

#### ***4. Is Novare curriculum suitable for a home school environment?***

Yes it is. But it may not feel like what you are used to.

Science education in our country is badly impaired by poorly calibrated expectations. Sadly, that includes much that is produced for home use. As mentioned in our Textbook Philosophy, the United States falls further behind other western nations in science and math every time a ranking is published, college freshmen are increasingly unprepared for classes, and they often require remedial coursework before they can begin credit classes. To remedy this problem requires more than bureaucracies, boards, and even more than most publishers are willing or able to accomplish. The pedagogical goal of science education should be to learn, master and retain the subject matter. This is our goal, and we care more about it than we do about increasing sales or pretending education can be easy.

Most science educators know that there is a level of comprehension at which a student feels like she has grasped the material, but cannot talk competently about it, cannot solve computation problems, and does not possess the skills of measurement, observation, and analysis required in real science.

Many curriculum producers hold out the promise of easy learning, simple administration, and making the subject fun, all the while promising academic rigor, creation-based content, and preparation for college. But what you often get is a paint-by-numbers, connect-the-dots approach that in the interest of simplicity, low cost, parental freedom, and enabling independent learning ultimately fails to provide an education anywhere near an ordinary public school, much less realize the dreams parents had when they started home schooling in the first place: that they could do a better job than public schools.

Lab experiments using only household items are inadequate to teach students laboratory skills such as the use of real lab apparatus, applying the concepts of precision vs. accuracy in measurement, following correct safety procedures, and using correct material disposal procedures. All of these are essential scientific skills and necessary for college lab preparation.

Exercises that avoid the integration of mathematics inexplicably bypass a major learning opportunity. And those that only require meaningless student activities such as copying vocabulary definitions, answering multiple choice questions, completing sentences by fill-in-the-blank, or plotting points on a pre-labeled, pre-scaled grid effect almost no real science learning at all. And few, if any, science-in-a-box curricula require the most basic and best science-learning activity: the preparation from scratch of a concise, properly formatted, analytical lab report.

If you are ready, perhaps even desperate, to escape the cycle of impoverished science-learning methods, then Novare materials are for you.

**Have you heard that Novare curriculum is difficult to use in a home school?**

Novare materials are not difficult to use, but some updating study methods are needed on the part of the student.

1. Daily review – for ordinary students to succeed with Novare, they need to spend time every day not only with the current chapter, but with key content from previous chapters. Spend 1/3 of your science study time reviewing and 2/3 with new content. A little time (15-30 minutes) every day is better than doing all the work in one or two sittings.
2. Close reading of textbooks – fortunately, homeschooled kids are normally used to having to read the text. Teach students to take notes on the text reading. Read the chapter twice if there is time.
3. Weekly quizzes – the books for lower grades (7-9) use a cumulative weekly quiz assessment strategy, with semester exams. There are no chapter tests in those grades (they are employed in upper grades). But cumulative weekly quizzes means they need to be keeping old content fresh while learning the new material.

We have lot of books, videos, and articles that elaborate on the kinds of study methods that are needed. [Here](#) is just one starting point. Also check out John Mays' book called [Teaching Science so that Students Learn Science](#).

The hardest part about using Novare materials is not the content, but the personal academic management required to stay on top of the textbook reading and studying according to the methods described in each course, methods designed to bring about *mastery*. This requires responsibility and maturity and, as mentioned above, it probably will not feel like what your student is used to. It will feel harder because it requires more discipline and closer engagement with the content than is demanded by most science programs.

**How much parental involvement is required?** That depends on how organized your student is, how diligent, how honest, and how motivated. The good news is that parents do not need to have a science background. That's what the textbook is for. Ordinary students will need some degree of administrative help from parents to get a routine established early on and to keep students accountable to produce quality work. However, parents DO need to understand what's going on with the mastery paradigm. You can read about that 1) in the introduction of each text, 2) in the documents in the Digital Resources, and 3) in greater depth in the book mentioned above, *Teaching Science So That Students Learn Science*.

Parents can help in getting students organized and on schedule using the semester planning materials in the Digital Resources. They can help with grading verbal/written work to help students learn to communicate technical information, and they can help in overseeing lab experiments. Parents do not need to grade homework, just check that it gets done. Because homework is graded for *completion and not for accuracy*, students can grade their own homework using the answers included with the course. Parents can grade quizzes and tests and assign a grade, and they grade high school lab reports using standards described in *The Student Lab Report Handbook*.

**What about costs?** Our books are priced competitively. All major publishers charge much more than Novare. And most Christian home school publisher's materials are in the same ballpark. And since Novare does not rely on teacher's manuals, a complete bundle of our high-quality course often costs as much or less than that of other publishers.

As for lab expenses, we strive to keep them modest. Nevertheless, we believe some investment in a few pieces of real lab equipment and materials is imperative. *More is caught than taught*, as the saying goes, and students learn much from handling beakers and measuring chemicals and operating a balance beam. Nobody wants their student to encounter a graduated cylinder for the first time in their college chemistry course.