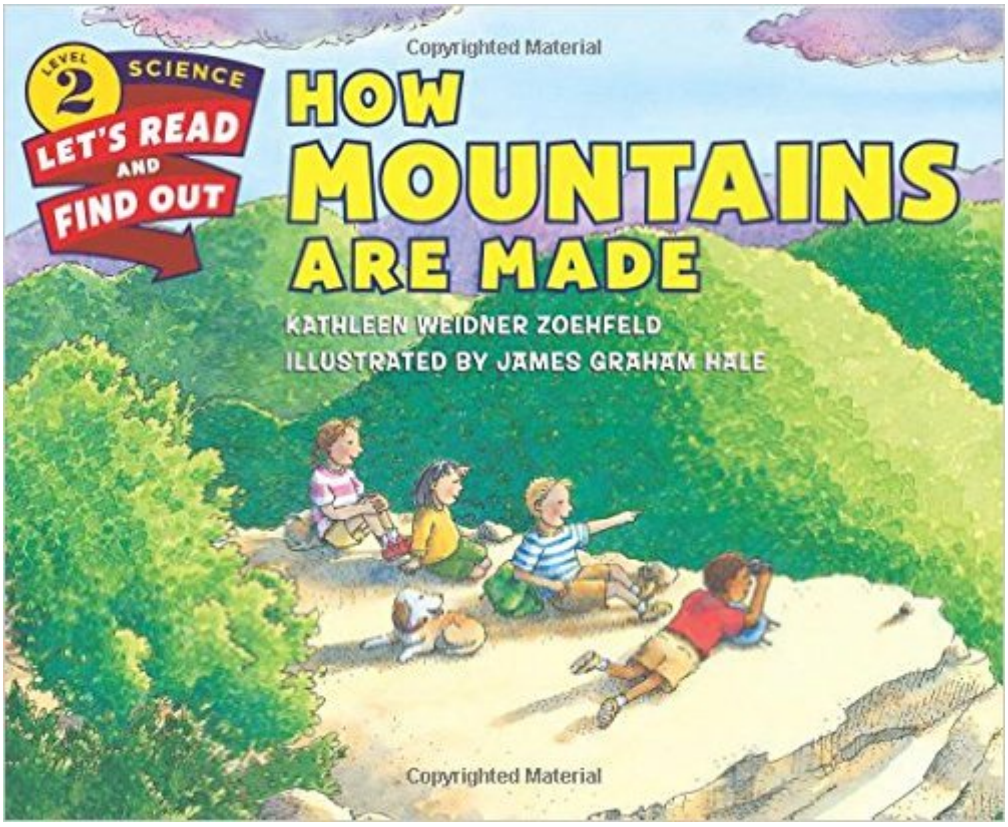
How Mountains Are Made (Let's-Read-and-Find-Out Science 2)



Synopsis

A mountain might be thousands of feet high, but it can still grow taller or shorter each year. This classic picture book explores how mountains are madeâ ”including how Mount Everest grew from a flat plain under an ocean to become 29,028 feet tall!Now rebranded with a new cover look, this book features simple activities and fascinating cross-sections of the earthâ ™s moving crust that clearly explain plate tectonics. Both text and artwork were vetted for accuracy by an expert in the field.This is a Level 2 Letâ ™s-Read-and-Find-Out Science title, which means the book explores more challenging concepts for children in the primary grades and supports the Common Core Learning Standards, Next Generation Science Standards, and the Science, Technology, Engineering, and Math (STEM) standards. Letâ ™s-Read-and-Find-Out Science is the winner of the American Association for the Advancement of Science/Subaru Science Books & Films Prize for Outstanding Science Series.

Book Information

Series: Let’s-Read-and-Find-Out Science 2

Paperback: 32 pages

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Product Dimensions: 10 x 0.1 x 8 inches

Shipping Weight: 4 ounces (View shipping rates and policies)

Average Customer Review: 3.9 out of 5 starsÂ Â See all reviewsÂ (9 customer reviews)

Best Sellers Rank: #350,387 in Books (See Top 100 in Books) #64 inÂ Books > Children’s Books > Education & Reference > Science Studies > Nature > Rocks & Minerals #197 inÂ Books > Children’s Books > Education & Reference > Science Studies > Earth Sciences #3859 inÂ Books > Children’s Books > Literature & Fiction > Chapter Books & Readers > Beginner Readers

Age Range: 4 - 8 years

Grade Level: Preschool - 3

Customer Reviews

Unfortunately, and unusually for this series, this book is complete fiction. We got it for our daughter, and had to throw it away. The geophysics presented in this book is completely imaginary (and I should know, I’m an earth scientist). The basic premise is that the plates of the Earth’s crust ride on

a layer of magma. That is false. The plates move on top of the aesthenosphere, which is quite solid. The enormous stresses over large distances allow it to flow, so that the plates move a few cm/year. Magma does exist here and there in small pockets. From the erroneous notion of a magma layer, a complete, and entirely fictional geophysics is constructed to explain various things about mountains -- much as the Aristotelian/Ptolemaic systems explained the cosmos from the false premise of geocentrism. There are numerous other errors also, and the volcano book in the series uses the same magma layer fiction.--Later addition--As a practicing earth scientist and member of the American Geophysical Union let me reiterate my complaint that the "geophysics" in this book are stuff and nonsense. To the person who claims a university page said the aesthenosphere was liquid, may I suggest a trip to the dictionary. "Malleable" does not mean liquid, it means solid, but deformable, like clay (very malleable) or iron (much less malleable). It's Latin for "hammerable". The mantle, including the aesthenosphere, is solid, solid, solid. Under the tremendous stresses it is subject to, it deforms very slowly, over tens of millions of years, moving the plates about.

This book is anomalous to this series of educational books. As stated by a previous poster, the account of the internal structure of the Earth is false, and there are numerous other problems throughout. The errors are not trivial and will give children (and their unsuspecting parents) an erroneous misconception of the nature of geologic processes. I present my review as a geology professor with more than 15 years of teaching and research experience related to mountain building.A series of misconceptions begins on page 13 of this 32 page illustrated book. The Earth's upper layer, the crust, is illustrated as lumps of broken rock set in what appears to be a fine-grained matrix of dirt. This "layer" overlies a series of layers termed "solid rock". The text correctly identifies both these intervals to comprise the Earth's solid lithosphere. However, the text states that the crust is a single "layer" below soil and vegetation, although the illustration shows it to be a pile of rubble that could entice the reader to infer that the 35 mile-thick crust was essentially a continuation of the Earth's very thin soil horizon. The text is misleading; the illustration is incorrect and needs to be redrawn.Page 14 features a map showing 8 major plates that constitute the upper lithosphere of the Earth. The map is over-generalized to the point of inaccuracy, and children fond of maps will be quick to note numerous cartographic problems. For USA readers, the map is scientifically inaccurate with respect to California, which is shown to be entirely part of the North American Plate.Page 15 features the most egregious error - the layer of "partially melted rock called magma" beneath the lithosphere. This layer is not a magma.

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