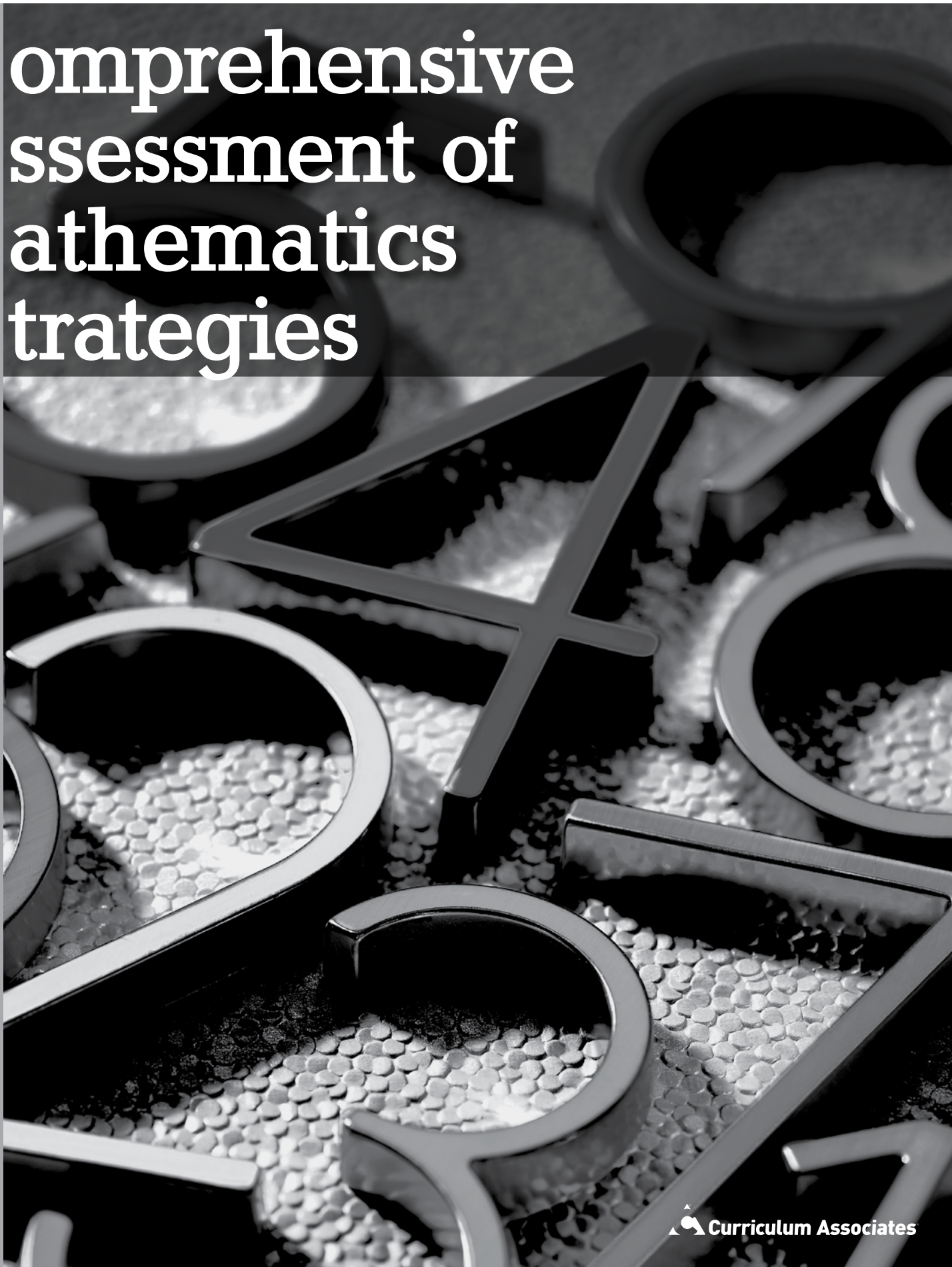


C A M S

Comprehensive Assessment of Mathematics Strategies



CAMS[®] and STAMS[®] Program

Grade-Level Foundational Concepts and Skills

Additional lessons and tests (Books C–G) included to address Common Core Standards.

See Table of Contents.

Book C (Grade 3)

Place Value
Add and Subtract
Multiplication Concepts
Fact Strategies
More Fact Strategies
Division Concepts
Fact Families
Fraction Concepts
Model Equivalent Fractions
Benchmark Fractions
Compare Fractions
Fractions Greater Than 1
Plane Figures
Length
Perimeter
Pictographs and Bar Graphs

Book D (Grade 4)

Multiplication Properties
Multiply Mentally
Multiply by 1-Digit Numbers
Multiply by 2-Digit Numbers
Relate Division to Multiplication
Divide Without Regrouping
Divide with Regrouping
Equivalent Fractions
Simplify Fractions
Decimal Place Value
Compare and Order Decimals
Relate Decimals to Fractions
Angles
Understand Area
Area of Rectangles
Line Plots

Book E (Grade 5)

Multiply 3-Digit Numbers
Divide Mentally
Estimate Quotients
1-Digit Divisors
Zeros in the Quotient
2-Digit Divisors
Understand Mixed Numbers
Add and Subtract Like Fractions
Compare Unlike Fractions
Add and Subtract Unlike Fractions
Add and Subtract Mixed Numbers
Add and Subtract Decimals
Area
Surface Area
Understand Volume
Line Graphs

Book F (Grade 6)

Multiply Whole Numbers by Fractions
Multiply Fractions
Divide Whole Numbers by Fractions
Divide Fractions by Fractions
Multiply and Divide by Powers of Ten
Multiply Decimals
Divide Decimals by Whole Numbers
Divide by Decimals
Understand Ratios
Understand Percent
Unit Rates
Ratios in Tables of Data
Solve Equations Using Number Sense
Solve Equations Using Inverse Operations
Use Formulas
Volume

Book G (Grade 7)

Understand Integers
Add and Subtract Integers
Multiply and Divide Integers
Evaluate Expressions
Solve Linear Equations
Equations with Rational Numbers
Proportional Relationships
Solve Proportions
Rate Problems
Percent as a Ratio
Percent Problems
Similarity
Circles
Cylinders
Circle Graphs
Theoretical Probability

Book H (Grade 8)

Exponents
Square Roots
Solve Two-Step Equations
Two-Step Equations with Rational Numbers
Linear and Nonlinear Equations
Slope
Graph Linear Equations
Solve Systems Graphically
Solve Systems Algebraically
Special Pairs of Angles
Angle Sums
Triangle Similarity
Pythagorean Theorem
Distance Formula
Mean, Median, Range
Scatter Plots

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CAMS® Features

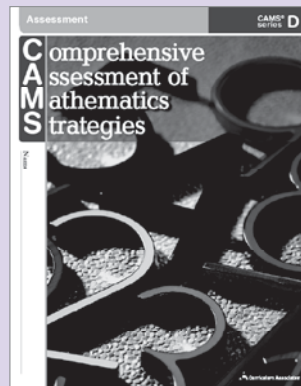
Comprehensive Pretest and Post Test to obtain reliable data on students' mastery of 16 foundational concepts and skills

Four Benchmark tests to measure student progress throughout instruction

Additional test, (Books C–G), to address concepts and skills new to grade level based on the Common Core State Standards.

Reproducible record forms to simplify record-keeping and lesson-planning

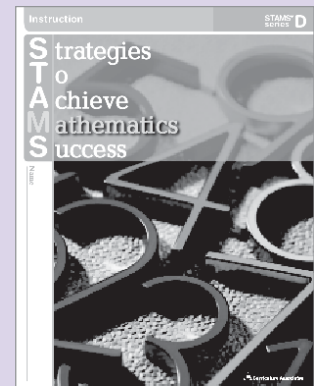
The *CAMS*® and *STAMS*® Program is a powerful integrated program of assessment and data-driven instruction. The program focuses on the critical math concepts and skills that students need to advance to the next grade level. The *CAMS Series* and *STAMS Series* work together effectively to ensure that your students gain a solid understanding of the key math concepts and skills. This knowledge will ultimately help them become independent problem solvers and succeed on high-stakes state tests.



**Books C–H
(Grades 3–8)**

Assessment

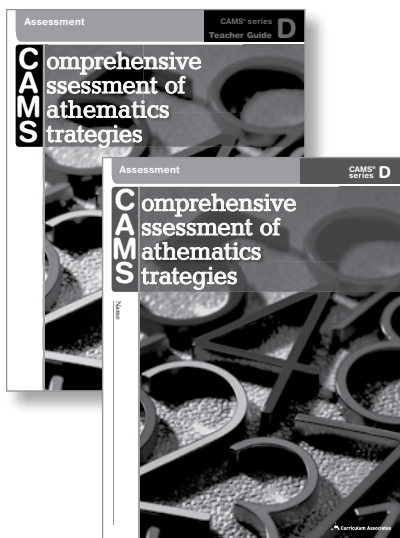
Use the *CAMS Assessment Series* to gather information for targeting instruction and measuring progress on 16 concepts and skills necessary for success at grade level.



**Books C–H
(Grades 3–8)**

Instruction

Use the *STAMS Instruction Series*, with Interactive Whiteboard Lessons, for in-depth teaching of the 16 concepts and skills that will help students succeed.



Assessment with the CAMS® Series

Measure both your students' progress in and their mastery of 16 foundational math topics, which cover both concepts and skills. Aligned to the NCTM Focal Points and Connections as well as to Common Core State Standards, these topics are key to grade-level success in math. The *CAMS® Assessment Series* is designed specifically to provide data for targeted instruction with the *STAMS® Instruction Series* but can also be used as a stand-alone assessment of students' grade-level progress.

Student Book

- A Pretest diagnoses students' strengths and weaknesses, and guides their placement in the *STAMS Series*. Pretest results can be compared with Post Test results to measure progress at year end.
- Four Benchmarks each test the same 16 topics as the Pretest, so individual and class progress can be monitored throughout the year.
- A Post Test assesses students' mastery of topics following instruction with the *STAMS Series* or at year end.
- Self-assessment forms prompt students to reflect on their learning and set goals.

Teacher Guide

- Answer keys make scoring fast and easy.
- Reproducible recording forms for each test facilitate data collection and interpretation. Class profiles, as well as individual strengths and weaknesses, are easy to identify.



Instruction with the STAMS® Series

Provide students with explicit instruction of the 16 math topics, which cover both concepts and skills, identified as the most important instructional goals for the grade.

- Highly scaffolded lessons in the student book support struggling students as they become more independent and confident learners.
- Full step-by-step support in the teacher guide helps teachers easily differentiate instruction and effectively present each lesson.
- Optional Interactive Whiteboard Lessons enhance instruction by bringing lessons to life.

Using the CAMS® and STAMS® Program

Each *CAMS*® 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*® lessons, are designed to assess mastery.

The Benchmarks are designed to be given at regular intervals during *STAMS* 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 Students	To determine which grade-level topics students have mastered and which topics need remediation.	Give the Pretest in late fall, 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 students showed weaknesses. (See <i>STAMS</i> teacher guide.)
	To assess students' 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 8.)	Immediately begin <i>STAMS</i> instruction in that topic for those students who need it.
During the School Year for Below-level Students	To identify gaps in each student's understanding of below-grade-level topics.	Administer the appropriate level of the <i>CAMS</i> ® Pretest as early in the school year as possible. Use standardized test scores to identify the grade level at which the student should be tested.	Immediately begin remediation with the corresponding <i>STAMS</i> lessons at that level.
During Summer School for Below-level Students	To identify the grade-level topics that students have not mastered.	Give the entire Pretest at the start of summer school.	Provide instruction with <i>STAMS</i> lessons for the topics students still need to learn.

Connecting to the Common Core State Standards

If your state has adopted or plans to adopt the Common Core State Standards (CCSS), you may wish to test and provide instruction on these topics. Consider the following options:

- Option 1: After completing the entire *CAMS* and *STAMS* Program, as suggested in the Pacing Chart on page 7, introduce the CCSS topics as a group. Teach the Additional Lessons in the *STAMS Series*; then assess mastery with the Additional Lessons Test in the *CAMS Series*.
- Option 2: Integrate the Additional Lessons and Test with the 16 foundational topics in the *CAMS* and *STAMS* student books. Administer the Additional Lessons Test at the same time as the Post Test.

Getting Started

Suggested Pacing Chart for Book D of the CAMS® and STAMS® Program

1 Diagnose with CAMS® Pretest

Use the *CAMS* Pretest to place students in the *STAMS Series*. Pretest questions correspond to each of the 16 topics in the *STAMS* lessons, so results clearly identify exactly which topics your students need to study.

(See details on pages 8–9.)

2 Instruct with STAMS® Lessons

Use the results of the *CAMS* Pretest to assign specific lessons in the *STAMS Series* to remediate or reinforce.

(See the *STAMS* teacher guide for more details about instruction.)

3 Monitor Progress with CAMS® Benchmarks

Use the four *CAMS* Benchmarks, each with one question per topic, to monitor students' progress at convenient points during the year. Refer to the Pacing Chart on this page for suggested intervals.

(See details on pages 10–11.)

4 Assess Mastery with CAMS® Post Test

Use the *CAMS* Post Test to assess mastery of each of the 16 foundational topics taught in the *STAMS Series*.

(See details on pages 12 and 13.)

TIP: If you choose to present the Additional Lessons in *STAMS* Books C–G that address topics related to specific Common Core State Standards, use the Additional Lessons Test to assess mastery following instruction in those lessons.

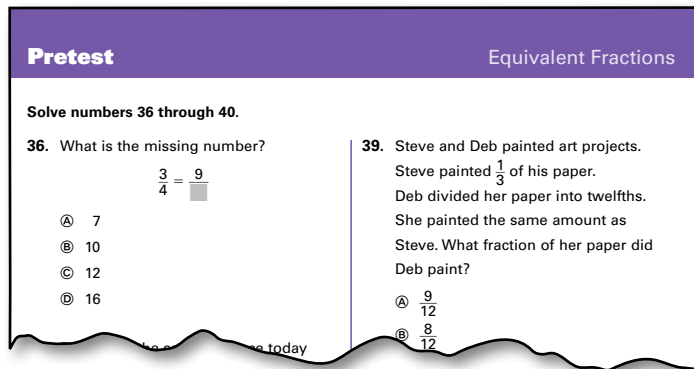
(See details on page 14.)

Day(s)	Lesson	Assessment and Instruction	Minutes
1–5		<i>CAMS</i> Pretest	30–45/day
6–10	1	Multiplication Properties	30–45/day
11–15	2	Multiply Mentally	30–45/day
16–20	3	Multiply by 1-Digit Numbers	30–45/day
21–25	4	Multiply by 2-Digit Numbers	30–45/day
26		<i>CAMS</i> Benchmark 1	30–45
27–31	5	Relate Division to Multiplication	30–45/day
32–36	6	Divide Without Regrouping	30–45/day
37–41	7	Divide with Regrouping	30–45/day
42–46	8	Equivalent Fractions	30–45/day
47		<i>CAMS</i> Benchmark 2	30–45
48–52	9	Simplify Fractions	30–45/day
53–57	10	Decimal Place Value	30–45/day
58–62	11	Compare and Order Decimals	30–45/day
63–67	12	Relate Decimals to Fractions	30–45/day
68		<i>CAMS</i> Benchmark 3	30–45
69–73	13	Angles	30–45/day
74–78	14	Understand Area	30–45/day
79–83	15	Area of Rectangles	30–45/day
84–88	16	Line Plots	30–45/day
89		<i>CAMS</i> Benchmark 4	30–45
90–94		<i>CAMS</i> Post Test	30–45/day

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

Using the Pretest

The CAMS® Pretest consists of 16 pages of test items, with one page of five problems for each STAMS® lesson. Each page is labeled with the lesson name and number, so when Pretest results identify an area of weakness, it is easy to know exactly which lesson should be used to remediate.



When to Give the Pretest

On-level students

- The Pretest includes grade-level topics that will be largely unfamiliar to your students at the start of the school year. So, wait at least three months into the school year before administering the Pretest.

TIP: If you do give the Pretest at the beginning of the school year, expect low scores, because the concepts and skills have not yet been taught. Use the results only as a baseline from which to measure progress.

- Specific Pretest pages can be used to assess mastery of topics covered in your core program. Throughout the year, administer those Pretest pages that correspond to units just taught in the core program. See the inside front cover of this teacher guide for the list of topics in each level of the CAMS and STAMS Program.

Below-level students

- For students functioning below grade level, administer the CAMS Pretest from the previous level early in the school year. Immediately begin remediation with the matching STAMS lessons at that level to help the student catch up quickly.

How to Administer the Pretest

- Allow 30 to 45 minutes a day over a five-day period to administer the Pretest. Each page should take about 10 to 15 minutes, so students should complete 3 pages per day.
- Provide students with sharpened pencils, an inch ruler (Books C–E only), erasers, and scratch paper.
- Have students detach the Pretest Answer Form from their student book and fill in the personal-information section.
- Direct students to the appropriate page of the Pretest. Have them fill in the answer circles on the Answer Form that correspond to the numbered problems on that page.

How to Correct the Pretest and Record Results

Use the Pretest Answer Key (page 20) to correct each student's test. Then use the following two recording forms to record the results.

Individual Record Sheet

- Make one copy of the Individual Record Sheet—Pretest/Post Test (page 16) for each student.
- Record the number of correct responses for each topic on the Individual Record Sheet. Then calculate and record the percent of correct responses.

Topic	Pretest Score	STAMS
1. Multiplication Properties	4 / 5 = 80 %	ye
2. Multiply Mentally	2 / 5 = 40 %	ye
3. Multiply by 1-Digit Numbers	2 / 5 = 40 %	ye
4. Multiply by 2-Digit Numbers	0 / 5 = 0 %	ye
5. Relate Division to Multiplication	1 / 5 = 20 %	ye
6. Divide with Grouping	2 / 5 = 40 %	ye

Class Record Sheet

- Make a copy of the Class Record Sheet—Pretest/Post Test (page 18).
- Write each student's name on the Class Record Sheet.
- Record the number of correct responses for each topic next to each student's name. Then calculate and record the total number of correct responses for all 16 topics.

Directions: Next to each student's name, record the number of correct responses for each topic. Then find the total number of correct responses for each student.

Student	Topics															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Adams P.	4	2	1	0	0	1	1	2	0							
Ansard, M.																
Chu, D.																

How to Use the Pretest Data

Individual Record Sheet

Use the data on each student's Individual Record Sheet to evaluate mastery of the topics.

- Circle *yes* or *no* in the corresponding box of the *STAMS*® Instruction column, using the following criteria.
 - For a score of 80% or more (4 or 5 correct) per topic, no instruction is suggested.
 - For a score of less than 80% (3 or fewer correct) per topic, remediation is recommended.

TIP: If a student responds correctly to 3 items for a topic, you may want to conduct a brief interview to determine whether or not instruction for that topic is necessary.

- Ask the student to explain or show how he or she solved two different problems. Choose one problem that was answered correctly and one that was answered incorrectly.
- Use your judgment to assess the student's level of understanding and decide whether or not *STAMS* instruction is needed.

Using the Pretest

Class Record Sheet

Use the data on the Class Record Sheet to help plan instruction.

- Highlight each score of 3 or fewer correct responses.
- Scan down each column to see which students require remediation for that topic.
- Use this information to group students and create an instructional plan. Choose the corresponding *STAMS* lessons from the same grade level to remediate.
- If students are not succeeding with a lesson, review prerequisite skills taught in earlier lessons or in the previous grade level.

(See pages 10–13 in the *STAMS* teacher guide for more details about instruction.)

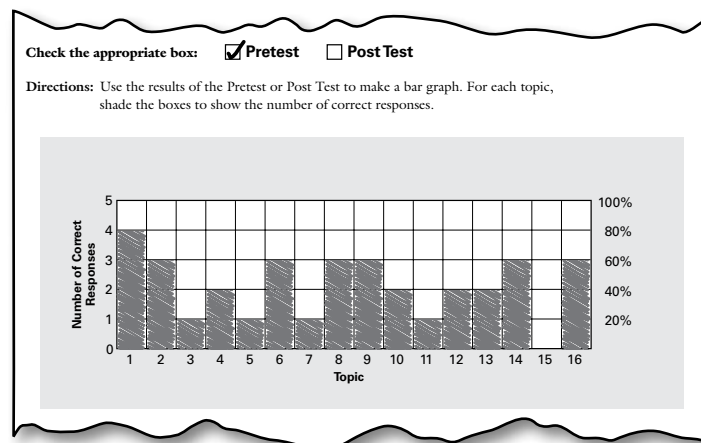
How to Use the Performance Graph and Self-Assessment

After finishing the Pretest, have students self-evaluate their performance.

Individual Performance Graph

The Individual Performance Graph (page 17) provides students with a visual display of their performance. It also encourages students to think about their strengths and weaknesses before they complete the Self-Assessment/Pretest in their student book.

- Make one copy of the Individual Performance Graph for each student.
- Model for students how to shade bars to show the number of correct responses for each topic.
- Have students complete the Self-Assessment/Pretest.
- Use this information as a basis for individual conferences. Make a plan to provide instruction in specific topics for each student.



Using the Benchmarks

The CAMS® student book includes four Benchmarks that provide a snapshot of the class’s progress while working with the CAMS® Series and STAMS® Series. Each Benchmark includes 16 items, one for each of the foundational topics. These tests are not meant to assess mastery of topics, but rather to give a quick measurement of the class’s growth overall.

When to Give the Benchmarks

The Benchmarks cover all STAMS lesson topics and can be given at different times during STAMS instruction. See the suggested intervals provided in the Pacing Chart on page 7. These intervals may be modified to meet your students’ needs or your school’s schedule.

How to Administer the Benchmarks

- Allow 30 to 45 minutes to administer each Benchmark.
- Provide students with sharpened pencils, an inch ruler (Books C–E only), erasers, and scratch paper.
- Have students detach the Benchmark Answer Form from their student book and fill in the personal information before the first Benchmark is given.
- Direct students to the appropriate Benchmark test page and make sure they know which answer circles to fill in on the Answer Form.

How to Correct the Benchmarks and Record the Results

Use the Benchmarks Answer Key (page 21) to correct each student’s test. Then record the results.

Class Record Sheet

- Make a copy of the Class Record Sheet—Benchmarks (page 19).
- Write each student’s name on the Class Record Sheet.
- Record the number of correct responses for each Benchmark next to each student’s name.

- Calculate the average number of correct responses for the class by dividing the total number of correct responses by the number of students. Record the result at the bottom of the corresponding column.
- Use the space at the bottom of the page for recording any notes or observations about student behavior or progress.

How to Use the Data

Class Record Sheet

- Use the Class Record Sheet—Benchmarks to see individual overall progress. Recognize that scores will be quite low on the earlier Benchmarks because many topics have not yet been taught.
- If you give the first Benchmark after instruction in four STAMS lessons, as shown on the Pacing Chart, you shouldn’t expect scores higher than about 7 or 8.
- For the second, third, and fourth Benchmarks, expect the highest scores to be around 10, 13, and 16, respectively.
- Compare the results of each Benchmark with the previous one to see individual student progress.
- If the class average of a Benchmark is lower than expected, you might want to take extra time to review topics with which the whole class struggled. Since these are foundational math topics, it’s important to fill gaps in understanding before moving on.

Directions: Next to each student’s name, record the date each Benchmark was given and the number of correct responses for the test.

Student	Benchmark 1	Benchmark 2	Benchmark 3	Benchmark 4
	Date Dec. 3	Date Jan. 18	Date March 3	Date
Adams, P.	7	11	13	
Ansara, M.	8	11	13	
Chu, D.	9	12	14	
Duarte, C.	5	8	9	
Ferris, J.	7	10	13	
Fong, D.	6	8	9	
Fowler, A.	6	10	12	
Gonzales, A.	5	10	12	
Haak, J.	6	9	10	
Herron, C.	9	11	12	
Ikeda, R.	6	10	13	
Jones, K.	7	12	13	
Juarez, P.	7	11	12	

How to Use the Student Self-Assessment

After finishing each Benchmark, have students self-evaluate their performance.

- Have students turn to the Self-Assessment/Benchmarks form in their student book.
- Suggest that they briefly look back at each problem in the Benchmark test and think about how well they understood the problem.
- Have students locate the column in the Self-Assessment form that corresponds to the Benchmark they just took. Ask them to write 1, 2, or 3 next to each problem to describe their level of understanding. You may wish to discuss the meaning of the numbers with students:

1. The student did not understand the problem at all.
2. The student understood the problem a little and was able to begin to solve it.
3. The student was able to solve the problem and could explain how to solve it.

- Be sure students understand that the first three Benchmarks include problems on some topics they have not yet been taught. Make it clear that they are not expected to understand all the problems until Benchmark 4.
- Use this information as a basis for individual conferences. Make a plan for each student to provide instruction in specific topics.

For each benchmark, write the number that tells what you think about each problem.

	1 Do not understand at all	2 Somewhat understand and can begin to solve the problem	3 Can solve problem and explain how	
Problem	Benchmark 1	Benchmark 2	Benchmark 3	Benchmark 4
1. Multiplication Properties	3			
2. Multiply Mentally	3			
3. Multiply by 1-Digit Numbers	3			
4. Multiply by 2-Digit Numbers	2			
5. Relate Division to Multiplication	2			
6. Divide Without Regrouping	/			
7. Divide with Regrouping	/			
8. Equivalent Fractions	2			
9. Simplify Fractions	/			
10. Decimal Place Value	/			
11. Compare and Order Decimals	/			
12. Relate Decimals to Fractions	/			
13. Angles	3			
14. Understand Area	2			
15. Area of Rectangles	/			
16. Line Plots	2			

from CAMS® Book D Student Book

Using the Post Test

The Post Test structure directly matches the Pretest structure, with five problems for each *STAMS*® lesson. This uniformity makes it easy to see student progress with each topic and to know exactly which lessons need to be reviewed to address areas of weakness.

When to Give the Post Test

Administer the Post Test after completing instruction of all the *STAMS* lessons.

How to Administer the Post Test

- Allow 30 to 45 minutes a day over a five-day period to administer the Post Test. Students will complete 3 pages per day, and each page should take about 10 to 15 minutes.
- Provide students with sharpened pencils, an inch ruler (Books C–E only), erasers, and scratch paper.
- Have students detach the Post Test Answer Form from their student book and fill in the personal-information section.
- Direct students to the appropriate page of the Post Test and make sure they know which answer circles to fill in on the Answer Form.

TIP: Consider correcting the Post Test orally with the class after its completion.

- On the board, have students show how to solve each problem. Explain concepts that students may not fully understand. Discuss why an answer choice is correct and why the remaining answer choices are not correct.
- If possible, elicit from students their reasoning for choosing both correct and incorrect answers.

Discussions like these provide review and practice for upcoming state tests.

How to Correct the Post Test and Record Results

Use the Post Test Answer Key (page 22) to correct each student’s test. Then use the following two recording forms to record the results.

Individual Record Sheet

- An individual student’s Post Test scores are recorded in the same chart that includes the Pretest scores. This provides a convenient one-page summary of the student’s performance.
- Record the number of correct responses for each topic on the Individual Record Sheet. Then calculate and record the percent of correct responses.

Pretest Score	<i>STAMS</i> ® Instruction	Post Test Score
<u>4</u> / 5 = <u>80</u> %	yes <input type="radio"/> no <input checked="" type="radio"/>	<u>5</u> / 5 = <u>100</u> %
<u>2</u> / 5 = <u>40</u> %	<input checked="" type="radio"/> yes no <input type="radio"/>	<u>4</u> / 5 = <u>80</u> %
<u>2</u> / 5 = <u>40</u> %	<input checked="" type="radio"/> yes no <input type="radio"/>	<u>5</u> / 5 = <u>100</u> %
<u>0</u> / 5 = <u>0</u> %	<input checked="" type="radio"/> yes no <input type="radio"/>	<u>4</u> / 5 = <u>80</u> %
<u>1</u> / 5 = <u>20</u> %	<input checked="" type="radio"/> yes no <input type="radio"/>	<u>3</u> / 5 = <u>60</u> %
<u>2</u> / 5 = <u>40</u> %	<input checked="" type="radio"/> yes no <input type="radio"/>	<u>5</u> / 5 = <u>100</u> %

Class Record Sheet

- Make a copy of the Class Record Sheet—Pretest/Post Test (page 18).
- Write each student’s name on the Class Record Sheet.
- Record the number of correct responses for each topic next to each student’s name. Then calculate and record the total number of correct responses for all 16 topics.

Check the appropriate box: Pretest Post Test Date: _____

Directions: Next to each student’s name, record the number of correct responses. Then find the total number of correct responses for each student.

Student	Topics										
	1	2	3	4	5	6	7	8	9	10	11
Adams P.	4	4	2	5	4	4	4	3	4	5	
Ansard, M.	5	4	4	4	5	4	4	5	4	5	
Chu D.	4	4	4	5	5	5	5	4	5	5	

How to Use the Post Test Data

Individual Record Sheet

Use the data on each student's Individual Record Sheet to compare Pretest and Post Test results and determine where progress has occurred.

- Also use the results of the Post Test to evaluate mastery of each topic. Identify the topics for which the student's percent of correct responses is 80% or 100%.
- Make note of the topics with a score below 80%. The student could benefit from a review of these topics prior to state testing.

Class Record Sheet

Use the data on the Class Record Sheet to identify areas of weakness.

- Highlight each score of 3 or fewer correct responses.
- Scan down each column to identify those topics with which the class as a whole is still struggling. You may want to provide additional review of those topics for the whole class prior to state testing.

Check the appropriate box: Pretest Post Test

Directions: Next to each student's name, record the number of correct responses for each topic. Then find the total number of correct responses.

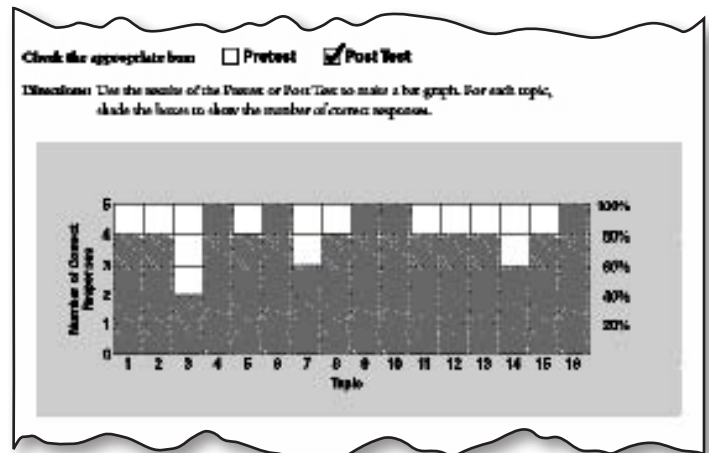
Student	1	2	3	4	5	6	7
Adams, P.	4	4	2	5	4	4	4
Ansard, M.	5	4	4	4	5	4	4
Chu, D.	4	4	4	5	5	5	5
Duarte, C.	4	4	3	4	4	5	4
Ferris, J.	5	5	4	4	4	2	4
Fong, D.	4	4	2	5	4	4	5
Fowler, A.	4	4	1	4	4	4	4
Gonzales, A.	4	4	2	4	4	2	5

How to Use the Student Self-Assessment

After finishing the Post Test, have students self-evaluate their performance.

Individual Performance Graph

- Make a copy of the Individual Performance Graph (page 17) for each student.
- Have students locate the Individual Performance Graph that they completed for the Pretest. Explain that they are going to make a similar graph to show the results of the Post Test.
- Ask students to shade bars on the graph to show the number of correct responses for each topic in the Post Test.
- Have students turn to the Self-Assessment/Post Test in their student book and complete the form.
- After the Self-Assessment/Post Test has been completed, suggest that students compare it with the Self-Assessment/Pretest they filled in at the beginning of the program.
- Use this information as a basis for individual conferences. Discuss progress made during the year.



Testing of Common Core State Standards

The concepts and skills in the *CAMS*[®] and *STAMS*[®] Program are based on the NCTM Focal Points and Connections. The Common Core State Standards Initiative has developed a set of standards that present some math concepts and skills at different grade levels than the NCTM Focal Points recommend. The *CAMS* and *STAMS* Program addresses that discrepancy in grade-level content and anticipated differences in schools' timelines for implementing the Common Core State Standards. It bridges the gap with Additional Lessons and a corresponding test (Books C–G).

- The Additional Lessons Test has five items for each lesson, just like the Pretest and Post Test.
- Because the Additional Lessons address concepts and skills that have traditionally been taught at higher grades, students are not likely to have been exposed to the content. For this reason, the Additional Lessons Test is best used as a post test, after instruction has been completed.
- There is no space on the *CAMS* recording forms for the Additional Lessons Test scores. It is best to treat the test results informally until your school begins formal assessment of the Common Core State Standards.

The chart below correlates the test items in *CAMS*[®] *Book D* with Common Core State Standards (CCSS) for grade 4 mathematics. The circled items represent topics within the CCSS that are new to this grade level.

CCSS Grade 4	Test Items		
	Pretest and Post Test	Benchmarks 1–4	Additional Lessons Test
Operations and Algebraic Thinking			
4.OA.1	1–5	1	
4.OA.4	6–10, 41–45	2, 9	
Number and Operations in Base Ten			
4.NBT.1	6–20, 26–35	2–4, 6, 7	1–10
4.NBT.4	16–20, 26–35	4, 6, 7	
4.NBT.5	6–20	2–4	1–5
4.NBT.6	21–35	5–7	6–10
Number and Operations—Fractions			
4.NF.1	36–45	8, 9	
4.NF.2	36–45	8, 9	
4.NF.3			11–15
4.NF.6	46–50, 56–60	10, 12	
4.NF.7	51–55	11	
Measurement and Data			
4.MD.3	66–75	14, 15	
4.MD.4	76–80	16	
4.MD.5	61–65	13	
Geometry			
4.G.2	61–65	13	

Strategies and Features	Examples	Research Says
<p>Computational Fluency Computational fluency is having quick recall of number facts and knowledge and ability to apply multiple computational methods.</p>	<p>CAMS Student Book Problems in the Pretest, Benchmarks, and Post Test reinforce grade appropriate methods for computing.</p>	<p>“Efficient, accurate computational fluency is key to students’ success in higher-level mathematics necessary for the workplace.” — <i>National Research Council, 2001</i></p>
<p>Data-driven Instruction Data-driven instruction involves instructional decisions that are based on the systematic collection of data that reflects students’ understanding.</p>	<p>CAMS Student Book</p> <ul style="list-style-type: none"> • 1 Pretest • 4 Benchmarks • 1 Post Test <p>STAMS Teacher Guide</p> <ul style="list-style-type: none"> • Assessment and Remediation Chart in each lesson 	<p>“Districts and schools that are improving generally show a commitment to the use of student assessment data to diagnose weaknesses and guide improvement efforts. They provide data to teachers and principals in a timely manner, train teachers in how to use these data effectively and give the teachers time to analyze the data.” — <i>U.S. Department of Education, 2010</i></p>
<p>Formative Assessments A formative assessment is an assessment tool to guide teacher’s instruction by setting an action plan based on a student’s performance.</p>	<p>CAMS Entire Series</p> <ul style="list-style-type: none"> • 1 Pretest • 4 Benchmarks • 1 Post Test <p>STAMS Entire Series</p> <ul style="list-style-type: none"> • Assessment and Remediation Chart in each lesson 	<p>“Teachers’ regular use of formative assessment improves their students’ learning, especially if teachers have additional guidance on using the assessment to design and to individualize instruction.” — <i>NMAP, 2008</i></p>
<p>Problem Solving The problem solving process standard enables students to build new math knowledge through problem solving and to solve problems using various strategies.</p>	<p>CAMS Entire Series</p> <ul style="list-style-type: none"> • 1 Pretest • 4 Benchmarks • 1 Post Test 	<p>“Problem solving is an integral part of all mathematics learning. In everyday life and in the workplace, being able to solve problems can lead to great advantages.” — <i>NCTM, 2000</i></p>
<p>Progress Monitoring Progress monitoring is a strategy that involves frequent, in-classroom progress checks of student’s understanding and mastery of math concepts and skills.</p>	<p>CAMS Student Book</p> <ul style="list-style-type: none"> • 1 Pretest • 4 Benchmarks • 1 Post Test <p>STAMS Student Book</p> <ul style="list-style-type: none"> • Parts One through Part Four: Your Turn activity • Part Five: Independence Practice 	<p>“Teachers’ regular use of formative assessments improves their students’ learning, especially if teachers have additional guidance on using the assessment results to design and individualize instruction.” — <i>NMAP, 2008</i></p>
<p>Test-Taking Practice Selected-response test questions are consistently used on state and national standardized tests.</p>	<p>CAMS Student Book</p> <ul style="list-style-type: none"> • 1 Pretest • 4 Benchmarks • 1 Post Test <p>STAMS Student Book</p> <ul style="list-style-type: none"> • Part Five: Independent Practice 	<p>“The more times one repeats an action (e.g., practice) or recalls the information, the more connections of new memories to old are made, and the more efficient the brain becomes in its ability to retrieve that memory or repeat that action. Eventually, just triggering the beginning of the sequence results in the remaining pieces falling into place.” — <i>Willis, 2007</i></p>

For a full report and bibliography, go to CurriculumAssociates.com/STAMS/research.