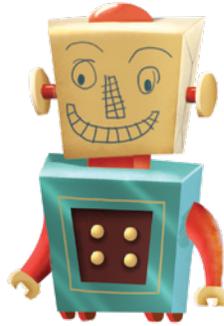


Robo

Teacher's Guide



Lyn Vause

Line Masters

This Teacher's Guide includes access to modifiable and PDF line masters.

To access these Mathology Little Book Line Masters, please log in at Pearson Places, www.pearsonplaces.com.au and select the Mathology Little Books icon. The Line Masters can be found in the 'Explore Resources' section.

If the icon doesn't appear or if you are new to Pearson Places, please contact our digital helpdesk at help@pearson.com.au and we will set up a teacher account for you.

Once you have your Pearson Places account details you can record them below for reference.

Log-in Name _____

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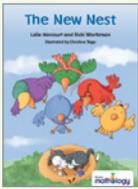
You can use these log-in details to access all your Pearson Places titles.

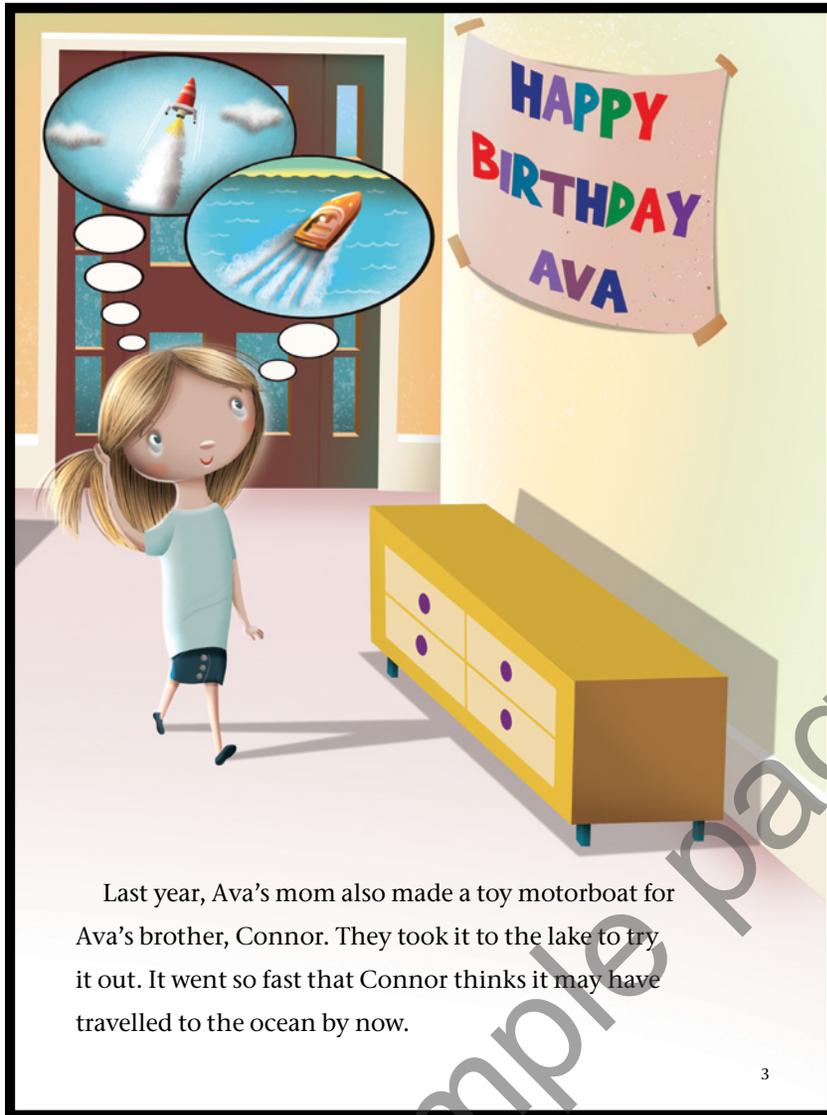
Mathology Little Books

This series recognizes that children’s understanding of maths concepts develops over time, and so the series allows you to choose the book that best matches a child’s or group’s level of mathematical understanding. The books engage children at just the right level in a wide range of mathematical ideas, thinking, and activities in a variety of real-world and imaginary contexts.

Robo engages children in conversations, investigations, and activities that help to develop their understanding of the big maths idea that “Objects can be located in space and looked at from different perspectives.”

Big Idea: Objects can be located in space and looked at from different perspectives
(2-D and 3-D shapes. Location, position and movement.)

TITLE	KEY MATHS FOCUS	MATHS SKILLS	STRATEGIES	ADDITIONAL FOCUS
	Locate objects in space Recognise shapes	Use positional language to describe location and movement Follow simple directions Give simple directions Describe and name 2-D shapes Identify 2-D shapes in 3-D objects		Count and compare quantities to 5 Make combinations to 5
	Locate and map objects in the environment Investigate 2-D shapes and 3-D solids	Identify and describe geometric attributes of 2-D and 3-D shapes Identify 2-D shapes on 3-D objects in the environment Locate objects by interpreting a map Use positional language to locate objects and give and follow directions		Organize information into graphs Count in groups to determine how many Add and subtract to 20 Estimate and compare measures
	Describe the location of objects Explore and describe the movement of objects	Provide instructions to locate an object in the environment Visualize and create 2-D representations of 3-D objects Use positional language to describe movement of objects	Use a map to describe movement of an object Use words and/or gestures to show directions	Visualize 2-D representations of 3-D objects Collect and organize data Digital technologies (coding)



Last year, Ava's mom also made a toy motorboat for Ava's brother, Connor. They took it to the lake to try it out. It went so fast that Connor thinks it may have travelled to the ocean by now.

Describing the location of objects

- Describe where Ava is. What is she beside? (e.g., table with drawers) Can anyone think of another way to describe where Ava is? (e.g., in front of the door)

Exploring and describing the movement of objects

- Where is the rocket going? (e.g., up into the sky) How could you describe where the toy motorboat is moving? (e.g., across the lake)
- Will the motorboat look smaller or larger as it moves farther across the lake? Why? (it will look smaller because it is moving away from you)
- Would the motorboat look smaller or larger if it were moving toward you? (it would look larger)

WATCH FOR...

- Does the child understand the language of movement (e.g., up, down, across, away, closer, farther, toward, backward)?
- Does the child use positional language (e.g., up, over, under, left, right) to describe location and movement?

Describing the location of objects

- How could you describe where the present is? (*on the table; between Ava and the dog*)

Exploring and describing the movement of objects

- Who are moving toward Ava and the dog? (*Mum and Connor*)
- Do people look larger or smaller when they are moving closer to you? (*larger*)
- Hold the palm of your hand close to your face. Now move it as far away from your face as you can. Does your hand look larger or smaller when you move it away? (*smaller*)



Large Group Options

If you read to a large group or whole class, you might project the book to facilitate reading aloud and better engage children in describing the location of objects as well as exploring and describing the movement of objects. These activities engage children in exploring and communicating their understanding of the location and movement of objects. Choose the activities that best address your children's learning needs.

MAKING NEW PATHS

ENGAGE

Draw attention to the tablet map of Ava and Connor's home on page 13 of *Robo*. Say:

- **Think about the path you would take from the front door to Ava's bedroom upstairs. Imagine where Ava's bedroom might be and describe the path you would follow.**
- **What words did you use to describe how to move along the path?** (e.g., forward, backward, left, right, up, between, around, through, over)

Record responses on a chart with a title such as "Movement Words."

WORK ON IT

Distribute copies of the Maths Mat (LM 3) and drawing and writing materials. Have children draw on the grid to create pathways through the house. Say:

- **You are going to draw different paths on your map of Ava and Connor's home. First, make 4 paths on your map. Each path should be a different colour or type of line, such as a dotted line. As you make each path, think about how you would describe it using words like "through," "over," and "behind."**
- **Show your map to a partner or small group and describe how to follow 1 of your paths. Ask your partner or group to identify which path you are describing.**

SHARE AND REFLECT

Have children share their paths. Prompt reflection by asking questions such as:

- **How did you figure out which path was described?** (e.g., *the description said turn right and then turn right again, so I knew it was the blue path*)
- **What words helped you pick out the correct path on the map?** (e.g., *turn right, go past*)
- **What is another way to describe the path you described to your partner or group?** (e.g., *start at the end of the path and describe it in reverse*)
- **How is your pathway like other children's pathways?**

MATHS FOCUS: explore and describe the movement of objects

MATERIALS: *Robo*, p. 13; chart paper; Maths Mat (LM 3); drawing and writing materials

WATCH FOR...

- Does the child use strategies to visualize the paths before drawing them (e.g., using gestures)?
- Does the child describe the path using appropriate/sufficient words (e.g., turn left and move toward the...)?
- Does the child match the descriptions he/she hears with the appropriate paths?

DIFFERENTIATE: Children could draw just 2 pathways on the map, describe 1 of the pathways, and then ask a partner or small group to identify the path described.

