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Using the CAMS® Plus and STAMS® Plus program

Each *CAMS® Plus* student book includes a pretest, a post test, four benchmark tests and three self-assessment forms. The pretest and post test, which both include five items for each of the 16 *STAMS® Plus* lessons, are designed to assess mastery.

The benchmarks are designed to be given at regular intervals during *STAMS® Plus* instruction. With one item for each lesson, they provide an ongoing measure of overall progress for individual students and the class as a whole.

The chart below describes common scenarios for when to administer the pretest and how to use the results.

| Use | Purpose of pretest | Timing for pretest | Using pretest results |
|--|--|---|---|
| During the school year for on-level children | To determine which year-level topics children have mastered and which topics need remediation. | Give the pretest about 3 months into the school year. | Use the results to create an instructional plan for the class or small groups based on areas in which children showed weaknesses. (See <i>STAMS® Plus</i> teacher guide.) |
| | To assess children's mastery of a topic you have taught with your core program. | Following instruction on a specific topic with your core program, give the page or pages from the pretest that address that topic. (See page 9.) | Immediately begin <i>STAMS® Plus</i> instruction in that topic for those children who need it. |
| During the school year for below-level children | To identify gaps in each child's understanding of below-year-level topics. | Administer the appropriate level of the <i>CAMS® Plus</i> pretest as early in the school year as possible. Use standardised test scores to identify the year level at which the child should be tested. | Immediately begin remediation with the corresponding <i>STAMS® Plus</i> lessons at that level. |

Implementing CAMS® Plus assessments and STAMS® Plus lessons

Option 1: Data-driven instruction

1 Diagnose with CAMS® Plus pretest

- Use the *CAMS® Plus* pretest to place children in the *STAMS® Plus Series*. Pretest questions correspond to each of the 16 topics in the *STAMS® Plus* lessons, so results clearly identify exactly which topics your children need to study. (See details on pages 9–10.)

2 Instruct with STAMS® Plus lessons

- Use the results of the *CAMS® Plus* pretest to assign specific lessons in the *STAMS® Plus Series* to remediate areas that need improvement. (See the *STAMS® Plus* teacher guide for more details about instruction.)

3 Monitor progress with CAMS® Plus benchmarks

- Use the four *CAMS® Plus* benchmarks, each with one question per topic, to monitor children's progress at four points during the year. (See details on pages 11–12.)

4 Assess mastery with CAMS® Plus post test

- Use the *CAMS® Plus* post test to assess mastery of each of the 16 fundamental topics following instruction with *STAMS® Plus*. (See details on pages 13 and 14)

Option 2: Comprehensive instruction

Suggested pacing chart for Book H

| Day(s) | Lesson | Assessment and Instruction | Minutes |
|--------|--------|--|-----------|
| 1–5 | | <i>CAMS® Plus</i> pretest | 30–45/day |
| 6–10 | 1 | Exponents | 30–45/day |
| 11–15 | 2 | Square roots | 30–45/day |
| 16–20 | 3 | Solve two-step equations | 30–45/day |
| 21–25 | 4 | Two-step equations with rational numbers | 30–45/day |
| 26 | | <i>CAMS® Plus</i> benchmark 1 | 30–45 |
| 27–31 | 5 | Linear and nonlinear equations | 30–45/day |
| 32–36 | 6 | Gradient | 30–45/day |
| 37–41 | 7 | Graph linear equations | 30–45/day |
| 42–46 | 8 | Solve sets of simultaneous equations graphically | 30–45/day |
| 47 | | <i>CAMS® Plus</i> benchmark 2 | 30–45 |
| 48–52 | 9 | Solve sets of simultaneous equations algebraically | 30–45/day |
| 53–57 | 10 | Special pairs of angles | 30–45/day |
| 58–62 | 11 | Angle sums | 30–45/day |
| 63–67 | 12 | Triangle similarity | 30–45/day |
| 68 | | <i>CAMS® Plus</i> benchmark 3 | 30–45 |
| 69–73 | 13 | Pythagorean theorem | 30–45/day |
| 74–78 | 14 | Distance formula | 30–45/day |
| 79–83 | 15 | Mean, median, range | 30–45/day |
| 84–88 | 16 | Scatter plots | 30–45/day |
| 89 | | <i>CAMS® Plus</i> benchmark 4 | 30–45 |
| 90–94 | | <i>CAMS® Plus</i> post test | 30–45/day |

Note: Allocate 19 weeks for full implementation of the *CAMS® Plus* and *STAMS® Plus* program, with each lesson spanning 5 school days.

The Australian Curriculum

Each book in the *CAMS® Plus*, *STAMS® Plus* and *Solve® Series* covers a range of Australian Curriculum content descriptions spread across two year levels. This allows teachers to select lessons for remediation or extension based on each student's needs. The content descriptions addressed by the lessons in Book H are listed here. Please note that not all the content descriptions for years 8 and 9 are addressed by these 16 lessons, as the focus of the *CAMS® Plus*, *STAMS® Plus* and *Solve® Series* is on fundamental maths skills and concepts. For more information on the Australian Curriculum go to: www.australiancurriculum.edu.au/

| Australian Curriculum Content Descriptions | | | Relevant Lesson(s) |
|--|---|--|--------------------|
| YEAR 8 | ACMNA182 | Use index notation with numbers to establish the index laws with positive integral indices and the zero index | 1 |
| | ACMNA183 | Carry out the four operations with rational numbers and integers, using efficient mental and written strategies and appropriate digital technologies | 4 |
| | ACMNA186 | Investigate the concept of irrational numbers, including π | 2 |
| | ACMNA190 | Extend and apply the distributive law to the expansion of algebraic expressions | 1 |
| | ACMNA191 | Factorise algebraic expressions by identifying numerical factors | 1 |
| | ACMNA193 | Plot linear relationships on the Cartesian plane with and without the use of digital technologies | 5 7 8 |
| | ACMNA194 | Solve linear equations using algebraic and graphical techniques. Verify solutions by substitution | 5 7 8 9 |
| | ACMMG201 | Develop the conditions for congruence of triangles | 12 |
| | ACMMG202 | Establish properties of quadrilaterals using congruent triangles and angle properties, and solve related numerical problems using reasoning | 10 11 |
| | ACMSP207 | Investigate the effect of individual data values, including outliers, on the mean and median | 15 |
| YEAR 9 | ACMNA209 | Apply index laws to numerical expressions with integer indices | 1 |
| | ACMNA212 | Extend and apply the index laws to variables, using positive integer indices and the zero index | 1 |
| | ACMNA213 | Apply the distributive law to the expansion of algebraic expressions, including binomials, and collect like terms where appropriate | 3 |
| | ACMNA214 | Find the distance between two points located on a Cartesian plane using a range of strategies, including graphing software | 14 |
| | ACMNA294 | Find the midpoint and gradient of a line segment (interval) on the Cartesian plane using a range of strategies, including graphing software | 6 |
| | ACMNA215 | Sketch linear graphs using the coordinates of two points and solve linear equations | 5 7 8 9 |
| | ACMNA296 | Graph simple non-linear relations with and without the use of digital technologies and solve simple related equations | 5 |
| | ACMMG220 | Use the enlargement transformation to explain similarity and develop the conditions for triangles to be similar | 12 |
| | ACMMG222 | Investigate Pythagoras' Theorem and its application to solving simple problems involving right angled triangles | 13 14 |
| | ACMMG224 | Apply trigonometry to solve right-angled triangle problems | 14 |
| ACMSP283 | Compare data displays using mean, median and range to describe and interpret numerical data sets in terms of location (centre) and spread | 15 16 | |