

## ***The Rainbow as a High School Curriculum*** by Durell C. Dobbins, Ph.D.

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***The Rainbow*** is a two-year curriculum designed for 12- to 14- year old home schoolers. Because of the unique approach to scope and sequence, many people find it appropriate for use as an early high school curriculum. The following are the opinions of the author/publisher with regards to its appropriateness for high school credit.

***The Rainbow*** is not designed to precisely fit the mold of a typical public or private school curriculum. For this reason, crossing over to fit precise standards may be somewhat contrived. Nevertheless, the curriculum can be harmonized with traditional curricula.

Central to ***The Rainbow*** is its scope and sequence. Nowhere in the public or private school experience are the sciences presented as an integrated whole, as they are in ***The Rainbow***. In this point, our curriculum provides a better framework for later learning than typical curricula. Students learn not only what topics make up a particular scientific discipline, but they also learn how all those disciplines are related to one another. Because of this oversight on the part of traditional schools, even career scientists are often unaware of the continuity among the sciences. We believe this understanding to be pivotal to a well-rounded science education. Many parents will use ***The Rainbow*** at the high school level for this reason alone, even absent any credit.

Content-wise, the first year of ***The Rainbow*** contains the same information that might be presented by a teacher in an 8<sup>th</sup> or 9<sup>th</sup> grade course commonly called Physical Science. In this year, our students study the conceptual content of the disciplines of Physics and Chemistry. This content is essentially the same as that of a Physical Science course. Our coverage is, however, somewhat broader. For example, we touch on the subjects of nuclear physics and chemical kinetics. Because the average home schooled child is advanced in the sciences relative to his public/private school counterpart, these more advanced abstract concepts may be taught with relative ease at home. *In our viewpoint, this curriculum is entirely adequate and fulfills all necessary requirements for high school credit as a 9<sup>th</sup> grade Physical Science course.*

The second year of ***The Rainbow*** is a survey of the concepts of biology and applied sciences. The Biology course is targeted at eighth or ninth grade students. Its content is equivalent in most ways to a 9<sup>th</sup> or 10<sup>th</sup> grade "Introductory Biology" course. Because of its focus on first principles, however, a few commonly included exercises in traditional early-high-school courses are omitted. An example is the memorization of the Krebs cycle and

glycolysis. These exercises were reserved for our advanced biology ("Biology II") course that will be released as part of our advanced high school curricula collectively called ***The Spectrum***. Undoubtedly, a helpful administrator will point out any specific requirements where this course is thought to be lacking as an introductory high school course so that it can be appropriately supplemented with other readings. In our viewpoint, this curriculum is entirely adequate and fulfills all necessary requirements for high school credit as a 9<sup>th</sup> or 10<sup>th</sup> grade *Introduction to Biology*. It is designed to be completed as such in the 9<sup>th</sup> grade.

The applied sciences portion of year two is an advanced treatment of what might be compared to an earlier Earth Science course in traditional education. Because of the prior coverage of the basic sciences in our course, however, students have a better conceptual grasp of the more complex aspects of nature such as atmospheric phenomena, geological constitution and environmental science. This material is often presented to younger kids (inappropriately, in our view) without the prerequisite background in the basic sciences.

The laboratory course that is an integral part of ***The Rainbow*** is more aggressive than most public and private school analogs, even at the high school level. There is a laboratory every week to illustrate and reinforce the principles taught in the text. However, there may be a particular laboratory exercise (such as dissection of a fetal pig) that would be required by a few high schools and that is not included in ***The Rainbow*** Home Laboratory. We find that where such (unavoidable) conflicts may arise, the perceived deficiency can be easily remedied by a supplemental laboratory exercise obtained from a mail order retailer (such as Carolina Biological Supply Company, who provide fetal pigs and instruction booklets for dissection). We at *Beginnings Publishing House, Inc.* are happy to help fill any such requirements. Unlike traditional high schools, our students will advance to the point of true hypothesis testing (with close guidance) by the end of this two-year curriculum.

An inappropriate use of our curriculum would be to consider it as a high school Physics or Chemistry course (as it lacks appropriate mathematical rigor) or as an Advanced Biology (Biology II or AP Biology) course. In the latter, students will learn more advanced physiology and biochemical processes than we provide at this level of instruction.

Thank you for your interest in our curriculum. Please let us know how we can be of further assistance.