Q. Is your curriculum suitable for a homeschool environment?

A. Yes it is. But it may not feel like what you are used to. Keep in mind that much science education is fundamentally broken in our country including much that circulates in homeschool communities. 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 and boards are willing or able to accomplish. The simple goal is for students 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 self-delusional stage at which a student feels like she has grasped the material, but cannot talk competently about it or explain it, cannot solve calculations, and does not possess skills of measurement, observation, or analysis required in real science.

Many homeschool curriculum producers hold out the promise of easy learning, simple administration, and making the subject "fun" all the while promising academic rigor, content aligning with a particular worldview, and preparation for college. But what you often get is a paint-by-numbers approach that, in the interest of simplicity, parental freedom, and enabling independent, self-directed students, ultimately fails to provide an education anywhere near an ordinary public school, much less realize the dreams parents had when they started homeschooling in the first place that they could do a better job than public schools.

Lab experiments using supplies like rubber bands, yarn, and baking soda are woefully inadequate to teach students true scientific skills use of real lab apparatus, precision vs. accuracy in measurement, safety, material disposal issues, all of which are essential skills of a scientist 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 from easy-to-find bolded terms in the chapter, multiple choice questions, sentence completion 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 Centripetal Press materials are for you. We strive to keep lab expenses modest, but we believe you simply must spend some money on a few pieces of real lab equipment so your student doesn't encounter an Erlenmeyer Flask for the first time in her undergraduate chemistry course. Also, students will need to allocate time daily for review and study. They will need to read and reread, every chapter of the book. And they will not be able to avoid providing accurate, concise responses using proper scientific vocabulary.

The results in the vast majority of cases will be students who feel they are entering the adult world of science, who feel like they actually know something about these subjects, who, if not falling in love with science, at least find science interesting, and who end up being tutors for their friends in college.

How much parental involvement is required? That depends on how organized your student is, how diligent, how honest, and how motivated. The hardest part about using Centripetal Press materials is not the content, but the personal academic management required of the student to stay on top of reading the text and studying according to the methods described in the introduction of each book, methods that bring about the mastery-learning paradigm. This requires discipline, and, as was mentioned above, it probably will not feel like what you are use to. It will require more focus, more engagement with the content than is demanded by most science books.

Ordinary students will need some administrative help from parents to get a routine established early on and to keep students accountable to produce quality work. Parents do not need to know science, but they need to understand what's going on with the mastery paradigm, which they can read about in the introduction and documents on the Resource CD.