

NEW BOOKS & MEDIA

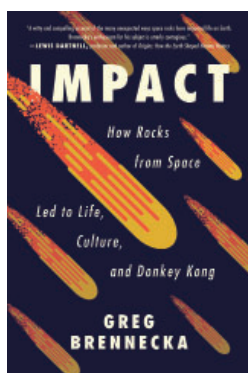
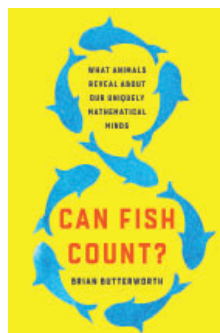
Can Fish Count?

What Animals Reveal About Our Uniquely Mathematical Minds

Brian Butterworth

Basic Books, 2022. \$30.00

What are numbers? What does it mean to count? In *Can Fish Count?*, Brian Butterworth, a cognitive psychologist who specializes in the psychology of mathematical concepts, investigates how human—and animal—minds became mathematical. Remarkably, humans have had concepts of numbers for over 10 000 years: Butterworth cites a study demonstrating that counting words like “one,” “two,” and “three” are some of the slowest changing words in most languages across the world, which means that they likely were used to express concepts that human ancestors may have possessed 100 000 years ago. Counting seems to be a fundamental skill possessed by most animals: Although they don’t have counting words, even tiny minnows have sufficient numeric ability to distinguish larger schools of fish from smaller ones. —RD



Impact

How Rocks from Space Led to Life, Culture, and Donkey Kong

Greg Brenneka

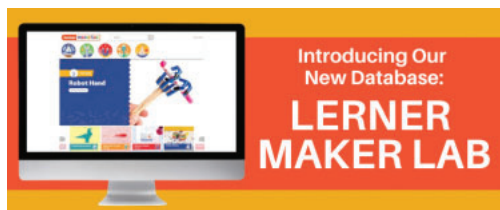
William Morrow, 2022. \$28.99

Meteorites may seem mundane, but they might just be some of the most scientifically valuable objects out there, writes Greg Brenneka, a cosmochemist, in his new book. Using pop-culture references and a wry tone, *Impact* presents readers with a comprehensive overview of meteorite studies from prehistoric times to the present day. As Brenneka notes, the study of space rocks helps us understand how the solar system formed, whether other planetary systems are out there, why life developed, and how unique the existence of life is. Meteorites also influenced human society: Before the Iron Age, meteorites were the only known source of the highly prized metal. As a result, meteoritic iron is typically present in artifacts that denoted significant social status, like a regal ceremonial dagger found in King Tutankhamen’s tomb. Although the book’s title veers into hyperbole, Brenneka convincingly argues that meteorites comprise the universe’s historical record. —RD

Lerner Maker Lab

Lerner, 2022. \$266.65

Aimed at elementary school students, particularly those in second through fifth grades, this database features more than 500 art, cooking, and science projects designed to inspire creativity and learning. Monster magnets, miniature windmills, balloon rockets, black-bean veggie burgers, and holiday decorations are among the available projects. Each one includes a basic description, a list of materials needed, and detailed instructions with illustrations. Although the materials generally consist of common household items, the directions occasionally call for a few specialty components, such as a luxmeter or pager motor. The website strives to be accessible, interactive, and kid friendly, but some projects do recommend adult supervision. —CC



How to Bake a Universe

Alec Carvlin;

ill. Brian Biggs

Norton Young

Readers, 2022.

\$18.95

Aimed at readers ages 6–8, *How to Bake a Universe* uses the analogy of making a cake to explain the origin of the cosmos. The author, Alec Carvlin, starts his imaginative storytelling with a young chef protagonist putting an empty baking pan into an oven set to Absolute Hot. The chef then monitors the baking process as matter is created and eventually forms stars. The colorful drawings by Brian Biggs help bring the story to life. To give the book a bit more heft in the science department, a notes section, glossary, and timeline are provided, which will aid parents and other adult helpers in explaining some of the many difficult concepts that are presented. —CC



The Joy of Science

Jim Al-Khalili

Princeton U. Press,

2022. \$16.95

Teaching nonscientists how to live more scientifically is the aim of Jim Al-Khalili in his new book, *The Joy of Science*. A theoretical physicist and host of the BBC radio program *The Life Scientific*, Al-Khalili focuses on science as a way of thinking and extols the wonders it can reveal. He bases his approach on the scientific method and, in eight short lessons, offers advice on such topics as recognizing objective truth, comprehending complex ideas, avoiding confirmation bias, and combatting disinformation. Using a light conversational tone and non-technical language, Al-Khalili explains how science provides a reliable way of learning about the world, one that allows us to see beyond our limited senses and develop a more profound and personal appreciation of our surroundings. —CC PT

