

NEW BOOKS & MEDIA



Kate the Chemist

The Big Book of Experiments

Kate Biberdorf

Philomel Books/Penguin Random House, 2020. \$17.99

Kate Biberdorf, a chemistry professor at the University of Texas at Austin, combines her chemical know-how and science communication skills in this book of experiments aimed at kids ages 8–12. The step-by-step instructions, with accompanying photos, guide young chemists through making edible snot, a bubble snake, dancing raisins, and the perennial favorite, a soda volcano. Biberdorf also includes explanations of why the experiments work and the

chemical and physical principles at play. Parents will appreciate that most experiments don't require exotic ingredients and that every experiment is labeled with a messiness level to help them plan for the cleanup afterwards.

—MB

Synchronicity

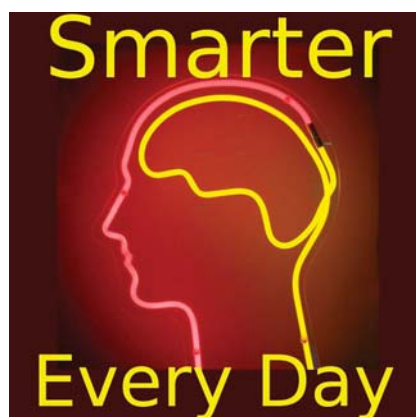
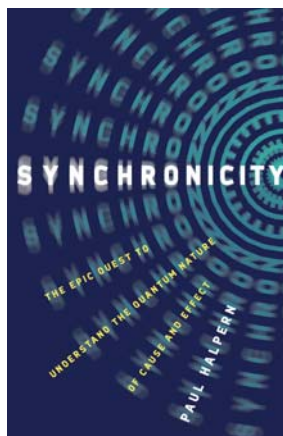
The Epic Quest to Understand the Quantum Nature of Cause and Effect

Paul Halpern

Basic Books, 2020. \$30.00

In *Synchronicity*, physicist Paul Halpern tackles the complex topic of quantum mechanics through a history of physics, from the ancient Greeks to the present day. Using anecdotes and biographical sketches of such scientists as Empedocles, Johannes Kepler, and Isaac Newton, he discusses the development of classical mechanics and goes on to cover key advances in physics, like the concept of causality, the wave and particle natures of light, and Einstein's theory of relativity. Halpern shows that the discovery of quantum theory in the early 20th century brought about a sea change in our understanding of how the world works. The book's title refers to a concept developed by psychologist Carl Jung and adapted by physicist Wolfgang Pauli to describe the meaningful coincidences, or acausality, of quantum phenomena.

—CC



Smarter Every Day

Destin Sandlin

YouTube, 2007–present

Want to take the first-ever online tour of the United Launch Alliance rocket factory? Learn about bird flocking behavior? Watch US Marines train to escape a sinking helicopter? *Smarter Every Day* is a series of videos on those and other topics. Series creator Destin Sandlin, who has degrees in both mechanical and aerospace engineering, says his goal is to explore the world using science and share with others what he learns. From the physics of riding a bicycle, to

the kinetics of a golf swing, to the optics of laser tattoo removal, Sandlin focuses on the science of everyday things and explains them for a lay audience.

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Biological Physics Student Edition

Energy, Information, Life

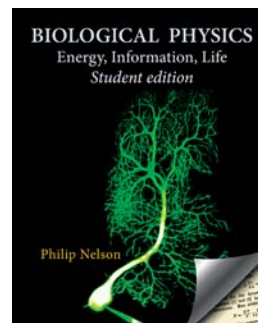
Philip Nelson

Chiliagon Science, 2020.

\$27.00 (paper)

Biophysicist Philip Nelson has updated figures, references, and some of the text to create this affordable edition of his 2004 textbook *Biological Physics*. The book is aimed at students in physics and the life sciences and requires prior knowledge of calculus. Nelson's clear explanations and attractive, instructive figures help guide readers through some potentially tricky material. Students and instructors who prefer ebooks can purchase it for \$9.99 on Amazon Kindle.

—MB



NASA TV

YouTube, 2008–present

Available for free on YouTube, NASA TV provides a variety of educational and public relations programming and live streaming of such events as the 30 May launch of two NASA astronauts on SpaceX's *Crew Dragon* destined for the International Space Station. In addition to the main channel, there are individual channels for NASA research centers, including Ames, Goddard, and the Jet Propulsion Laboratory. Via #AskNASA, viewers can send agency experts questions about anything having to do with space exploration, science, and aeronautics.

—CC PT

