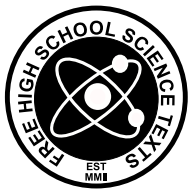

FHSST Authors

The Free High School Science Texts: Textbooks for High School Students Studying the Sciences Physics Grades 10 - 12

Version 0
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Contents

Part I

Introduction

Chapter 1

What is Physics?

Physics is the study of the world around us. In a sense we are more qualified to do physics than any other science. From the day we are born we study the things around us in an effort to understand how they work and relate to each other. Learning how to catch or throw a ball is a physics undertaking for example.

In the field of study we refer to as physics we just try to make the things everyone has been studying more clear. We attempt to describe them through simple rules and mathematics. Mathematics is merely the language we use.

The best approach to physics is to relate everything you learn to things you have already noticed in your everyday life. Sometimes when you look at things closely you discover things you had overlooked intially.

It is the continued scrutiny of everything we know about the world around us that leads people to the lifelong study of physics. You can start with asking a simple question like "Why is the sky blue?" which could lead you to electromagnetic waves which in turn could lead you wave particle duality and to energy levels of atoms and before long you are studying quantum mechanics or the structure of the universe.

In the sections that follow notice that we will try to describe how we will communicate the things we are dealing with. This is our langauge. Once this is done we can begin the adventure of looking more closely at the world we live in.

/ntsDescriptions relating to these questions must be included: What is meant by a theory?

How does a hypothesis become part of a law?

(a) Define the term "laboratory." (b) How does your school's physics laboratory fit this definition?

Distinguish between science and technology.

Appendix A

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