

DIVE Teacher Guide & Syllabus

Saxon Algebra 2, 2nd & 3rd Editions

Quick Start Guide

1. **Parents and Students:** Watch the [Getting Started](#) video.
2. **Critical:** Print the **STUDENT INSTRUCTION SHEET** on page 6.
3. Print the **ASSIGNMENT CHART** on page 7.
4. If your student did not use Saxon Math 87, 2nd or 3rd Edition, complete the ten five-minute facts drills that develop fluency in the essential fraction, decimal, percent, and conversion skills required to learn algebra. [Learn More](#)
5. **Critical:** Use the Timed Method, described under Syllabus on page 2.
6. See the **Weekly Schedule** section to determine the number of homework problems your student should do.
7. **Required Materials**
 - Drawing Compass
 - Ruler
 - Scientific or Graphing Calculator: [See Recommendations](#)

[Time- Saving Tips for Success](#)

Important Note for Second Edition Users

Your textbook does not include the lesson reference numbers for each homework question. We have created one for you: [Lesson Reference Chart](#)

Need help accessing or viewing the DIVE video lessons?

[Stream & Download Access Instructions & Tech Support](#)

VHX: Error SystemTimed Out: [Follow these Steps](#)

[CD-ROM Access Instructions & Tech Support](#)

What's Inside?

Syllabus

The DIVE syllabus organizes assignments on a 36 week schedule. There are two types of assignments: lessons, and tests. At the beginning of the year, you will typically have 5 assignments. As the year progresses and the concepts become more complex, there are only 3 to 4 assignments. This allows students to slow down a little if extra time is needed.

Lessons

Each lesson is made up of three parts: **DIVE Lecture, Saxon Lesson Practice, and Saxon Problem Set**. The DIVE lecture number corresponds with the assigned Saxon lesson for that day. So if you are assigned Lesson 4, you will watch DIVE Lecture 4 and complete Saxon Lesson 4 in the Saxon Student Textbook.

DIVE Video Lectures Ensure Understanding

Did you know the lesson in the Saxon textbook is not the complete lesson? John Saxon designed his program to be taught in a public school classroom by a trained Saxon instructor. So think of the DIVE lectures as going to class. They have important information that is not in the book. Don't skip class! The DIVE lectures will actually save time by ensuring you understand.

During the lecture students should take notes and work problems with Dr. Shormann, pausing and rewinding as necessary. They should not be looking at their book. It is too difficult to look at the book, watch the lecture, and take notes. Because Saxon has limited practice on the new concept, Dr. Shormann uses different example problems in his lectures than the ones in the Saxon textbook. If a student needs more practice they can do the example problems in the Saxon lesson.

Saxon Lesson Practice Develops Fluency

Next, the lesson practice section is completed. This section provides practice on the new concept introduced in the DIVE lecture. Students should review the DIVE lecture as necessary.

Saxon Problem Set Builds Long-term Retention

Finally, the problem set is completed. It provides more than enough review of previously learned concepts. Saxon's unique method of continual review (not spiral) means the student is either practicing the concept in the mixed practice or building on it in the new lesson. Practicing a concept daily over a long period of time has been proven to build long-term retention.

Keep in mind the Problem Set problems are just practice. It is expected that students will "forget" some of the concepts. The key is to re-learn these forgotten concepts. A lesson reference number is in parentheses next to each problem indicates which lesson that concept was taught in. Simply click on that DIVE Lecture to quickly re-learn that concept. Better than an answer, this gives students the opportunity to apply what was just learned, which builds retention.

Rarely, after re-watching the DIVE lecture, the student may not understand. Mark the problem wrong and go to the next problem. It will be corrected during the grading step.

Saxon Answer Key for Grading Daily Work

Found in the Home Study Packet, the Answer Key provides the answers (not full solutions) to all Practice and Problem Set questions. At this level, it is recommended students grade their own work as this is part of the learning process. After seeing the correct answer, students can often find their mistake without using any other resources. If not, simply re-watch the corresponding DIVE lecture and try correcting the problem again. Homework should be graded and corrected before starting the next lesson.

Saxon Solutions Manual Provides Step-by-Step Solutions

If, after watching the DIVE lecture, the student still does not understand a problem, let them look at the Solutions Manual. Here they will find step-by-step solutions to every Problem Set question and Test question. A parent should keep this booklet and only have the student use it when grading is completed and they have corrected all the problems they can by re-watching the DIVE lecture.

Q&A Email Service with Dr. Shormann

If, after viewing the Solutions Manual, the student still does not understand the concept, use [this form](#) to contact Dr. Shormann. Typically the student has missed a foundational concept along the way and he can pinpoint that for you.

Tests

Approximately every 4 lessons there is a test. The tests are in a small booklet called Test Forms, nestled in the Home Study Packet. The tests are cumulative, which means there are concepts from previous lessons. Students should spend 10-15 minutes studying for the test by working a few practice problems from each lesson the test covers. This information is listed on the syllabus in parentheses next to each test number.

Weekly Schedule

Use the Timed Method

Students should work on math 4 or 5 days per week, for 1 - 1.5 hours per day. At the end of this time, regardless of how much of the lesson is completed, stop and pick up where you left off the next day. Eventually, the student will build retention and fluency and complete their lessons faster and faster.

Instead of requiring the student to complete a full lesson every day, use the timed method in red text above. This will ensure the student has time to go back and relearn forgotten concepts, building mastery and fluency.

How many problems in the Problem Set should I complete?

Each lesson has 30 homework problems. However, most DIVE students do not need this much review. Following is a method that works well for reducing the amount of review while maintaining fluency and building long-term retention. If test scores drop below an 80 or 85, this means the student needs more practice and should increase the number of homework problems.

Odds or Evens + 5

With this schedule students complete the odd numbered problems on odd numbered lessons and even numbered problems on even lessons. If you have a very strong math student, 15 problems may be

enough review. Typically 15 problems do not provide enough review for most students to build fluency. Therefore, we recommend adding 3-5 more problems from the most recent lessons (see the lesson reference number in parentheses next to each problem). For example, if you are on lesson 65, you would do all the odd numbered problems in the Mixed Practice section. Then circle 3-5 problems that have 65, 64, 63, 62, in parentheses next to the problem. This will add a review on the most recently learned concepts.

New to DIVE or Saxon Math?

The first 30 lessons of each Saxon text are review and move fairly quickly. However, if you are new to Saxon/DIVE these lessons may not be review and extra time may be required to complete these lessons. It is especially important to use the Timed Method described under Weekly Schedule above. Don't be surprised if it takes 2 or 3 days to complete a lesson during this review section.

Starting Algebra 2 with No Break after Saxon Algebra 1?

If you are starting Algebra 2 with little to no break after finishing Saxon Algebra 1, you may be able to skip or modify some of the review. However, some review is necessary to build fluency (speed and accuracy) required to do well on the PSAT/SAT/ACT. Test grades are the best indicator of fluency.

1. Give test 2 with a one hour time limit. If the student scores 85+, correct missed problems then complete test 3 the following day.
3. Continue this process through test 5, as long as the student scores an 85+ in a one hour time limit.
3. Be sure and follow the instructions for grading and correcting tests (grey box titled Daily Schedule).
4. After test 5, start the course normally with week 7 on the syllabus.
5. If the student scores less than 85 on any test, start with the first lesson covered on that test (see Assignment Chart on next page) and complete the course normally from that point forward

Grades

Problem Set Grades

The Problem Sets are practice. They should not be used to evaluate understanding. Students are expected to miss or “forget” some of the concepts. The important thing is that they relearn missed problems by working them properly on paper before going to the next lesson. The continual “reminder” of doing the problem correctly, over a long period of time, will eventually build long-term retention. So don’t be concerned about the number of problems missed. If all the homework is completed, graded and corrected, the student should receive a 100. We prefer the student grade and correct their daily work as that is part of the learning process.

Test Grades

Test scores are the best indicator of understanding. Tests should be graded by a parent with 1/2 credit given for missed problems in which the student can find their mistake. This gives the student an incentive for showing their work. If test scores drop below an 80 or 85, increase the number of homework problems assigned and slow the pace down. When test scores go up, you can try reducing the number of homework problems.

Final Grade

To calculate a final grade, find the average for each column (sum of all grades divided by the number of grades) add all the grades in one column and divide by the number of grades). Then use the following formula to calculate the final grade.

$$\text{Final Grade} = (\text{Total Homework Average} \times .20) + (\text{Total Test Average} \times .80)$$

Student Instructions for Lessons & Tests

Parents: Read the Syllabus & Assignment Chart section on page 1.

Print this page for daily use by the student.

1. Watch the DIVE lecture. Take brief notes on headings and formulas only. Pause the lecture and solve each example problem on your notes. Do not copy the example problems.	<ul style="list-style-type: none"> Try to solve the missed problem again. If you can't, skip it and go to the next missed problem. Repeat these steps to re-learn each missed problem.
2. Lesson Practice Problems (in Saxon Textbook) Do all the problems in the Lesson Practice Section. Re-watch the DIVE lecture, as needed.	<ul style="list-style-type: none"> For all problems you still cannot correct:
3 . Do the Problem Set (Odd/Even + 5) Follow these steps if you can't solve a problem.	<ul style="list-style-type: none"> View the step-by-step solution in the Saxon Solutions Manual
A. Click the DIVE lecture that matches the number in parenthesis next to the question.	<ul style="list-style-type: none"> Close the manual and try to solve the problem on your corrections page. Don't copy the solution.
B. Fast forward the lecture until you see a similar example problem.	<ul style="list-style-type: none"> Repeat these steps for each remaining missed problem.
C. Watch this section of the lecture. Pause the lecture and attempt to work the example problem in the lecture.	<ul style="list-style-type: none"> For any problems you cannot solve by using the solutions manual, email Dr. Shormann www.diveintomath.com/ask-a-math-question/
D. Try to solve the homework problem again. If you can't, skip to the next question. Don't spend more than 10 minutes time "stuck" on a problem.	<p style="text-align: center;">Tests</p> <p>Study by working a few practice problems from each lesson listed next to the test number on the assignment chart.</p>
E. Repeat these steps to answer all the questions you can for this lesson.	Test should be graded by a parent. Parents, do not correct, just mark wrong problems.
4. Grade the Homework (use Answer Key in Homeschool packet). Put an x next to each wrong answer. Do not correct until the next step.	Check your work and correct all missed problems you can without using any resources.
5. Start a new page in your notebook titled, "Corrections: Lesson x".	Missed problems corrected without using resources, award $\frac{1}{2}$ credit.
Correct each missed problem by:	Re-learn and correct all other missed problems by following steps under 3. A - E
<ul style="list-style-type: none"> Check each missed problem for careless mistakes and correct the ones you can. 	Do similar problems in the Lesson Practice section to build mastery on missed problems.
<ul style="list-style-type: none"> For each remaining missed problem, follow steps A - C under #3 above. 	For problems you can't correct, contact Dr. Shormann www.diveintomath.com/ask-a-math-question/

Assignment Chart

Saxon Algebra 2, 2nd & 3rd Editions

See the Timed Method on page 2.

Week #	Lessons	Tests	Study*
1	A-3	-	-
2	4-7	-	
3	8-11	1	1-4
4	12-15	2	5-8
5	16-19	3	9-12
6	20-23	4	10-16
7	24-27	5	17-20
8	28-31	6	21-24
9	32-35	7	25-28
10	36-39	8	29-32
11	40-43	9	33-36
12	44-47	10	37-40
13	48-51	11	41-44
14	52-55	12	45-48
15	56-59	13	49-52
16	60-63	14	53-56
17	64-67	15	57-60
18	68-71	16	61-64
19	72-75	17	65-68
20	76-79	18	69-72
21	80-83	19	73-76
22	84-87	20	80-84
23	88-90	21	85-88
24	91-93	22	89-92
25	94-96	23	93-96
26	97-99		
27	100-102	24	97-100
28	103-105	25	101-104
29	106-108	26	105-108
30	109-111		
31	112-114	27	109-112
32	115-117	28	113-116
33	118-120	29	117-120
34	121-123	30	121-124
35	124-126	31	125-128
36	127-129	32	125 - 129

Grade Recording Form

Student Name _____ School Year _____

Course Name _____ Final Grade _____

Week	Lessons	Homework Average	Test	Test Grade
1	A-3			
2	4-7		1 (1-4)	
3	8-11		2	
4	12-15		3	
5	16-19		4	
6	20-23		5	
7	24-27		6	
8	28-31		7	
9	32-35		8	
10	36-39		9	
11	40-43		10	
12	44-47		11	
13	48-51		12	
14	52-55		13	
15	56-59		14	
16	60-63		15	
17	64-67		16	
18	68-71		17	
19	72-75		18	
20	76-79		19	
21	80-83		20	
22	84-87		21	
23	88-90		22	
24	91-93			
25	94-96		23	
26	97-99		24	
27	100-102		25	
28	103-105			
29	106-108		26	
30	109-111		27	
31	112-114		28	
32	115-117			
33	118-120		29	
34	121-123		30	
35	124-126		31	
36	127-129		32	
	Homework and Test Average			
	Final Grade			