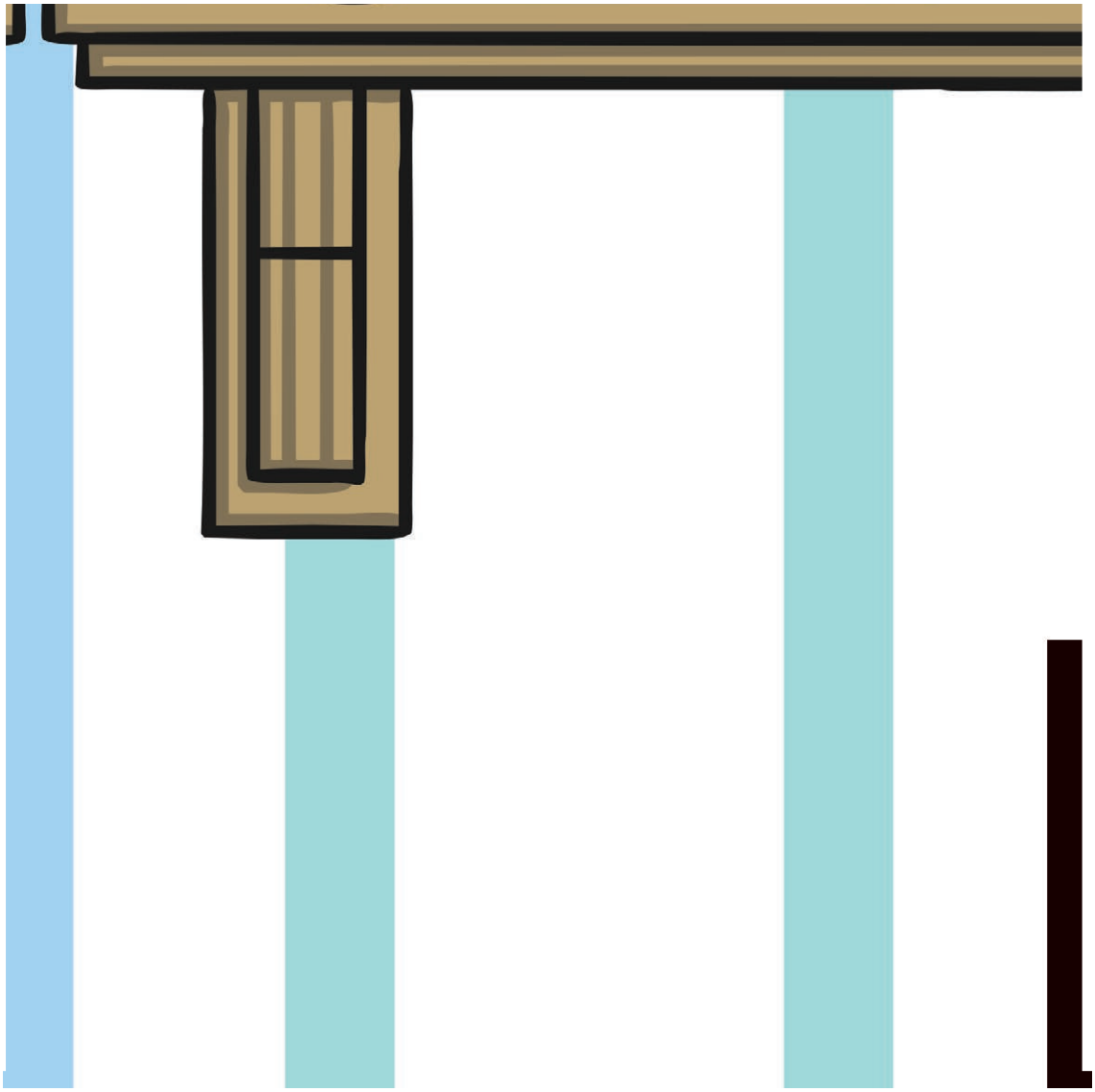

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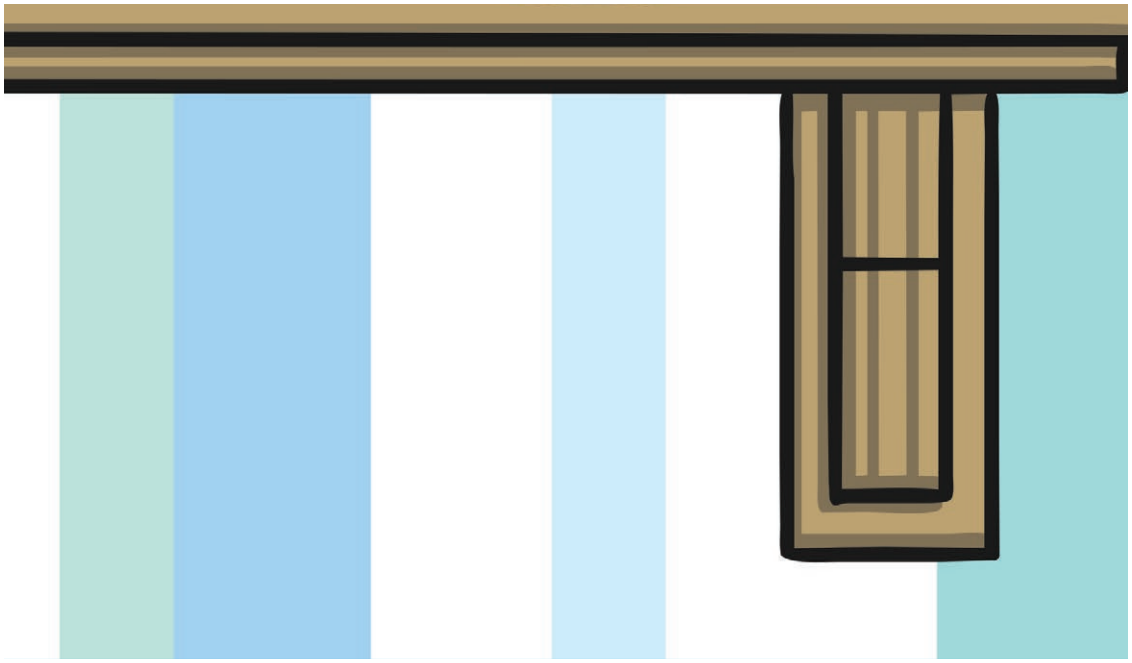

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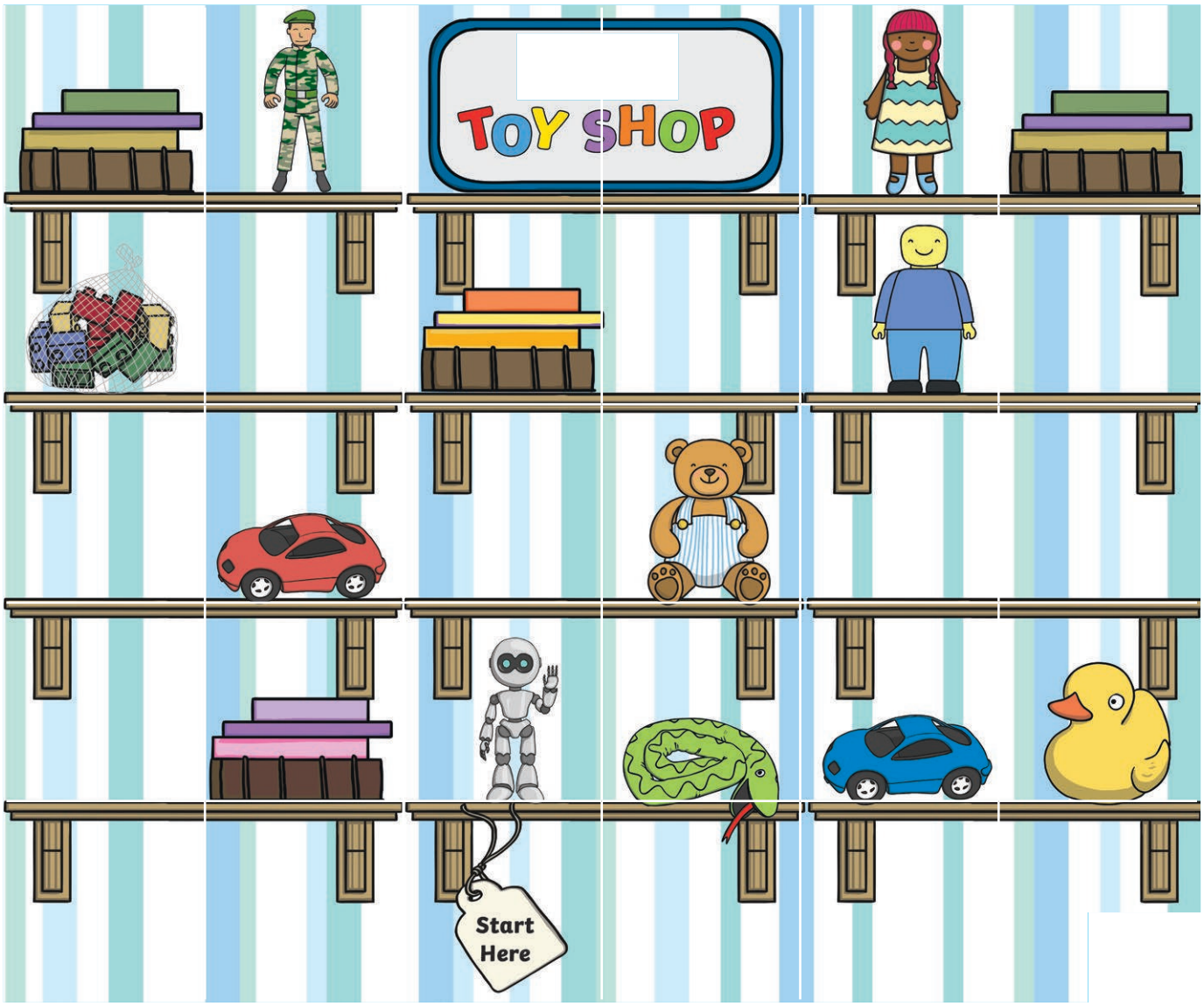
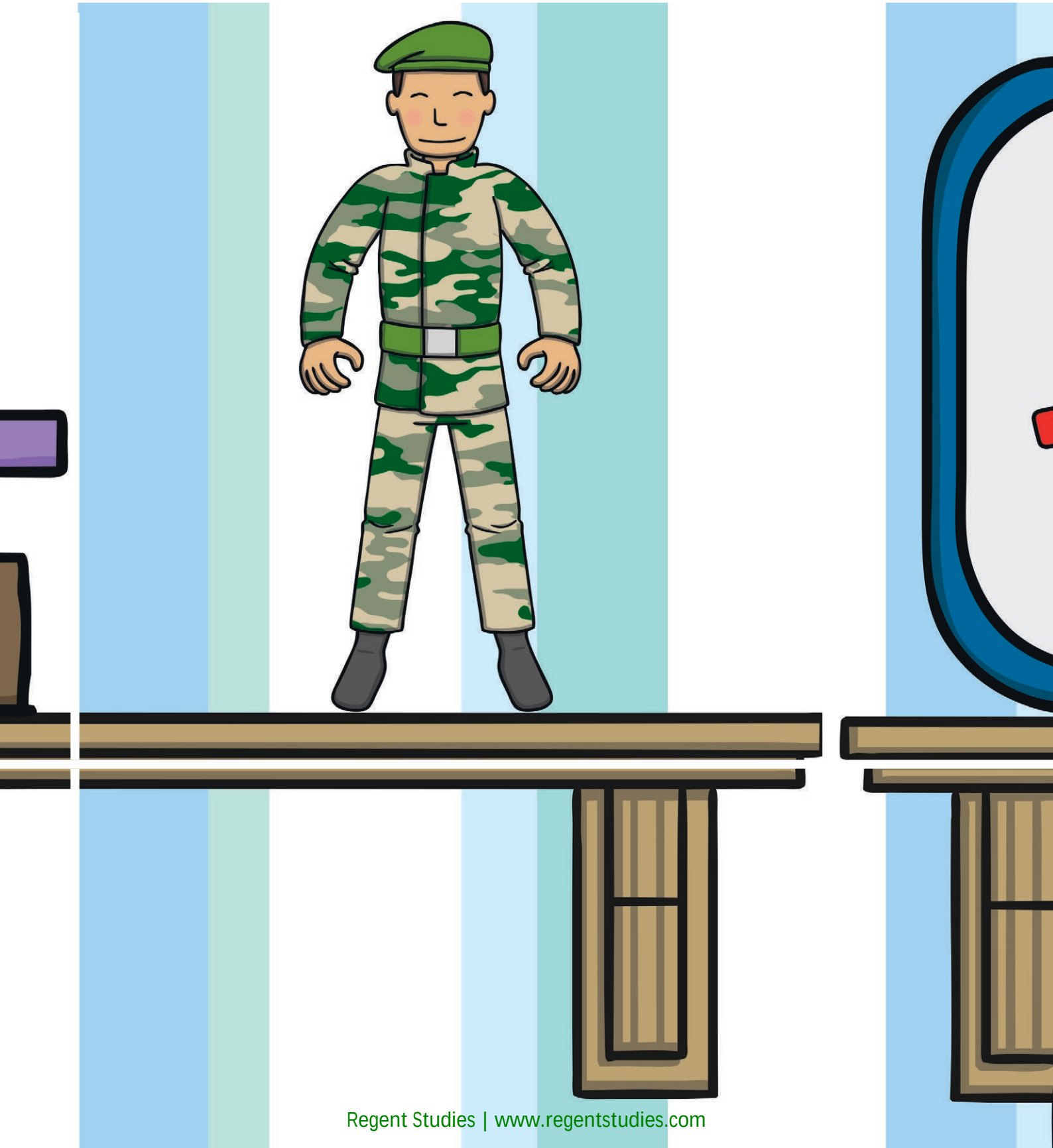

TOY SHOP
Start Here



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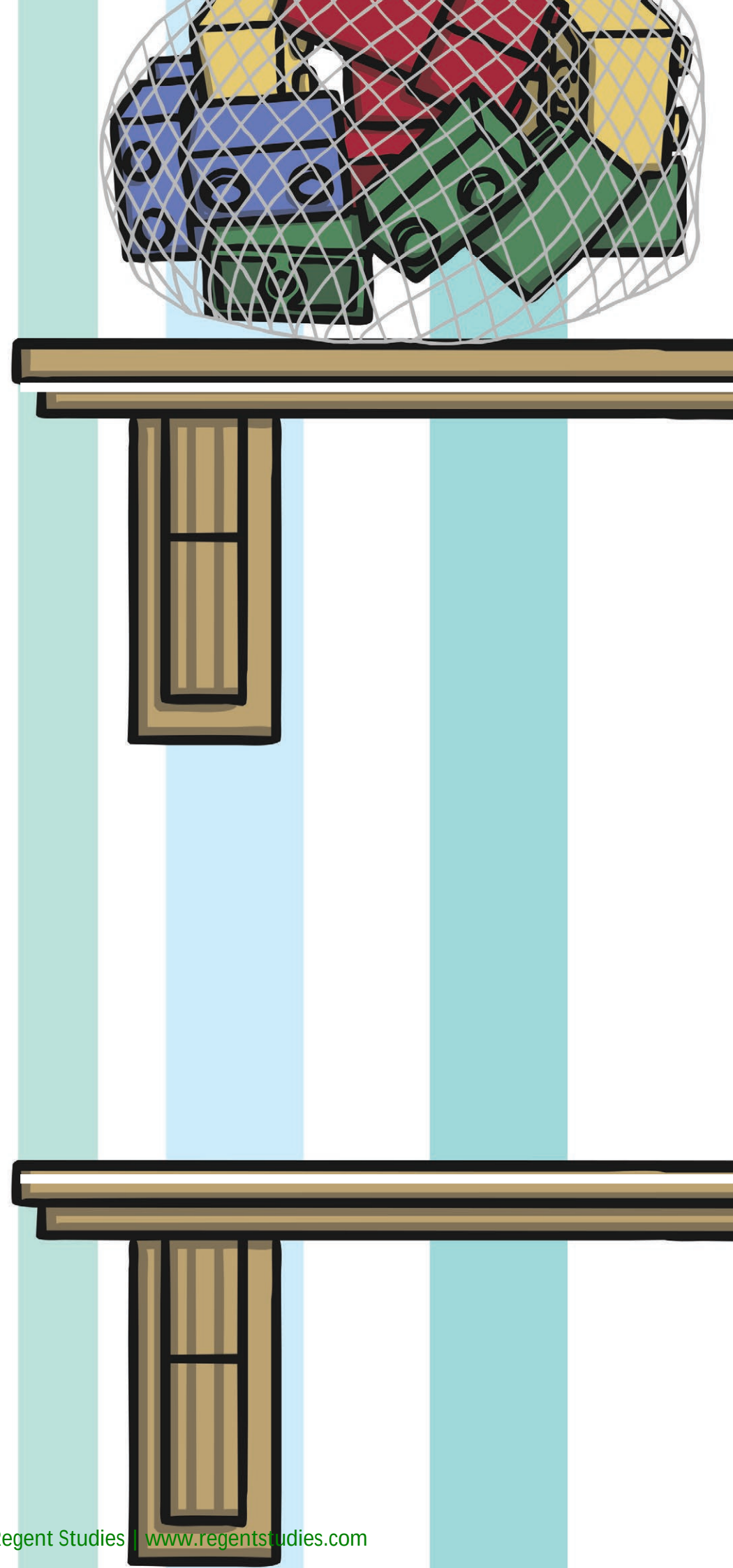
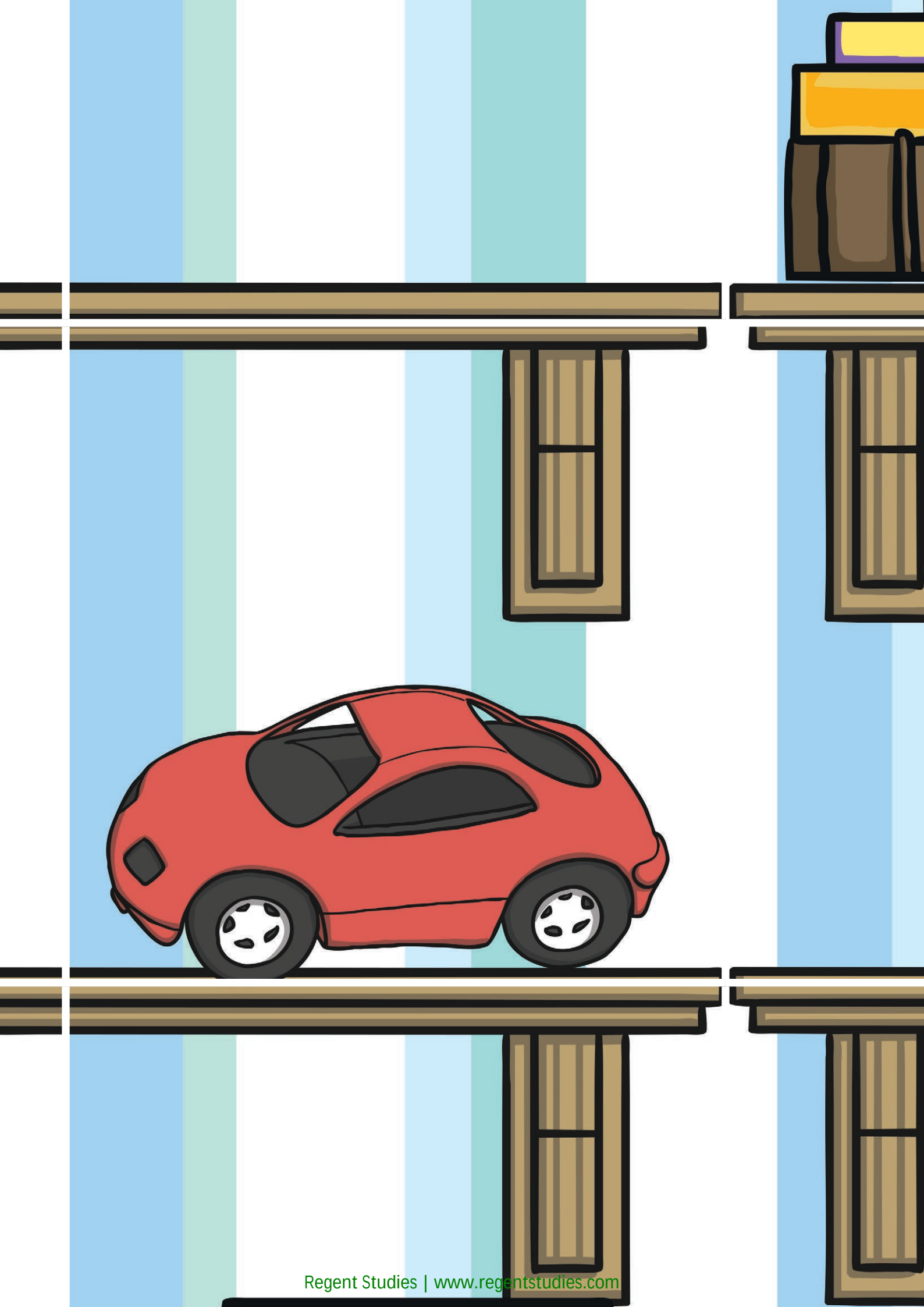
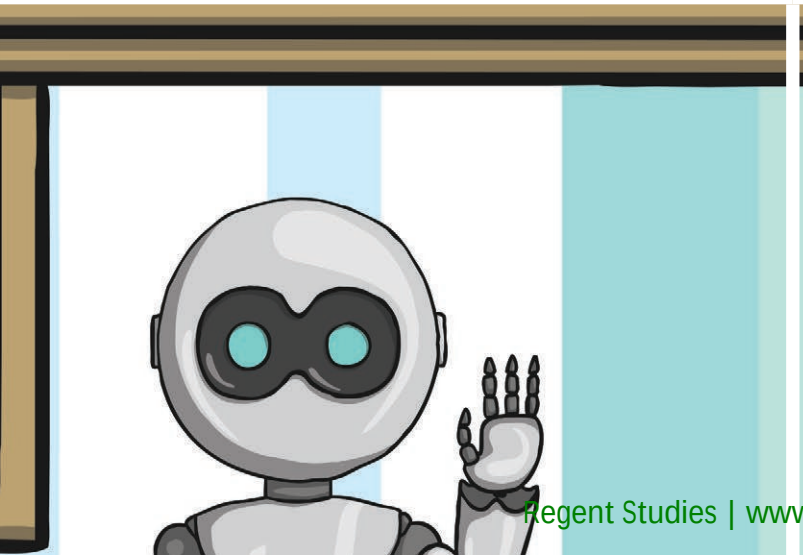
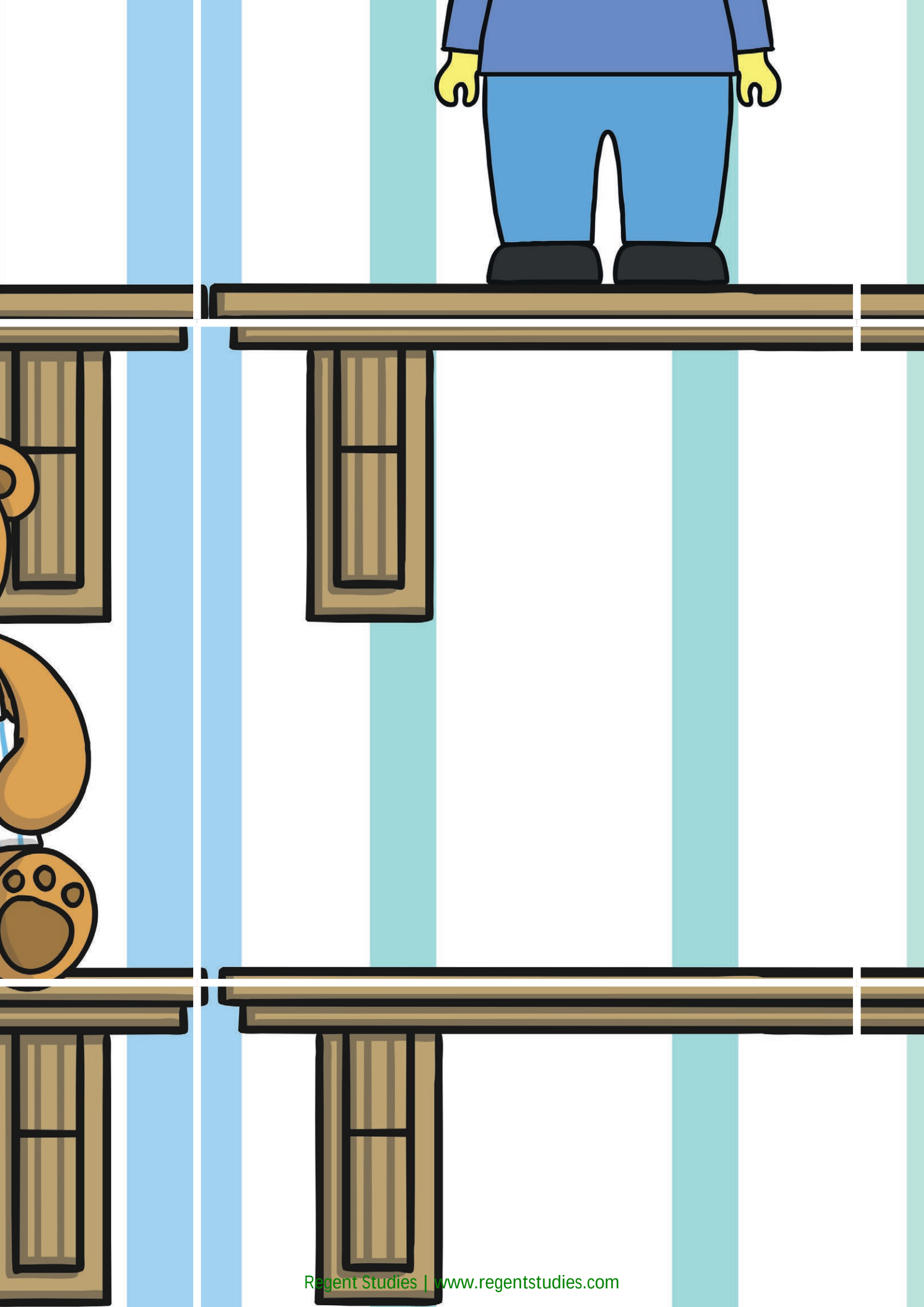
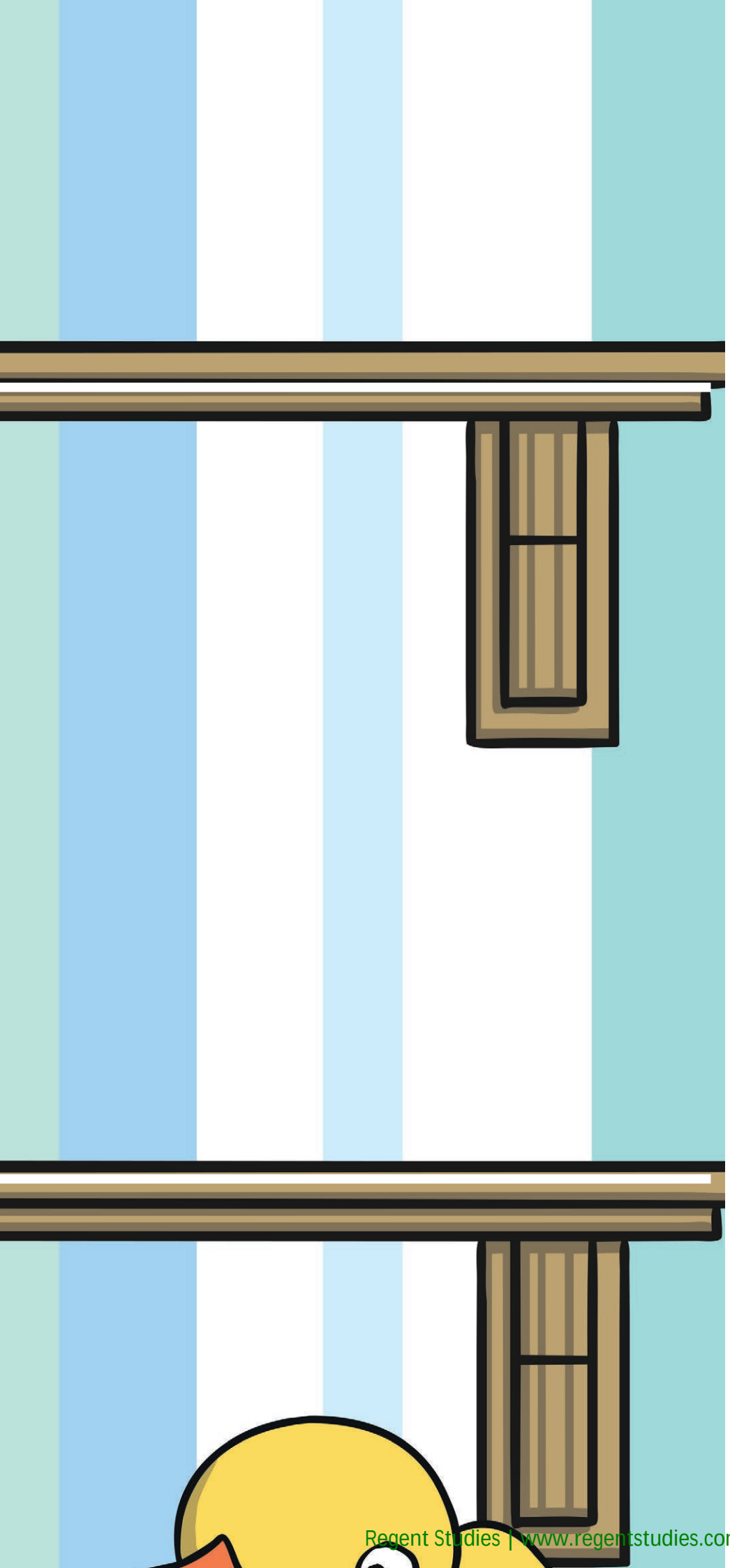
TOY SHOP











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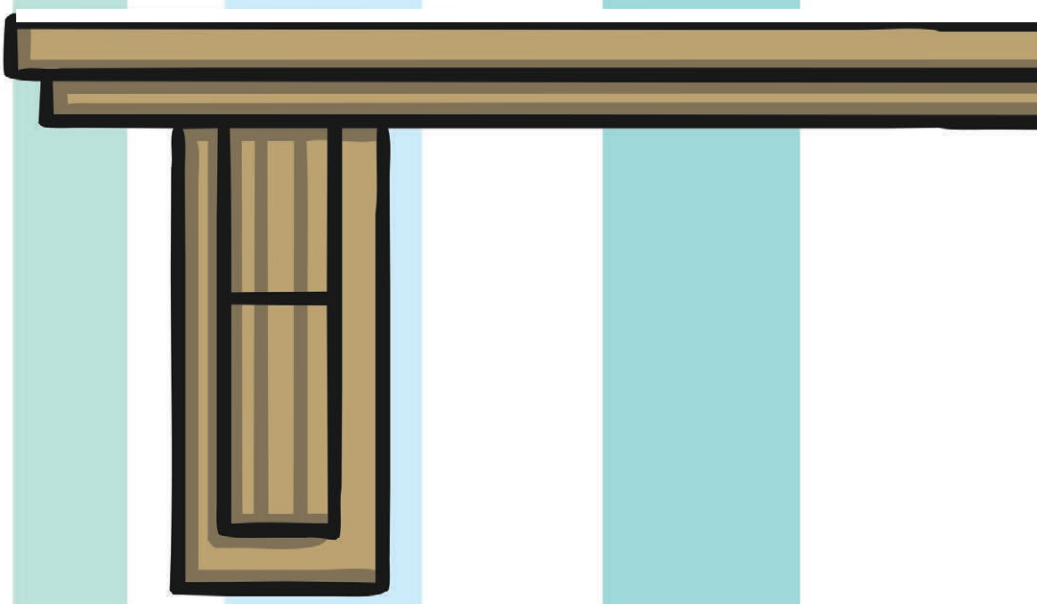

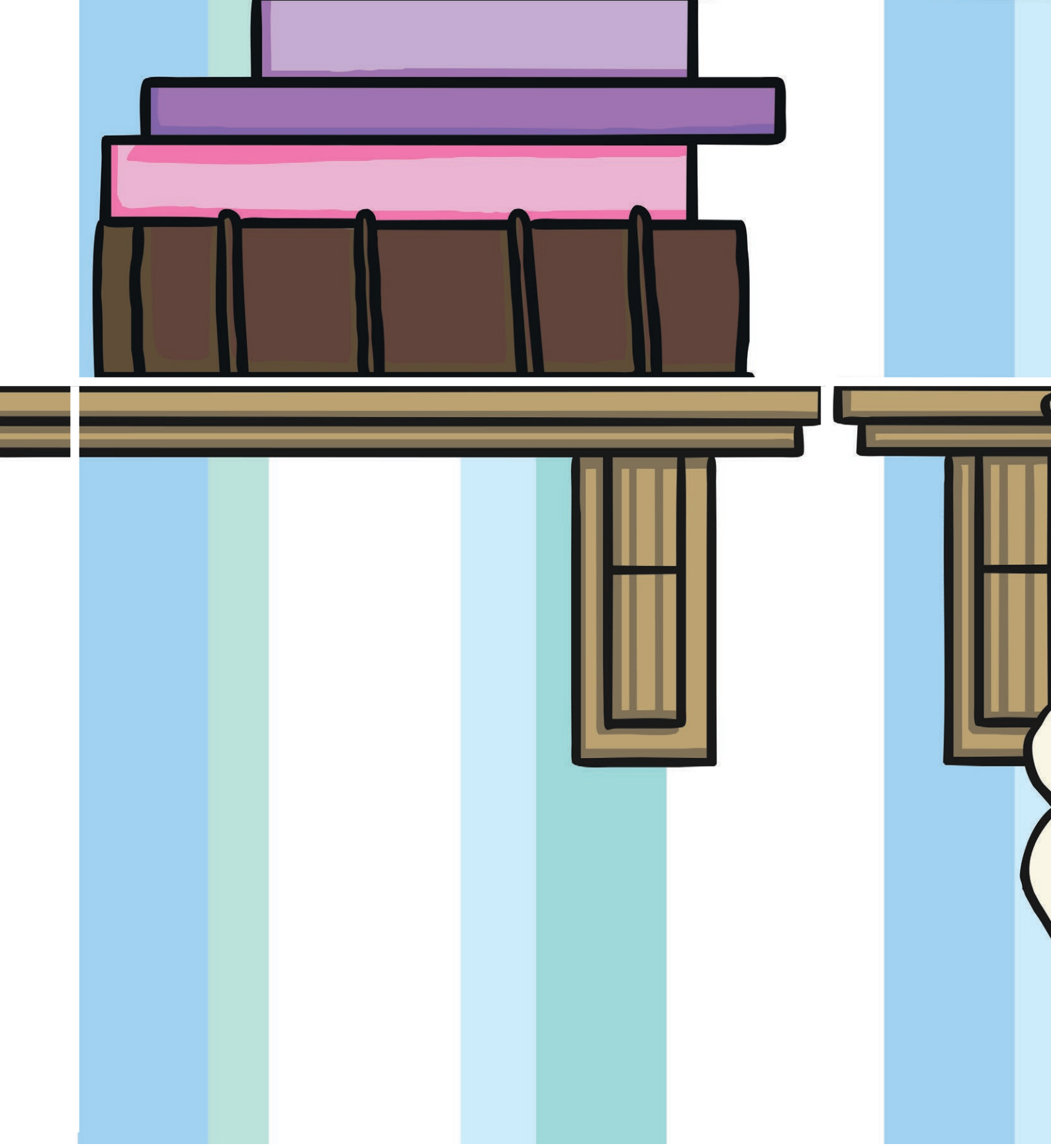

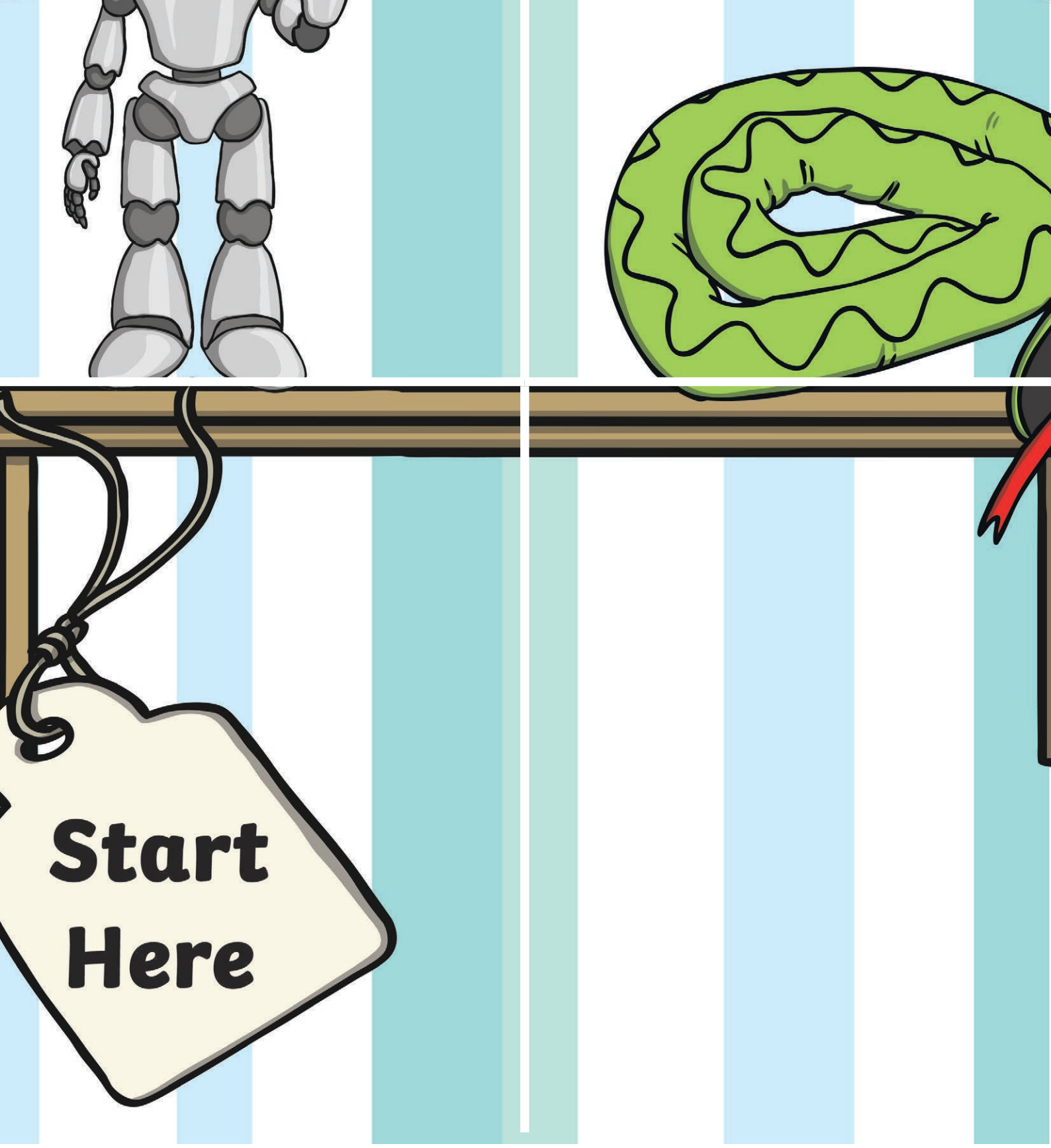
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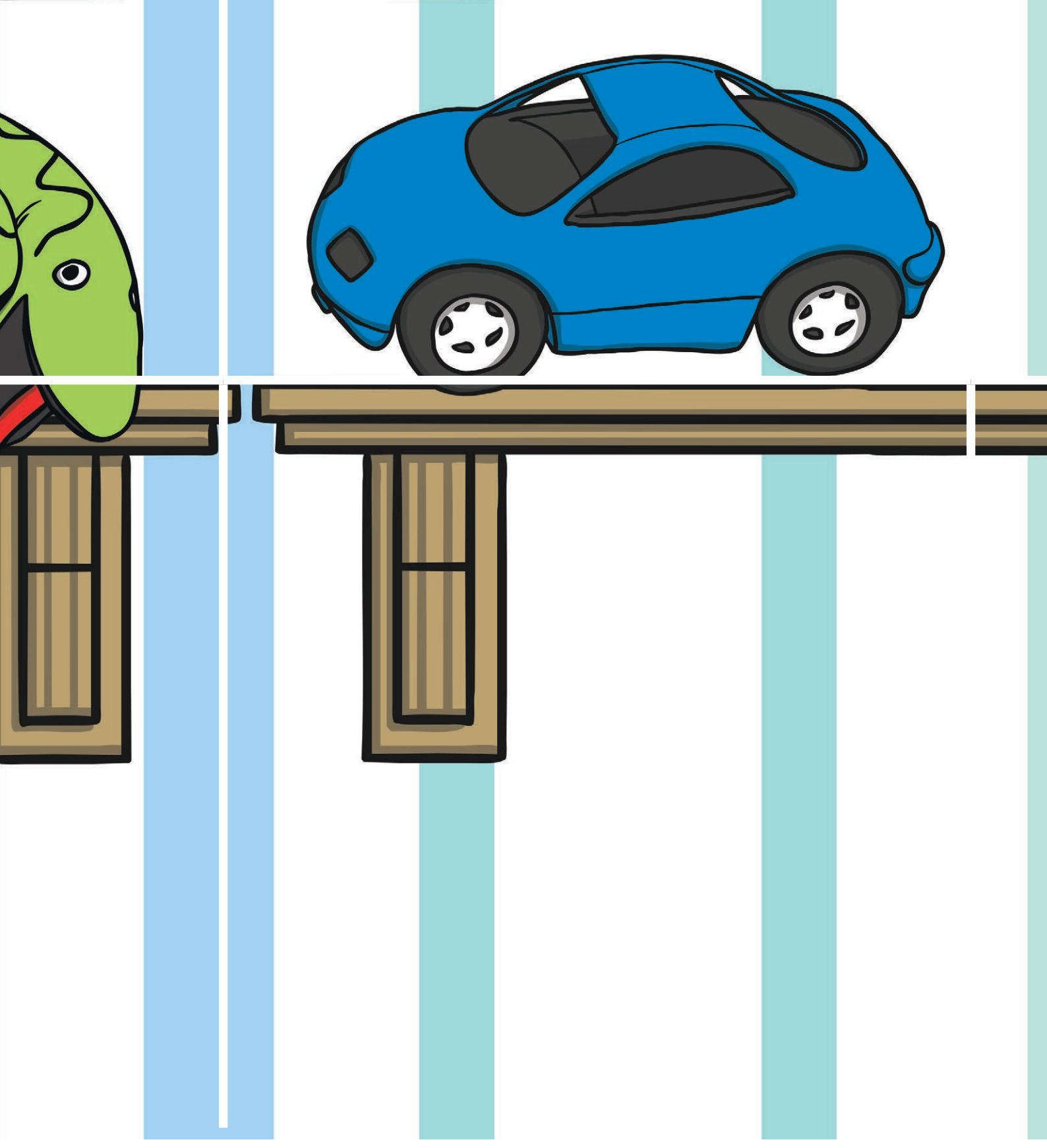

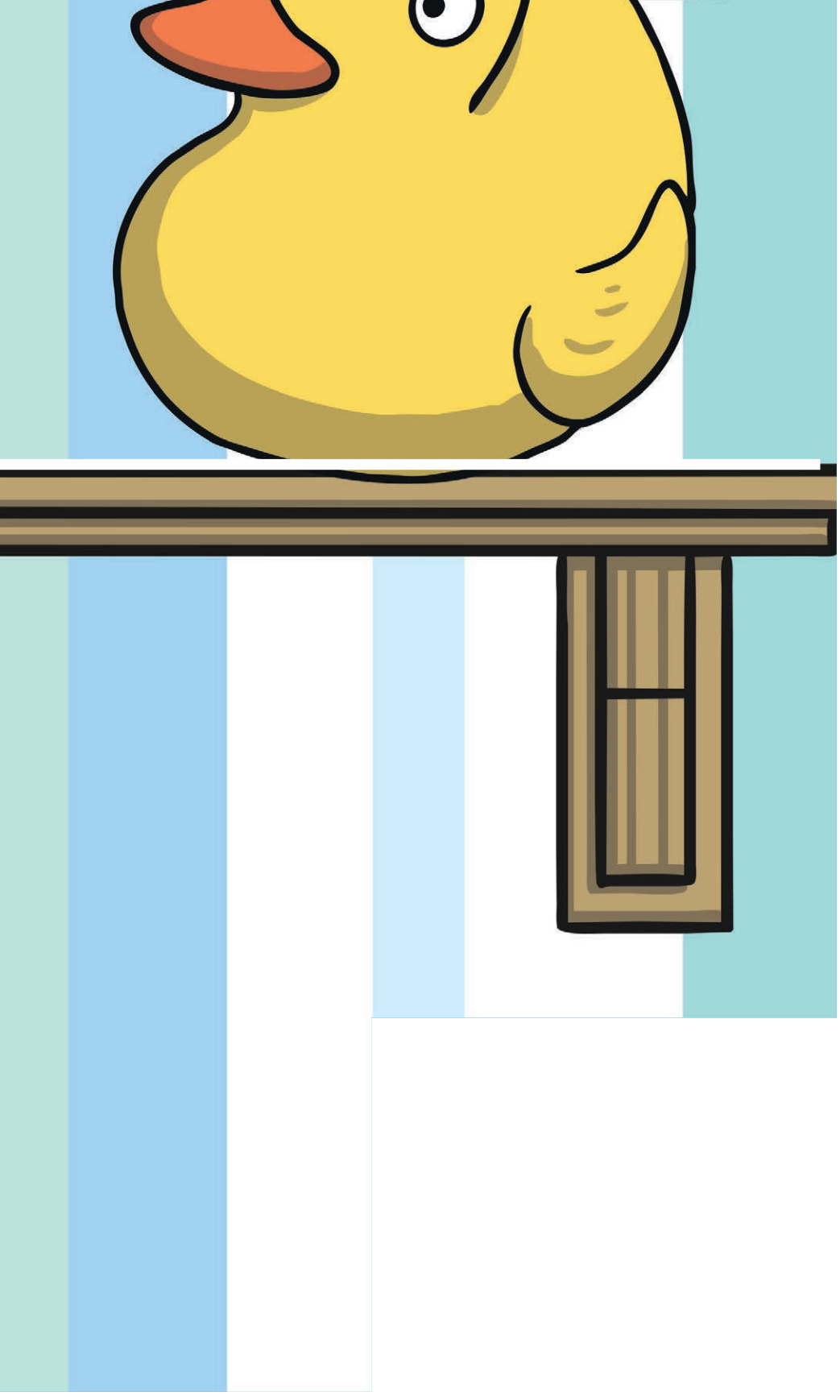

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I can direct a Bee-Bot (or similar programmable toy) to a toy.		
I can program a Bee-Bot (or similar programmable toy) using the arrow buttons.		

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