



Scientific Testing Lessons

Books

Scientific Testing

Measuring Small Things and Measuring Length and Circumference

How Big Is a Foot

By Rolf Myller. (1997, Random House Children's Books)

Through the story of an apprentice who gets in trouble for making the queen's bed too small, this book talks about traditional measurements and the development of standard systems. It does not cover the metric system.

The Librarian Who Measured the Earth

By Kathryn Lasky. (1994, Little, Brown and Company)

The story of Eratosthenes, a Greek scholar of the third century B.C. who calculated the circumference of Earth with impressive accuracy by measuring shadows in two distant cities, measuring the distance between the cities, and using geometry. The children may need adult assistance if they want to understand why this method worked.

How Long or How Wide? A Measuring Guide

By Brian P. Cleary; illustrated by Brian Gable. (2007, Lerner Publishing Group)

This book is full of rhyming text with humorous examples to explain how to use and compare metric and U.S. customary units of length. Readers are also introduced to the tools they need to measure length such as rulers and meter sticks.

Measuring Penny

By Loren Leedy. (2000, Holt, Henry & Company)

In this engaging book, a girl is given a homework assignment to measure something in several different ways. She has to use standard units like inches and nonstandard units like paper clips to find out height, width, length, weight, volume, temperature, and time.



Millions to Measure

By David M. Schwartz; illustrated by Steven Kellogg. (2006, HarperCollins Publishers)

This book explores the invention of length, weight, and volume measurements. Students are introduced to the world of metrics and are given easy ways to understand the basic pattern of meters, liters, and grams.

Finding Elapsed Time

A Second Is a Hiccup: A Child's Book of Time

By Hazel Hutchins. (2007, Scholastic, Inc.)

This book explains to children the units of time in imaginative terms that they can understand: a second lasts as long as a hiccup; a week is seven sleeps; and a year is the time it takes to grow into new shoes.

Using Models in Science

Janice VanCleave's Super Science Models

By Janice Pratt VanCleave. (2004, Wiley, John & Sons, Inc.)

This book contains 25 modeling activities focused on a variety of science topics such as modeling the Earth's layers, the states of matter, and an electric circuit.

Models (Arts and Crafts Skills)

By Kevin Newell. (1999, Children's Press)

This book engages children in a variety of modeling tasks using materials such as paper, clay, salt dough, and recycled items to create a variety of models.

Models

By Helen Bliss and Ruth Thompson. (1998, Crabtree Publishing Co.)

This book provides children with an array of modeling projects including a model room, toy cars, and stick creatures.



Accurately Measuring Weight and Volume

Measuring Penny

By Loren Leedy. (2000, Holt, Henry & Company)

In this engaging book, a girl is given a homework assignment to measure something in several different ways. She has to use standard units like inches and nonstandard units like paper clips to find out height, width, length, weight, volume, temperature, and time.

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By David M. Schwartz; illustrated by Steven Kellogg. (2006, HarperCollins Publishers)

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Designing a Fair Test

The Science of Life: Projects and Principles for Beginning Biologists

By Frank G. Bottone, Jr. (2001, Chicago Review Press)

This book provides students with a variety of introductory biology activities to practice their skill at conducting experiments and designing a fair test.

The Ben Franklin Book of Easy and Incredible Experiments: A Franklin Institute Science Museum Book

By Franklin Institute Science Museum and Cheryl Kirk Noll. (1995, Wiley)

This book provides students with a variety of introductory physical science activities to practice their skill at conducting experiments and designing a fair test.

Measuring Temperature Accurately

Really Hot Science Projects with Temperature: How Hot Is It? How Cold Is It?

By Robert Gardner. (2003, Enslow Publishers, Inc.)

This book provides students with a variety of ways to measure the transfer of heat energy in the world around them.



The Science Book of Hot and Cold

By Neil Ardley. (1992, Gulliver Books)

A visually stimulating book that explores and explains different properties of temperature through simple experiments. This is an excellent resource to expand children's understanding of how heat and cold can be manipulated to affect matter in its various states.

Temperature

By Joy Frisch. (2003, Smart Apple Media)

This book introduces temperature and how it is measured. It also addresses future environmental concerns such as global warming.