

Assessment (Testing and Grading) for Homeschoolers
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Parents who want to homeschool “right” often take their cue from the way things are done in “real” schools. That’s a shame, because they have the potential to do so much better than that. Many of the practices we take for granted as “schooling” were not developed to optimize learning. They are tried and true ways to make large classrooms manageable. Managing the learning of a few students in a home environment is something completely different. To get the greatest value out of the homeschooling experience it is important to rethink the process from the ground up.

I would like to walk you through rethinking one of the key features we all associate with the schooling experience. In education classes for teachers it is called “assessment,” but the rest of us know it as testing and grading.

A few years ago I was working with an algebra student who had been taking an Algebra I correspondence course offered through a major university. He was more than halfway through the course and was passing the tests, but I could tell after just the first few minutes he was in fact lost.

He was so lost, I wondered how he was able to pass the tests he had to do online. So I had him show me the current test. It was multiple choice, typical for a computerized testing environment, and seemed to cover the appropriate material. I watched him do the first few problems. He very systematically (and tediously) tried each of the answers, plugged them into the equation, and found which one worked. He wasn't cheating. He just didn't know any other way to do them. He had missed the whole point of solving algebraic equations and was surprised when I showed him how they were actually supposed to be solved.

Who did a better job of “assessment”? The professor monitoring his work with a (seemingly) well designed test instrument, or someone who had a brief conversation with him to see what he actually understood, where he felt stuck, and how he was doing the problems? Assessment is important. Testing may or may not be a useful tool for assessment.

If you are the parent working one-on-one with a student you are in an excellent position to assess the student's progress in a much more realistic and useful manner than a professor on the other end of a correspondence course, or even a teacher in a room full of students. I recognize many parents are not fluent in high school level math themselves. It is still possible for them to manage the educational process and assess the progress.

How can a parent do this? The short answer is “Oral Exams.” Here's how it works. (I am using the context of math for my example, but this could apply to other areas as well.)

Start with a notebook check. You can learn a lot about your student's progress just by going over their daily work with them.

All homework should be kept in notebook. For math/science topics use “quadrille ruled” paper (i.e. graph paper). All of the work should be done one problem at a time, with the scratch work shown in context. (Discourage students from numbering 1 to 25, or whatever, down the side of the page, leaving only a line or two to show their work.) The scratch work should be relevant to the problem and show a flow of logic. When the problem is solved, put a box around the answer, draw a line of demarcation under it, and go on to the next problem. It should be readable to the extent that the student should be

able to decode their own notes, lead you through them, and explain how they did the problem and got their answer. Don't approach it as the "notebook police."

Sit down and have a conversation about the current chapter. Engage with them. If they perceive that you are treating this as a chore, they will learn to game the system. Keep it real. Have them go through the book with you and tell you about the chapter. Ask about any new vocabulary and definitions of key terms. Textbooks often highlight key terms and important principles in some kind of colored boxes in the chapter, and/or as a summary list at the end of the chapter or section.

What is your student's own perception of their progress? Does it seem realistic? Have your student show you that they can actually do the work. You can pick, or sometimes you could even let them pick, a few typical example problems. It doesn't matter if they have done those particular problems before or not. If they can "still" do the problem, then they can do the problem.

That's pretty much it. Your goal is to "assess" whether your student is doing what they need to do to master the material, or if not, why not and what to do differently. You can then respond by adjusting the pace, going over the work with the student in more detail (have them teach you about what they are learning), or seeing if more in-depth solutions like tutoring are needed.

The optimal situation, which will not work for everyone, is if a parent commits to learn a new subject along with the student. Your own struggles to master something new, contributing your adult perspective while engaging with your child as a peer, and the opportunity for your child to actually teach you something you may be having difficulty with, are all components of the teaching/learning experience you have access to in the home but which rarely happen in the classroom.

What about grading? Oh that! Did your student master a topic well enough to move on? Then move on. If not, they don't need to be beat up with a failing grade. They need to do some more work, take more time, get more help, or whatever is called for. Rewards and punishments are pretty much irrelevant to a student who is engaged in and taking responsibility for their own education. It's a judgment you can come to mutually with your child about how well they are progressing.

When I teach physics one of the topics I discuss a lot, early on, is measurement, because that is the basis for our knowledge of the physical world. I set up a lab where the students measure length, mass, volume, temperature, time, etc. using a variety of measuring instruments. One of the tasks I set out is to measure the diameter of a cotton ball with a micrometer. A micrometer can measure to a thousandth of an inch. Students invariably turn in answers to the thousandth of an inch. The point of the lesson is that a precise measurement of something that does not have precise dimensions is meaningless. A cotton ball is not a sphere, to the resolution of a thousandth of an inch. It's meaningful to ask whether it is about an inch or half inch or two inches across, or whether a bag of cotton balls are uniform to within about a quarter of an inch, but much more precision than that is delusional.

How do you measure overall performance when learning a new subject? If the low level of understanding prevents continuing on to the next level, that tells you something. If learning is adequate to build on the experience, that tells you something. If the course generates excitement and light bulbs go off, and the student is inspired to excel, that tells you this is something to celebrate. But how to interpret the difference between an A- or a B+ is a meaningless exercise in playing school that should be avoided at all costs. There is no one looking over your shoulder forcing you to do that, so stop it!

That's all I have to say about grading.