Administrator's Guide to

Saxon Math K–12

SAXON MATH™

The Difference That
Gets Results

Administrator's Guide to
Saxon Math K–12

Your school or district has selected *Saxon Math* because of its outstanding reputation for increasing student success in mathematics. Through an effective structure called incremental development, topics are introduced to students in spaced steps. The time between steps allows students to gain confidence at one level of difficulty before moving to the next. Throughout the year, in every lesson, previously learned information is continually reviewed and practiced. Topics are not dropped but grow in complexity, so learning is systematic and sequential.

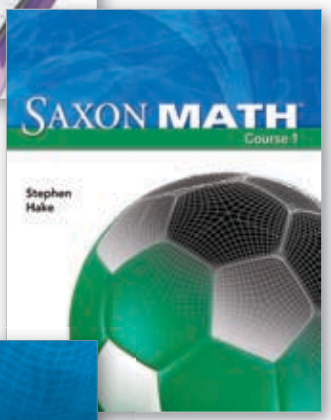
This Administrator's Guide to ***Saxon Math*** is provided to assist administrators in supporting teachers in the successful implementation of ***Saxon Math*** in their classrooms. Overviews of the primary, intermediate, middle, and high school programs are included to help you understand the unique structure and pedagogy of ***Saxon Math*** at these levels, followed by suggested Observational Checklists. You will find these useful during your classroom observations to ensure ***Saxon Math*** is being taught with fidelity.

The information in the guide is divided into four parts: Math K–4; Intermediate 3–5; Courses 1–3; and Algebra 1, Geometry, and Algebra 2. Each section provides an overview and discussion of the components for that particular level or course of the K–12 mathematics series, followed by a checklist of classroom practices that produce optimum results for your students.

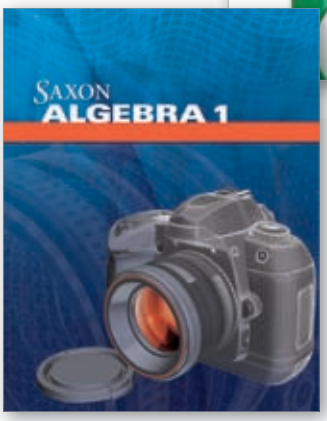
This guide is not designed to be a formal evaluation tool; however, administrators will want to share with teachers the information contained in this resource. The checklists can promote dialogue between teachers and administrators to help solve any problems that may occur during the implementation of ***Saxon Math***.

Math 1

Intermediate 4



Course 1



Algebra 1

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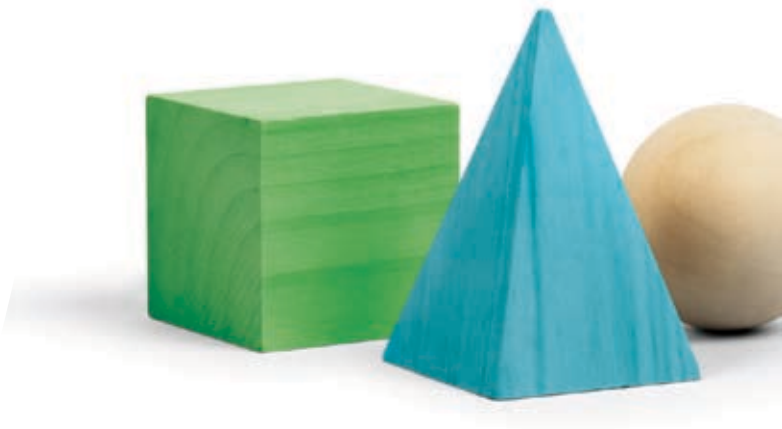


Saxon Math Kits K–4

Overview

Saxon Math K–4 is a kit program that provides a hands-on approach with an important difference–Saxon provides minds-on support that ensures all teachers are successful and all students are engaged in rich, meaningful activities. Modeled, in-depth plans for every lesson provide proven instructional techniques. It is not intended that teachers read every word; however, the scripts especially serve as a valuable support for new teachers and substitute teachers. The lesson plans also develop consistent math vocabulary and correct mathematical explanations from teacher-to-teacher and grade-to-grade, a key to children's success in mastering the standards.

Saxon Math **K–4 provides a predictable and structured classroom format.**

Daily lesson plans are divided into four parts:

- **The Meeting**
- **Fact Practice:** Grades 1–4
- **New Concepts**
- **Written Practice:** Lesson and Handwriting Practice Grade K; Guided Class Practice and Homework Grades 1–4

1. The Meeting

The Meeting is a whole-class activity where mathematical concepts such as time, money, patterns, measurement, etc. are practiced orally using the Meeting Board as a visual aid and manipulative. You should observe how the children transition into The Meeting. Modeling appropriate behavior for this activity and providing the students with a clear idea of what is expected are essential components. A good Meeting proceeds at an accelerated pace and allows whole-group student participation as well as individual responses. The teacher (or later in the year, the Student of the Day) should prepare parts of the Meeting Board before the activity. Advanced preparation will avoid consuming too much time and not detract from the objective of rapid response and smooth transition from one concept to the next. Since individual parts of the Meeting Board are large enough to be seen by all of the children, students should be seated comfortably in front of the board. The teacher should have the lesson booklet clearly in view to ensure that all of the parts of The Meeting are covered. Children should move smoothly out of The Meeting and into other activities

2. Facts Practice

Learning math facts is an integral part of a primary math program. A daily review of math facts is accomplished in about 10 minutes, through a variety of activities using a wide range of learning modalities. Learned strategies are quickly reviewed, as needed. Written fact practice follows the review. Recording the fact practice sheet scores provides an organized, simple way to monitor students' improvement in accuracy and number of facts completed.

3. New Concepts

The new objective or increment is taught during the lesson. A prepared teacher will be thoroughly familiar and comfortable with the lesson. All necessary manipulatives will be ready and available when needed for the lesson. The teacher should start by stating the objective of the lesson and conclude by asking questions that monitor the students' understanding of the concepts taught. A teacher new to the Saxon series should have the lesson booklet plan in hand or clearly in view at all times during the teaching.

4. Written Practice

Guided Class Practice is a teacher-guided activity that follows the instructional component. Here the new increment and previously introduced concepts are practiced. Early in the year, the teacher will read the Guided Class Practice worksheet (Side A) aloud with the students to promote and facilitate a thorough understanding of the language and concepts. Working one-on-one with children who make errors is a critical component of enhanced learning. The Homework worksheet (Side B) should be used for independent practice at home in order to reinforce the concepts taught that day. Parents are encouraged to help their child by reading the problems when necessary and checking the completed page.

Assessment

Oral Assessments are every 10 lessons and serve as a diagnostic tool for the teacher and are not intended to be graded.

Written Assessments in Grades 1–4 are administered first at Lesson 10 and every five lessons thereafter. Recording forms allow teachers to analyze children's errors and provide appropriate remediation.

Scheduling Your Visit

Discussing with the classroom teacher what you wish to observe beforehand will help you schedule your visits as not all portions of a math lesson may be taught at the same time of the day. For example, The Meeting is a beginning-of-the-day, whole-class activity that may take place outside of the regularly scheduled math time. Because of this, you may wish to schedule a classroom visit over a period of several days. Ask the teacher to provide you with a copy of the lesson booklet beforehand. This will be a good guide to you to follow as you observe the lesson being taught.

Implementation Checklist

Yes	No	The Meeting
		A. Do the children arrive and leave The Meeting in an organized manner?
		B. Is the Meeting Board neat, well organized, and easy to read?
		C. Did the Student of the Day prepare parts of The Meeting in advance? (Math 1 to Math 3 only)
		D. Was The Meeting completed within 20 minutes?
		E. Do the children understand the routine of The Meeting?
		F. Are the children attentive and involved?
		G. Is the teacher enthusiastic?
		H. Are the shape and color patterns being used on the calendar? (Math K and Math 1 only)
		I. Are a variety of modes of student responses encouraged?
		J. Is the teacher following the lesson instructions for The Meeting and practicing all components?
		K. Are meeting masters being used? (Math 2 to Math 4 only)
		L. Does the teacher utilize The Meeting as a means of remediation?
		Comments:

Yes	No	Fact Practice (Math 1 to Math 4 only)
		A. Are the children on task during this program component?
		B. Do children rely on their fingers for calculations?
		C. Does the teacher implement (with fidelity) the review activities contained in the lesson booklet for the Fact Practice before students complete the Fact Practice worksheet? (Math 1 to Math 3 only)
		D. Does the teacher use an effective procedure for grading the Fact Practice worksheet?
		E. Is the Fact Practice homework consistently completed and returned?
		Comments:

Yes	No	New Concepts
		A. Is the teacher familiar with the lesson plan?
		B. Does the teacher state the objective at the beginning of the New Concept?
		C. Are children attentive and involved as the teacher interacts with them?
		D. Is the New Concept instructed at an effective pace?
		E. Are children able to quickly transition into groups if needed?
		F. Are the manipulatives distributed and collected in an efficient manner?
		G. Is the class at a lesson number that will reasonably allow the entire curriculum to be completed by the end of the year?
		Comments:

Yes	No	Written Practice
		A. Is the New Concept taught before children begin the Guided Class Practice?
		B. Are the worksheet problems previewed before children answer them?
		C. Does the teacher move around the room helping individual children?
		D. Is the Guided Class Practice corrected before children take the independent practice sheet (Homework Side B) home?
		E. Is the homework from the previous day graded and discussed before the children begin the Guided Class Practice?
		F. Are enrichment activities made available to above-grade-level children?
		Comments:

Yes	No	Assessment
		A. Are tests (oral, fact, and written as applicable) administered after the proper lessons as suggested in the teacher materials?
		B. Is intervention prescribed for children who score less that 80% on an assessment?
		C. Does the teacher use the appropriate recording forms to record childrens' scores?
		D. Is the teacher using the answer key and scoring guide provided for written asessments?
		E. Are all primary teachers using the same uniform grading procedure?
		Comments:

Saxon Math Intermediate 3–5

Overview

Saxon Math Intermediate for Grades 3–5, including the former editions of Math 5/4 and Math 6/5, moves from a kit program to a hard-bound book. Instruction for each lesson is written within the student textbook directly to students. This provides consistent and correct development of math vocabulary and math content from teacher-to-teacher and grade-to-grade. Making up lessons for absent students is easy as well. The focus of each lesson is on developing an understanding of how and why math works with an emphasis on mathematical thinking.

Because of its highly structured and predictable format, *Saxon Math* Intermediate for Grades 3–5 provides an excellent opportunity to observe and analyze instructional techniques.

Lessons are divided into three sections:

- **Power Up/Warm Up**
- **New Concepts and Lesson Practice**
- **Written Practice**

1. Power Up/Warm Up

This warm-up activity at the beginning of the class period helps get students organized and on task, setting the tone for a productive class period. In the Power Up students' knowledge is activated and built upon. This is composed of facts practice, mental math, and problem solving strategies. Daily facts practice enhances the retention of previously learned facts. Facts practice should take no more than five minutes to complete and correct. Intermediate 4 and 5 students need to record their scores from the fact fluency practice on their Student Progress Chart. The class should then move on to the mental math and problem solving activities.

2. New Concepts and Lesson Practice

The new objective or increment should be presented each day with a minimum amount of time spent on the content delivery by the teacher. Each example problem should be done with the class. Lesson Practice problems covering the new increment follow the example problems, and the Lesson Practice problems are an essential component of the lesson. Students should solve all of the practice problems with guided support from the teacher if necessary, before beginning the rest of the day's assignment.

3. Written Practice

The Written Practice is the portion of the lesson in which students practice skills and concepts previously presented. Each day all of the problems in the problem set should be assigned and completed by the student. It is critically important for each student to diligently and honestly complete each problem set, seeking help and not just answers on difficult questions. Early in the year, as foundational topics are presented, the textbooks may seem deceptively easy. It is essential to recognize that student assignments and tests in the Saxon program become progressively more challenging as new topics

are incorporated. Students should form the habit of doing the more difficult problems (those with asterisks in Intermediate 4 and 5) while in class where help is readily available. The portion of the problem set not completed in class becomes the homework for that evening.

Homework Correction

The previous day's problem set assignment (homework) should be corrected by the student. Particular attention should be paid to the specific type(s) of error(s) made. Computational errors may be a clue that the student needs to pay more attention to detail. Conceptual errors mean that the student needs to request help in understanding that type of problem. Although the teacher should review problems that presented difficulty for the majority of students, excessive time should not be spent on the previous day's homework. Instead the teacher should remediate identified problem areas by demonstrating similar problems as they occur on upcoming Written Practices.

Assessment

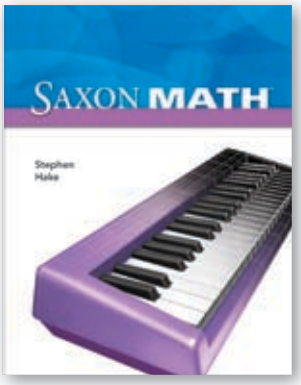
Written Assessments in ***Saxon Math*** Intermediate 3–5, 5/4, and 6/5 are administered first at Lesson 10 and every five lessons thereafter. The Assessment Guide/Test Master booklet contains two versions of each test, each containing 20 questions/problems covering material they have been practicing since Lesson 1. Because each test is cumulative and resembles a final exam, it reveals not only what students have learned, but also what they have retained. No test covers material that has not been practiced for at least five lessons.

Test Day Activities and Performance Tasks are available options to use on each day that a cumulative assessment is administered. Standards benchmark opportunities exist every 30 lessons.

Scheduling Your Visit

Discussing with the classroom teacher what you wish to observe beforehand will help you schedule your visits, as not all portions of a math lesson may be taught at the same time of the day. Because of this, you may wish to visit a classroom over a period of several days.

Intermediate 3



Intermediate 4

Intermediate 5

Implementation Checklist

Yes	No	Power Up/Warm Up
		A. Are the Power Up activities implemented in such a way that they run smoothly with little explanation regarding procedures?
		B. Is the fact practice accomplished in five minutes or less?
		C. Are students focused and energetic in their effort to quickly complete the facts portion of their worksheet?
		D. Are all students engaged in the mental math exercises?
		E. Are mental math strategies discussed by the students?
		F. Are students following the four-step problem solving process?
		G. Is the Problem-Solving Discussion from the Teacher's Edition used for support?
		H. Is the entire Power Up completed in 15 minutes or less?
		Comments:

Yes	No	New Concept and Lesson Practice
		A. Are all lessons (and investigations) taught in sequential order?
		B. Is the new increment of instruction explained in 10 minutes or less?
		C. Are the examples demonstrated on the board or with the overhead projector?
		D. Are students monitored while they work on the Lesson Practice problems?
		E. Is the class at a lesson number that will reasonably allow the entire curriculum to be completed by the end of the year?
		F. Is the Lesson Practice completed in five minutes or less?
		Comments:

Yes	No	Written Practice
		A. Are about half of the problems completed by the students before leaving class?
		B. Are all problems in the set assigned to all of the students?
		C. Do students start with the more difficult problems in the set, leaving the less challenging problems as homework?
		D. Are students kept on task?
		E. Is student practice monitored?
		F. Are students assisted with the Written Practice problems?

Yes	No	Written Practice (continued)
		G. Are the results of the previous assessment used as a guide for providing intervention while students work on the Written Practice?
		H. Do students use boxed homework sheets or Lesson Recording Forms?
		I. Is half of the class time devoted to the Written Practice?
		J. Are struggling students using the adapted worksheets?
		Comments:

Yes	No	Homework Correction (previous day's Written Practice)
		A. Are all assignment answers provided to the students on the day following the assignment?
		B. Do students correct errors and receive assistance for problems that represent areas of concern?
		C. Is homework reviewed quickly for evidence of student work, completeness, and correction of errors?
		Comments:

Yes	No	Assessment
		A. Are tests administered after the proper lessons as suggested in the teacher materials?
		B. Are students instructed to analyze and correct their errors after each test instead of reviewing the test in a whole-group format?
		C. Is intervention prescribed for students who score less that 80% on an assessment?
		D. Is a Performance Task or Test Day Activity assigned on test days?
		E. Are Power Up tests administered?
		Comments:

Saxon Math Courses 1–3

Overview

In ***Saxon Math*** Courses 1–3, including former editions of Math 7/6 and 8/7, instruction for each lesson is dialogued within the student textbook and written directly to the students. This provides consistent and correct development of math vocabulary and math content from teacher-to-teacher and grade-to-grade. Making up lessons for absent students is easy as well. The focus of each lesson is on developing an understanding of how and why math works with an emphasis on mathematical thinking.

Because of its highly structured and predictable format, *Saxon Math* Courses 1–3 provides an excellent opportunity to observe and analyze instructional techniques.

Lessons are divided into three sections:

- **Power Up/Warm Up**
- **New Concepts and Practice Sets**
- **Written Practice**

1. Power Up/Warm Up

The Power Up at the beginning of the class period helps get students organized and on task, setting the tone for a productive class period. In the Power Up students' knowledge is activated and built upon. This section is composed of facts practice, mental math, and problem solving strategies. Daily facts practice enhances the retention of previously learned facts. Facts practice should take no more than five minutes to complete and correct. Students need to record their scores from the fact fluency practice on their recording sheet. The class should then move on to the mental math and problem solving activities.

2. New Concepts and Practice Sets

The presentation of the new concept should be brief to maximize the time students have to complete problems in class. Each example problem should be done with the class. Practice set problems covering the new increment follow the example problems. The practice set problems are an essential component of the lesson. Students should work all of the practice problems before beginning the rest of the day's assignment.

3. Written Practice

The Written Practice is the portion of the lesson in which students practice skills and concepts previously presented. Each day all of the problems in the Written Practice should be assigned and completed by the student. Early in the year, as foundational topics are presented, the textbooks may seem deceptively easy. It is important to recognize that student assignments and tests in the Saxon program become progressively more challenging as new topics are incorporated. It is essential for students to maintain a high level of achievement on the daily problem sets in order to ensure successful progress through the program. Students should begin with the

more difficult problems (those with asterisks) while in class where help is readily available. The portion of the Written Practice not completed in class becomes the homework for that evening.

Homework Correction

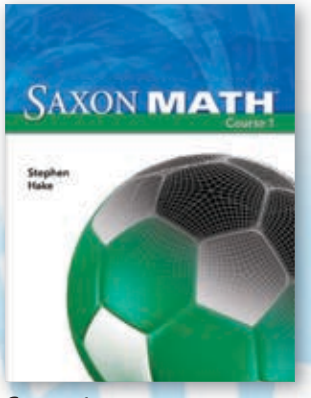
The previous day's Written Practice (homework) should be corrected by the student. Particular attention should be paid to the specific type(s) of error(s) made. Computational errors may be a clue that the student needs to pay more attention to detail. Conceptual errors mean that the student needs help in understanding that type of problem. Although the teacher should review problems that presented difficulty for the majority of students, excessive time should not be spent on the previous day's homework. Instead the teacher should remediate identified problem areas by demonstrating similar problems as they occur on upcoming Written Practice sets.

Assessment

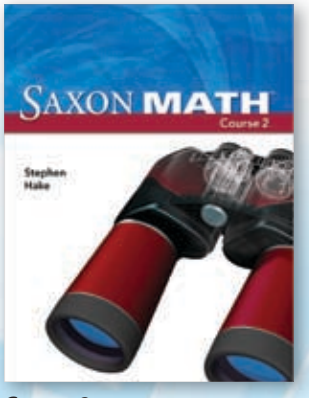
Cumulative assessments in Courses 1–3 are administered at Lesson 10 and every five lesson thereafter. The Course Assessments booklet contains two versions of each test. Both versions contain 20 questions/problems covering material students have been practicing since Lesson 1. Also included is a Power Up test. Because each test is cumulative, it reveals not only what students have learned, but also what they have retained. No test covers material that has not been practiced for at least five lessons. Test Day Activities and Performance Tasks are available options to use on each day that a cumulative assessment is administered. Standards benchmark testing opportunities exist every 30 lessons.

Scheduling Your Visit

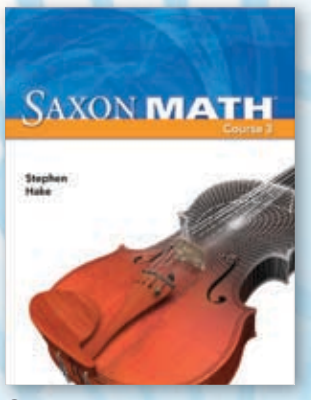
Discussing with the classroom teacher what you wish to observe beforehand will help you schedule your visits as not all portions of a math lesson may be taught at the same time of the day. Because of this, you may wish to visit a classroom over a period of several days.



Course 1



Course 2



Course 3

Implementation Checklist

Yes	No	Power Up
		A. Are the Power Up activities implemented in such a way that they run smoothly with little explanation regarding procedures?
		B. Is the fact practice accomplished in four minutes or less?
		C. Are students focused and energetic in their effort to quickly complete the facts portion of their worksheet?
		D. Are all students engaged in the Mental Math exercises?
		E. Are mental math strategies discussed by the students?
		F. Are students following the four-step problem solving process?
		G. Is the Problem-Solving Discussion from the Teacher's Edition used for support?
		H. Is the entire Power Up completed in 15 minutes or less?
		Comments:

Yes	No	New Concepts and Practice Sets
		A. Are all lessons (and investigations) taught in sequential order?
		B. Is the new increment of instruction explained in 10 minutes or less?
		C. Are the examples demonstrated in class?
		D. Are students monitored while they work on the practice set problems?
		E. Is the practice set completed in five minutes or less?
		F. Is the class at a lesson number that will reasonably allow the entire curriculum to be completed by the end of the year?
		Comments:

Yes	No	Written Practice
		A. Are about half of the problems completed by the students before leaving class?
		B. Are all problems in the set assigned to all of the students?
		C. Do students start with the more difficult problems in the set, leaving the less challenging problems as homework?
		D. Are students kept on task?
		E. Is student practice monitored?
		F. Are students assisted with the Written Practice problems?

Yes	No	Written Practice (continued)
		G. Are the results of the previous assessment used as a guide for providing intervention while students work on the Written Practice?
		H. Is half of the class time devoted to the Written Practice?
		I. Are struggling students using the adapted worksheets?
		Comments:

Yes	No	Homework Correction (previous day's Written Practice)
		A. Are all assignment answers provided to the students on the day following the assignment?
		B. Do students correct errors and receive assistance for problems that represent areas of concern?
		C. Is homework reviewed quickly for evidence of student work, completeness, and correction of errors?
		Comments:

Yes	No	Assessment
		A. Are tests administered after the proper lessons as suggested in the teacher materials?
		B. Are students instructed to analyze and correct their errors after each test instead of reviewing the test in a whole-group format?
		C. Is intervention prescribed for students who score less that 80% on an assessment?
		D. Is a Performance Task or Performance Activity assigned on test days?
		E. Are Power Up tests administered?
		Comments:

Saxon
Algebra 1, Geometry, and Algebra 2

Overview

The regular lesson plan format of the ***Saxon*** Algebra 1, Geometry, and Algebra 2 series allows students to become comfortable with the lesson and to know what to expect each day. Instruction for each lesson is dialogued within the student textbook and written directly to the student. The focus of each lesson is on developing an understanding of how and why math works with an emphasis on higher mathematical thinking.

Because of its highly structured and predictable format, *Saxon* Algebra 1, Geometry, and Algebra 2 provide an excellent opportunity to observe and analyze instructional techniques.

Lessons are divided into three sections:

- **Warm Up**
- **New Concepts and Lesson Practice**
- **Practice**

1. Warm Up

Starting the class period with the Warm Up helps get students organized and on task, setting the tone for a productive class period. The Warm Up provides practice and review of the prerequisite skills and vocabulary necessary to understand the material that will be presented in the New Concept.

2. New Concepts and Lesson Practice

Each day the New Concept introduces a new topic through clear explanations and examples that build in depth and use a variety of methods and real-world applications. The strategies and math vocabulary help students understand how and why the math works. Lesson Practice problems covering the new increment follow the example problems. The Lesson Practice problems are an essential component of the daily learning. Students should work all of these practice problems before beginning the rest of the day's assignment.

3. Practice

The 30 problems in the Practice provide opportunities for students to practice skills and concepts previously presented. Each day all of the problems in the Practice should be assigned and completed by the student. It is essential for students to maintain a high level of achievement (at least 80% correct) on the daily practice sets in order to ensure successful progress through the program. Students should begin with the more difficult problems (those with asterisks) while in class where help is readily available. The portion of the Practice not completed in class becomes the homework for that evening.

Homework Correction

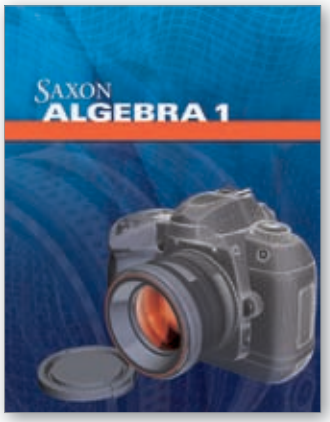
The previous day's Practice (homework) should be corrected by the student. Particular attention should be paid to the specific type(s) of error(s) made. Computational errors may be a clue that the student needs to pay more attention to detail. Conceptual errors mean that the student needs help in understanding that type of problem. Students must maintain a high level of competency on the problem sets (at least 80% correct), or they risk falling behind as the year progresses. Although the teacher should review problems that presented difficulty for the majority of students, excessive time should not be spent on the previous day's homework. Instead the teacher should provide remediation for identified problem areas by demonstrating similar problems as they occur on upcoming Practice sets.

Assesment

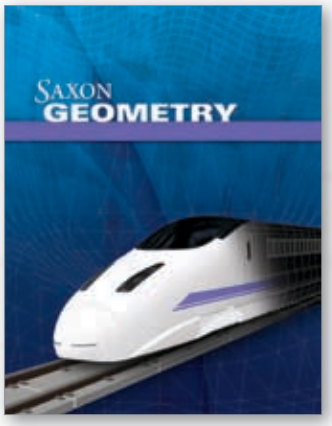
Cumulative assessments in ***Saxon*** Algebra 1, Geometry, and Algebra 2 are administered at Lesson 10 and every five lessons thereafter. The Course Assessments booklet contains two versions of each test. Both versions contain 20 questions/problems covering material students have been practicing since Lesson 1. Because each test is cumulative and resembles a final exam, it reveals not only what students have learned, but also what they have retained. No test covers material that has not been practiced for at least five lessons.

Scheduling Your Visit

Discussing with the classroom teacher what you wish to observe beforehand will help you schedule your visits as not all portions of a math lesson may be taught at the same time of the day. Because of this, you may wish to visit a classroom over a period of several days.



Algebra 1



Geometry

Algebra 2

Implementation Checklist

Yes	No	Warm Up
		A. Is the Warm Up section implemented in such a way that it runs smoothly with little explanation regarding procedures?
		B. Are the Warm Up questions completed and reviewed within five minutes from the start of class?
		C. Are all the students engaged in the Warm Up?
		Comments:

Yes	No	New Concepts and Lesson Practice
		A. Are all lessons, labs, and investigations taught in sequential order?
		B. Is the new increment of instruction explained in 15 minutes or less?
		C. Are the examples demonstrated in class?
		D. Are math conversations utilized during the instruction?
		E. Are students attentive and engaged?
		F. Are technological tools implemented when appropriate as new concepts are taught?
		G. Is the class at a lesson number that will reasonably allow the entire curriculum to be completed by the end of the year?
		H. Are Check for Understanding Questions utilized?
		Comments:

Yes	No	Practice
		A. Are about half of the problems completed by the students before leaving class?
		B. Are all problems in the set assigned to all of the students?
		C. Do students start with the more difficult problems in the set, leaving the less challenging problems as homework?
		D. Are students kept on task?
		E. Is student practice monitored?
		F. Are students assisted with the Practice problems?
		G. Are the results of the previous assessment used as a guide for providing intervention while students work on the Practice?
		H. Is half of the class time devoted to the Practice?
		I. Are struggling students using the adapted worksheets?
		Comments:

Yes	No	Homework Correction (previous day's Practice)
		A. Are all assignment answers provided to the students on the day following the assignment?
		B. Do students correct errors and receive assistance for problems that represent areas of concern?
		C. Is homework reviewed quickly for evidence of student work, completeness, and correction of errors?
		Comments:

Yes	No	Assessment
		A. Are tests administered after the proper lessons as suggested in the teacher materials?
		B. Are students instructed to analyze and correct their errors after each test instead of reviewing the test in a whole-group format?
		C. Is intervention prescribed for students who score less that 80% on an assessment?
		D. Is a Performance Task or Test Day Activity assigned on test days?
		Comments:

SAXON MATH

The Difference That **Gets Results**

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