



First Big Book of How: How Do Polar Bears Keep Warm? How Do Keys Open Locks? How Do Spacesuits Work? The Ultimate Book of Answers for Kids Who Need to Know How!

Sally Symes

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Sally Symes's colorful, child-friendly reference text *First Big Book of How* compiles dozens of scientific questions on topics ranging from human memory to space telescopes and dinosaur extinction.

The questions are siphoned into six categories: the body; machines and buildings; wild animals; bugs; Earth; and space. They include inquiries into how insects sleep (they “go into a kind of trance ... their body slows down and they stay as still as itsy-bitsy statues”), how dishwashers work (like robots, by “following the instructions in its computer program”), and objects look bigger through magnifying glasses (because of “light bouncing off the object [passing] through the convex lens”), and about what some subjects are, as with a close-up image of a chameleon's eye and another of the unusual, colorful bigfin reef squid with its tentacles of extraordinary length. Each section also includes two spreads with quick, one-sentence answers to trivia-evocative questions, like “How much do fingernails grow in one year? / About 1.5 inches!” and “How strong is a spider's web? / For its size, web silk is five times stronger than steel!”

Each question and answer takes up a spread, with a one-paragraph explanation, a photograph or graphic illustrating key points, and, sometimes, “wacky fact” sidebars that note details such as that “a booger can be green, brown, or even pink” or list the strange items found in sharks' stomachs. In many cases, the graphics are just as informative and fun as the text. The explanation of how a polar bear keeps warm features a closeup drawing of the layers of its skin, while that about how babies grow has images of fetuses at different stages of development.

Rewarding childhood curiosity, the reference text *First Big Book of How* makes scientific inquiry fun, explaining diverse topics with an engaging visual style.

JEFF FLEISCHER (November / December 2024)

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