

# DIVE Teacher's Guide

## Saxon Geometry

[Shormann Math](#) is now recommended instead of Saxon.

John Saxon did not publish this book. Learn more: [New Saxon Books: Are they worthy of the Saxon Name?](#)

### Quick Start Guide

1. **Parents and Students:** Watch the [Getting Started](#) video.
2. **Print pages 5 and 6.** These are critical to your student's success.
3. **Critical:** Use the Timed Method, described under Syllabus on page 2.
4. **See the Weekly Schedule section to determine the number of homework problems your student should do.**

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 during the longer lessons..

#### Lessons

Each lesson is made up of three parts: **DIVE Lecture, Saxon Lesson Practice, and Saxon Practice (Distributed and Integrated)**. 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 Distributed Practice Builds Long-term Retention**

Finally, the Distributed Practice section 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 Distributed Practice problems are just that: 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 Homeschool 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 Practice 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 Homeschool 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 a minimum of 4 or 5 days per week, for no more than 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 should my student do?

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.

### New to 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.

### 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.

## 4 Day Sample Schedule

This schedule drops 1 Practice per week which means 90 problems are completed per week, instead of 120. Since you watch 2 DIVE lectures on the first day, a little more time is required on Day 1.

**Day 1** Watch DIVE lectures for Lesson 1 and Lesson 2.

Do the Lesson Practice for both lessons 1 & 2.

Skip the Practice section for Lesson 1.

Do the Practice section for Lesson 2.

**Day 2** Watch the DIVE lecture for Lesson 3.

Complete Lesson Practice and Practice for Lesson 3.

**Day 3** Watch DIVE lecture 4.

Complete Lesson Practice and Practice for Lesson 4.

**Day 4** Study and take Test

## Homework & Test Grades

Don't be concerned about the number of missed homework problems. Students are expected to miss or "forget" some of the concepts. However, the continual "reminder" of doing the problem correctly, over a long period of time, will eventually build long-term retention. 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 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.

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.**

<p>1. <b>Watch the DIVE lecture.</b> Take brief notes on headings and formulas only. <b>Pause the lecture and solve each example problem on your notes.</b> Do not copy the example problems.</p>	<ul style="list-style-type: none"> <li>• Try to solve the missed problem again. If you can't, skip it and go to the next missed problem.</li> <li>• Repeat these steps to re-learn each missed problem.</li> </ul>
<p>2. <b>Lesson Practice Problems</b> (in Saxon Textbook) Do all the problems in the Lesson Practice Section. Re-watch the DIVE lecture, as needed.</p>	<ul style="list-style-type: none"> <li>• <b>For all problems you still cannot correct:</b></li> </ul>
<p>3 . <b>Do the Problem Set</b> (Odd/Even + 5) Follow these steps if you <b>can't solve a problem.</b></p>	<ul style="list-style-type: none"> <li>• View the step-by-step solution in the Saxon Solutions Manual</li> </ul>
<p>A. Click the DIVE lecture that matches the number in parenthesis next to the question.</p>	<ul style="list-style-type: none"> <li>• Close the manual and try to solve the problem on your corrections page. Don't copy the solution.</li> </ul>
<p>B. Fast forward the lecture until you see a similar example problem.</p>	<ul style="list-style-type: none"> <li>• Repeat these steps for each remaining missed problem.</li> </ul>
<p>C. Watch this section of the lecture. Pause the lecture and attempt to work the example problem in the lecture.</p>	<ul style="list-style-type: none"> <li>• For any problems you cannot solve by using the solutions manual, email <a href="mailto:Dr.Shormann@www.diveintomath.com">Dr. Shormann</a> <a href="http://www.diveintomath.com/ask-a-math-question/">www.diveintomath.com/ask-a-math-question/</a></li> </ul>
<p>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>	<p style="text-align: center;"><b>Tests</b></p> <p>Study by working a few practice problems from each lesson listed next to the test number on the assignment chart.</p>
<p>E. Repeat these steps to answer all the questions you can for this lesson.</p>	<p>Test should be graded by a parent. Parents, do not correct, just mark wrong problems.</p>
<p>4. <b>Grade the Homework</b> (use Answer Key in Homeschool packet). Put an x next to each wrong answer. Do not correct until the next step.</p>	<p>Check your work and correct all missed problems you can without using any resources.</p>
<p>5. <b>Start a new page in your notebook titled, "Corrections: Lesson x".</b></p>	<p>Missed problems corrected without using resources, award ½ credit.</p>
<p><b>Correct each missed problem by:</b></p>	<p>Re-learn and correct all other missed problems by following steps under 3. A - E</p>
<ul style="list-style-type: none"> <li>• Check each missed problem for careless mistakes and correct the ones you can.</li> </ul>	<p>Do similar problems in the Lesson Practice section to build mastery on missed problems.</p>
<ul style="list-style-type: none"> <li>• For each remaining missed problem, follow steps A - C under #3 above.</li> </ul>	<p>For problems you can't correct, contact <a href="mailto:Dr.Shormann@www.diveintomath.com">Dr. Shormann</a> <a href="http://www.diveintomath.com/ask-a-math-question/">www.diveintomath.com/ask-a-math-question/</a></p>

# Assignment Chart for Saxon Geometry

Parents, please watch the introductory lesson with your child. Students should watch the lesson on the DIVE CD before each Saxon lesson. **DON'T SKIP class!**

## Daily Schedule

### 1. Find Today's Assignment on the DIVE Syllabus

### 2. Watch the DIVE Lecture

that corresponds with the assigned Saxon lesson. You should take notes and work problems with Dr. Shormann, pausing and rewinding until you understand. You should not be looking at the book during the lesson.

### 3. Complete Lesson Practice

in the Saxon textbook. Re-watch the DIVE lecture as needed.

### 4. Complete Problem Set

Re-watch the DIVE lecture (printed in parentheses next to each question) for any questions you forget how to do. Typically there is a practice problem like the one you are attempting. Then try to do the problem again. If you can't, mark the problem wrong and go to the next problem. You will correct it in the next step.

### 5. Grade & Correct Homework Daily

Grade homework using the Answer Key in the Homeschool Packet. To correct missed problems:

- A. Check your work on all missed problems and see if you can figure out the correct answer.
- B. For those you can't, re-watch the DIVE lecture (printed in parentheses next to each problem) and try to correct again. If you can't go to the next missed problem.
- C. After correcting all the missed problems you can, use the Solutions Manual to correct any remaining problems.
- D. Use [this form](#) to contact Dr. Shormann about any problems you cannot correct using the steps above. At first, this can be a time consuming process. Be patient and eventually you will build long-term retention. Then math will go faster and your test scores will be higher!

## TESTS

Study for tests by working a few practice problems from the lessons listed on the syllabus. After a parent grades the test, correct missed problems:

1. Try to correct any problems you can without looking at your book, lectures, etc. Problems corrected this way will be awarded 1/2 credit.
2. Look at the answer key then try to correct the problem.
3. Correct all other problems using the steps listed under step 5 B-D above.

Week #	Lessons	Tests	Study*
1	1-5		
2	6-9		1-4
3	10-13	1	5-8
4	14-17	2	9-12
5	18-21	3	10-16
6	22-25		17-20
7	26-29	4	21-24
8	30-33	5	25-28
9	34-37	6	29-32
10	38-41	7	33-36
11	42-45	8	37-40
12	46-49	9	41-44
13	50-53	10	45-48
14	54-57	11	49-52
15	58-60	12	53-56
16	61-63	13	
17	64-66		57-60
18	67-69	14	61-64
19	70-72		65-68
20	73-75	15	
21	76-78		69-72
22	79-81	16	73-76
23	82-84		80-84
24	85-87	17	
25	88-90		85-88
26	91-93	18	89-92
27	94-96		93-96
28	97-99	19	
29	100-102		97-100
30	103-105	20	101-104
31	106-108		105-108
32	109-111	21	
33	112-114		109-112
34	115-117	22	113-116
35	118-120		
36		23	117-120

# Grade Recording Form

Student Name \_\_\_\_\_ School Year \_\_\_\_\_

Course Name \_\_\_\_\_ Final Grade \_\_\_\_\_

Week	Lessons	Homework Average	Test	Test Grade
1				
2				
3				
4				
5				
6				
7				
8				
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24				
25				
26				
27				
28				
29				
30				
31				
	Homework and Test Average			
	Final Grade			