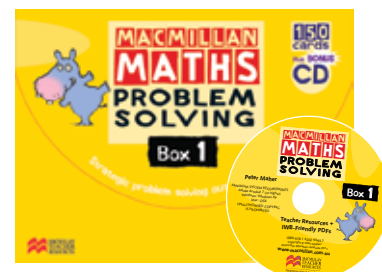


MACMILLAN MATHS: PROBLEM SOLVING BOXES

PRIMARY • YEARS 1 – 6

STRATEGIC PROBLEM SOLVING OUT OF THE BOX!



What is the Macmillan Maths Problem Solving Box series?

Our problem-solving boxes are designed to take learners on a creative learning journey. This developmental programme will encourage students to use real contexts to apply the mathematics they have learned in lessons, or use their skills to pose problems for their peers.

Presented in a flexible, supplementary format, they are an easy, out-of-the box resource for additional practice that will challenge students to think deeply and laterally to develop a full understanding and firm grasp of mathematical concepts.

Each box contains activity cards to develop and strengthen problem-solving strategies across:

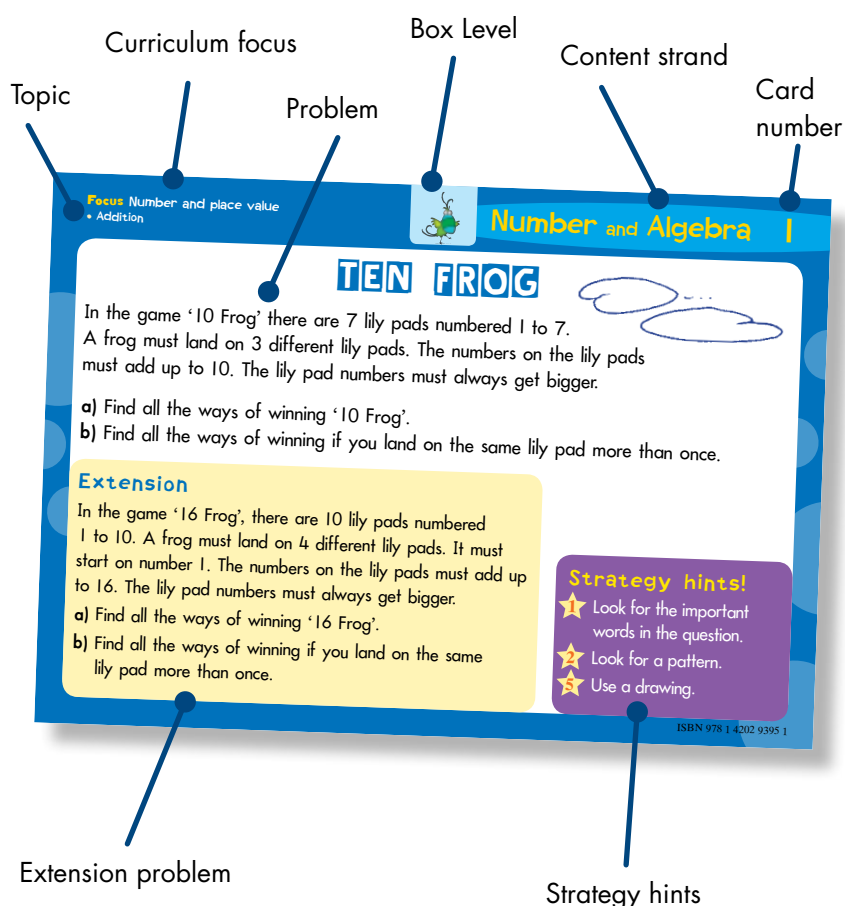
- Number and Algebra
- Measurement and Geometry
- Statistics and Probability

Extension activities are also included.

How does it work?

There are 6 boxes in the series, each containing 150 problem solving cards. The cards in each box are labelled by box number and animal icon, rather than by year level. This will allow teachers to cater to different student abilities, and select the box or cards that best suit the needs of individual students.

Here's an example:



Curriculum focus
Focus Number and place value
• Addition

Topic

Problem

Box Level

Content strand
Number and Algebra 1

Card number

TEN FROG

In the game '10 Frog' there are 7 lily pads numbered 1 to 7. A frog must land on 3 different lily pads. The numbers on the lily pads must add up to 10. The lily pad numbers must always get bigger.

- Find all the ways of winning '10 Frog'.
- Find all the ways of winning if you land on the same lily pad more than once.

Extension

In the game '16 Frog', there are 10 lily pads numbered 1 to 10. A frog must land on 4 different lily pads. It must start on number 1. The numbers on the lily pads must add up to 16. The lily pad numbers must always get bigger.

- Find all the ways of winning '16 Frog'.
- Find all the ways of winning if you land on the same lily pad more than once.

Strategy hints!

- ★ Look for the important words in the question.
- ★ Look for a pattern.
- ★ Use a drawing.

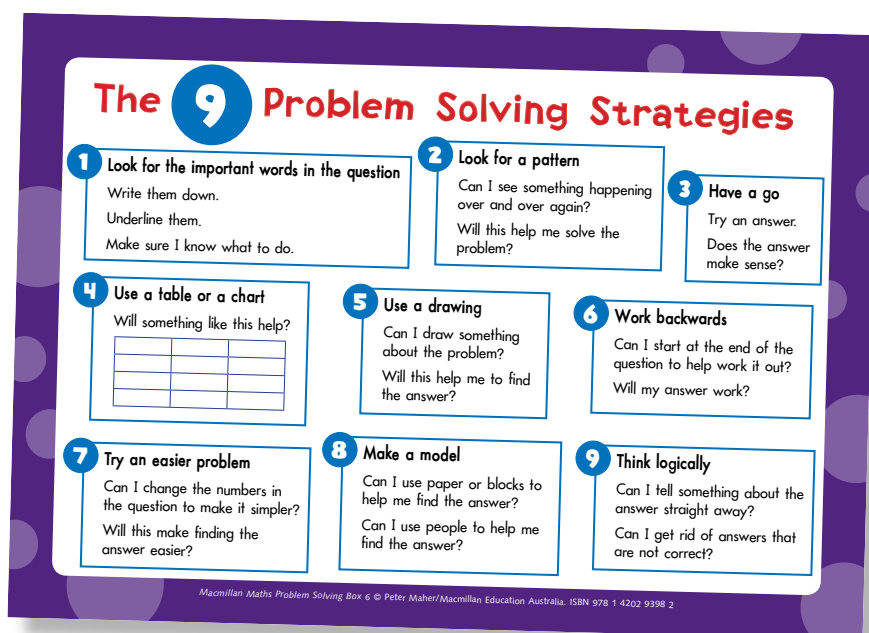
ISBN 978 1 4202 9395 1

Teachers can use the cards to supplement their maths programmes and strengthen problem solving skills at any time. They can select cards to support specific topics and strands from their core material and have students work through the problems in small groups. A suggested structure is to introduce the topic, have students work through the main card problems and extension activities, and report back. Each card is designed to take approximately 10 - 30 minutes to complete.

The problem-solving strategies

Problem solving is the application of previously acquired skills and knowledge to an unfamiliar situation. All six boxes in Macmillan Maths Problem Solving series are built on the same nine problem solving strategies. These core strategies are as relevant to a 5 year old as they are to an adult.

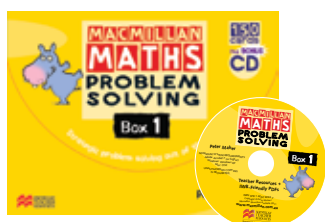
The two key strategies are Strategy 1: Look for the important words in the question and Strategy 2: Look for a pattern. These are fundamental to almost all problem solving tasks. The other seven strategies are more question-specific, but are relevant to all learners.



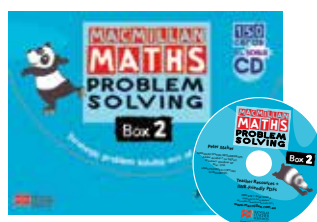
What's included?

In addition to the 150 cards in each box containing main problems, extension activities and hints, teachers are supported by a CD ROM at each level which includes:

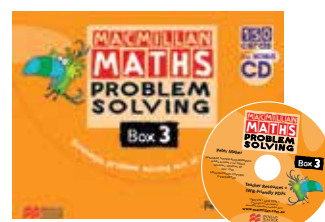
- IWB-friendly PDFs of all cards and blank card templates
- A teaching guide
- Assessment guidelines and rubrics
- Printable posters
- Record sheets, answers and index



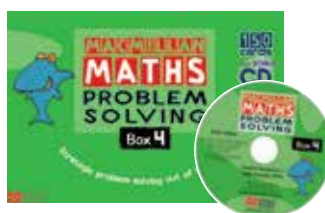
Box 1 (Year 1)
9781420293937



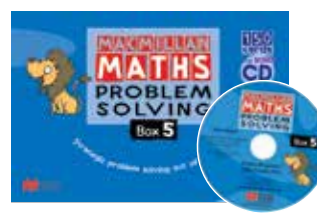
Box 2 (Year 2)
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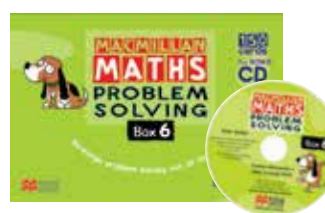
Box 3 (Year 3)
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Box 4 (Year 4)
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Box 5 (Year 5)
9781420293975



Box 6 (Year 6)
9781420293982



Our resources are specifically written to support students whose first language is not English.
Find out more about our complete solution for primary level maths which includes Max Maths - A Singapore Approach at www.macmillanic.com

