

How to Use DIVE Algebra $\frac{1}{2}$, 2nd Edition

What's Inside?

Syllabus

The DIVE syllabus organizes assignments on a 36 week schedule. There are three types of assignments: lessons, investigations, 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.

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. The lesson in the book is review for the student. If you read the lesson in the book, you are missing important information. Think of the DIVE lectures as going to class. Don't skip class!

During the lesson students should take notes and work problems with Dr. Shormann, pausing and rewinding as necessary. They should not look 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. 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 section is completed. It provides ample 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 is proven to build long-term retention which increases recall speed and raises exam scores.

Students will often forget a concept in this section. Don't be concerned about this. The important thing is to quickly re-learn the forgotten concept. A lesson reference number is in parentheses next to each problem that indicates which lesson that concept was taught in. When "stuck" on a problem, simply click on that DIVE lesson to quickly re-learn that concept. Better than an answer this gives students the opportunity to apply what was just learned, building long-term retention.

If you "help" your student by showing them how to do the problem correctly, you are removing the opportunity to build retention. This will make math harder. However, if you take the time to re-learn forgotten concepts properly (watch the DIVE lecture), the student will eventually build fluency. This makes math faster and easier.

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

Important Note: To teach critical thinking skills, Saxon will include concepts in the homework that have not yet been taught. This teaches the skill of applying what is known to a new problem. Don't be thrown by this. It takes time to develop this skill which is essential to doing well on college entrance exams. These types of questions are only presented in the homework so it will not lower the overall grade..

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 re-watching the DIVE lecture, the student still does not understand how to work a problem, let them look at the Solutions Manual. Here they will find step-by-step solutions to every Practice, Problem Set, 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 lectures.

Q&A Email Service with Dr. Shormann

If, after viewing the Solutions Manual, the student still does not understand the concept, email Dr. Shormann at drshormann@gmail.com. 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 new lesson the test covers as well as any concepts they missed on the last test. This information is listed on the syllabus in the Study column.

Recommended Weekly Schedule

In the first part of the course 4 lessons and a test are completed per week. 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. To avoid overwhelming your child, do not spend more than an hour or two (depending on age). Regardless of how much of the lesson is completed, stop and pick up where you left off the next day. Eventually, your student will build retention and fluency and complete their lesson daily.

4 Day Sample Schedule

This schedule drops 1 Problem Set 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.

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

Do the Lesson Practice for both lessons 1 & 2.

Skip the Problem Set section for Lesson 1.

Do the Problem Set section for Lesson 2.

Day 2 Watch the DIVE lecture for Lesson 3.

Complete Lesson Practice and Problem Set for Lesson 3.

Day 3 Watch DIVE lecture 4.

Complete Lesson Practice and Problem Set for Lesson 4.

Day 4 Study and take Test

Odd & Even + 5 Schedule

With this schedule students watch the DIVE lecture and complete the Lesson Practice normally. But in the Problem Set section you 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 Problem Set section. Then circle 3-5 problems that have 65, 64, 63, 62, in parentheses next to the problem. This will add extra 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. During these lessons, we recommend new students complete one-half lesson per day. For example, you could watch the DIVE lecture, do the Lesson Practice, and complete the first 7-10 problems in the Problem Set section. The next day complete the remaining homework problems then grade and correct. This will allow extra time to learn these concepts and build retention. After the first 30 lessons or so, use the recommended weekly schedule listed above.

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.

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

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](#)

Syllabus for Saxon Algebra 1/2, 2nd Edition

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 it 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. Email Dr. Shormann at drshormann@gmail.com 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

Week #	Lessons	Test	Study *
1	1-5		
2	6-9	1	1-4
3	10-13	2	5-8
4	14-17	3	9-12
5	18-21	4	13-16
6	22-25	5	17-20
7	26-29	6	21-24
8	30-33	7	25-28
9	34-37	8	29-32
10	38-41	9	33-36
11	42-45	10	37-40
12	46-49	11	41-44
13	50-53	12	45-48
14	54-57	13	49-52
15	58-61	14	53-56
16	62-65	15	57-60
17	66-69	16	61-64
18	70-73	17	65-68
19	74-77	18	69-72
20	78-81	19	73-76
21	82-85	20	77-80
22	86-89	21	81-84
23	90-93	22	85-88
24	94-97	23	89-92
25	98-101	24	93-96
26	102-105	25	97-100
27	106-109	26	101-104
28	110-113	27	105-108
29	114-117	28	109-112
30	118-121	29	113-116
31	122-124		
32	125-127	30	117-120
33	128-130	31	121-124
34	131-133	32	125-128
35	134-136	33	129-132
36	137	34	133-136

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.

Grade Recording Form

Student Name _____ School Year _____

Course Name _____ Final Grade _____

Week	Lessons and Investigations	Homework Average	Test	Test Grade
1	1-5			
2	6-9		Test 1(1-4)	
3	10-13		Test 2 (5-8)	
4	14-17		3	
5	18-21		4	
6	22-25		5	
7	26-29		6	
8	30-33		7	
9	34-37		8	
10	38-41		9	
11	42-45		10	
12	46-49		11	
13	50-53		12	
14	54-57		13	
15	58-60		14	
16	61-63			
17	64-66		15	
18	67-69		16	
19	70-72		17	
20	73-75			
21	76-78		18	
22	79-81		19	
23	82-84		20	
24	85-87			
25	88-90		21	
26	91-93		22	
27	94-96		23	
28	97-99			
29	100-102		24	
30	103-105		25	

31	106-108		26	
32	109-111			
33	112-114		27	
34	115-117		28	
35	118-120		29	
36			30	
	Homework Average		Test Average	
			Final Grade	