

FOR THE TEACHER

Strategies to Achieve Mathematics Success (STAMS) provides essential instruction in key mathematics strategies. The series is the instructional piece of the mathematics system that includes the *Comprehensive Assessment of Mathematics Strategies (CAMS)* diagnostic series, and the *Comprehensive Assessment of Mathematics Strategies II (CAMS II)* assessment series. Diagnose with *CAMS*, teach with *STAMS* and assess with *CAMS II*. Used alone or as part of the system, *STAMS* provides precise instruction in and practice of the strategies students need to master in order to achieve mathematics success.

In *STAMS Book 1*, students receive step-by-step instruction in 8 mathematics strategies:

- number sense
- addition
- subtraction
- multiplication
- time and money
- working with measurements
- shape
- interpreting data

Each of the strategy lessons focuses on one specific mathematics area. Teaching sequences use metacognition to lead students to understandings about the mathematics concepts.

The content of the student book is based on themes encountered in students' everyday experiences and in their reading materials. Solving the word problems may require use of information found in the following kinds of formats:

- recipes
- directions
- games
- maps
- charts
- graphs
- grids
- signs
- calendars
- illustrations
- sports articles
- science articles.

What is in the student book?

Each student book contains:

- 12 strategy lessons (8 strategy lessons in Book 1)
Each lesson provides instruction and practice in a specific mathematics area. Students use information found in the context of a theme-based reading passage and/or graphic to answer questions that focus on the target mathematics strategy.
- 4 review lessons
A review lesson follows every three strategy lessons.

(Every two strategy lessons in Book 1.) Students use information found in the context of two reading passages and/or graphics to answer questions that focus on the target mathematics strategies in the previous lessons.

- 1 final review
The final review gives practice in the mathematics areas presented in the strategy lessons. Students use information from reading passages and/or graphics to answer questions that focus on the target mathematics strategies presented in the book.

What is in the teacher guide?

Each teacher guide contains

- suggestions and instructional guidelines for using *STAMS*
- a section entitled Know your strategies
- a blank answer form for students to record their answers
- a completed answer form for correction of student forms.

Where do students record their answers?

Students can record their answers on the answer form from the teacher guide. Students may also record their answers directly in the student book.

What is the correction procedure?

For best results, correct each strategy lesson orally with students immediately following its completion. Explain concepts that students do not seem to understand. Encourage students to participate in a discussion about the targeted strategy and how to apply it.

When should I begin using the *Strategies to Achieve Mathematics Success* in the classroom?

STAMS should be initiated after an assessment of mathematics has been administered to students and analysed by a teacher. The *CAMS Series* provides the diagnostic portion of the mathematics system, and is designed specifically for making such a strategy-based assessment. Students may be assigned specific strategy lessons to remediate areas that need improvement and reinforcement, based on the results of the *CAMS* assessment. Or, you may have students complete the entire *STAMS* student book in order to build basic knowledge of mathematics strategies. This is recommended when students have gaps in their mathematics learning.

Know your strategies is a useful tool for explaining each of the mathematics strategies and for instructing students in how to answer a strategy-based question.

How do I use *Strategies to Achieve Mathematics Success* effectively in the classroom?

STAMS is designed for flexibility in the classroom and can be used effectively in several ways, according to your classroom needs. The instructional portion of each strategy lesson should be presented to students as a teaching lesson. Peer learning is encouraged. Students should complete the review questions independently; the reasons why answers are correct or incorrect should be reviewed as a classroom activity. All other sections of each strategy lesson should be completed independently by students.

How can I assess mastery of the strategies in the *STAMS Series*?

The *Comprehensive Assessment of Mathematics Strategies II (CAMS Series II)* dovetails with the strategies presented in the *CAMS* and *STAMS* programs. *CAMS II* is designed to assess mastery of the strategies that were taught in the *STAMS* program.

KNOW YOUR STRATEGIES

Number

Number sense

You use **number sense** when you count and write numbers.

- ▶ Numbers can be shown in digits or in words.
- ▶ In counting, each number comes before a number and after another number.
- ▶ Use the words *first*, *second*, *third* and so on to tell where something is in a row or a line.

Addition

You use **addition** to find the sum of two or more numbers.

- ▶ Count to find how many there are in all.
- ▶ Count on from one number to find the sum.

Subtraction

You use **subtraction** to find the difference between two numbers.

- ▶ Draw a picture.
- ▶ Count back from the larger number to find the difference.

Multiplication

You use **repeated addition** to find how many there are in total.

- ▶ Draw a picture and count.
- ▶ Write a repeated addition sentence.

KNOW YOUR STRATEGIES

Measurement

Time and money

You use a clock to tell **time** and to tell how much time has gone by.

- ▶ Look at the shorter hand to tell the hour.
- ▶ Look at the longer hand to tell how many minutes there are after the hour.

Working with measurements

You use **measurement** to find the size of something.

- ▶ Use centimetres and metres to measure how long something is.
- ▶ Use cups, millilitres or litres to measure how much something holds.
- ▶ Find how many of one unit equals a different unit of measurement.

Space

Shape

You use **geometry** to talk about figures, or shapes.

- ▶ Some figures are squares, triangles, rectangles and circles.
- ▶ The number of sides and corners on some figures is used to talk about the figures.

Chance and data

Interpreting data

You use **maths pictures** to show data.

- ▶ A tally chart uses tally marks to show how many.
- ▶ A pictograph uses pictures to show how many.
- ▶ A bar graph uses bars and numbers to show how many.