

Welcome Universe Neil Degrass Tyson

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Mathematics and Art - Lynn Gamwell 2016

This is a cultural history of mathematics and art, from antiquity to the present. Mathematicians and artists have long been on a quest to understand the physical world they see before them and the abstract objects they know by thought alone. Taking readers on a tour of the practice of mathematics and the

philosophical ideas that drive the discipline, Lynn Gamwell points out the important ways mathematical concepts have been expressed by artists. Sumptuous illustrations of artworks and cogent math diagrams are featured in Gamwell's comprehensive exploration. Gamwell begins by describing mathematics from antiquity to the Enlightenment, including Greek, Islamic, and

Asian mathematics. Then focusing on modern culture, Gamwell traces mathematicians' search for the foundations of their science, such as David Hilbert's conception of mathematics as an arrangement of meaning-free signs, as well as artists' search for the essence of their craft, such as Aleksandr Rodchenko's monochrome paintings. She shows that self-reflection is inherent to the practice of both modern mathematics and art, and that this introspection points to a deep resonance between the two fields: Kurt Gödel posed questions about the nature of mathematics in the language of mathematics and Jasper Johns asked "What is art?" in the vocabulary of art. Throughout, Gamwell describes the personalities and cultural environments of a multitude of mathematicians and artists, from Gottlob Frege and Benoît Mandelbrot to Max Bill and Xu Bing. Mathematics and Art demonstrates how mathematical ideas are embodied in the visual arts and

will enlighten all who are interested in the complex intellectual pursuits, personalities, and cultural settings that connect these vast disciplines.

Merlin's Tour of the Universe - Neil deGrasse Tyson 2011-03-23

From the #1 New York Times bestselling author of *Astrophysics for People in a Hurry* comes a fascinating guide to the most popular questions about the universe. In Neil de Grasse Tyson's delightful tour of the galaxies, his fictional character Merlin responds to popular astronomy questions asked by adults and children alike. Merlin, a visitor from Planet Omniscia in the Andromeda Galaxy, has been friends with many of the most important scientific figures of the past, including da Vinci, Magellan, Doppler, Einstein, and Hubble—and he often recounts his conversations with these historical figures in his explanations. Merlin's illuminating answers feature a unique combination of wit and poetry along with serious

science explained in refreshingly clear, reader-friendly language. Dear Merlin: Can a person cross our galaxy in a spaceship during one human lifespan? Merlin: In 1905, Merlin's good friend Albert Einstein introduced the "Special Theory of Relativity," which predicts that time will tick slower and slower the faster you travel. Were you to embark on such an adventure you could conceivably age as little as you wish, depending of course, on your exact speed. The problem arises when you return to Earth, which will have moved several hundred thousand years into the future and everyone will have forgotten about you. A timeless book for lovers of the universe by one of its greatest lights. [How Did the First Stars and Galaxies Form?](#) - Abraham Loeb 2010-07-19

Though astrophysicists have developed a theoretical framework for understanding how the first stars and galaxies formed, only now are we able to begin testing those theories with actual observations of the

very distant, early universe. We are entering a new and exciting era of discovery that will advance the frontiers of knowledge, and this book couldn't be more timely. It covers all the basic concepts in cosmology, drawing on insights from an astronomer who has pioneered much of this research over the past two decades. Abraham Loeb starts from first principles, tracing the theoretical foundations of cosmology and carefully explaining the physics behind them. Topics include the gravitational growth of perturbations in an expanding universe, the abundance and properties of dark matter halos and galaxies, reionization, the observational methods used to detect the earliest galaxies and probe the diffuse gas between them--and much more. Cosmology seeks to solve the fundamental mystery of our cosmic origins. This book offers a succinct and accessible primer at a time when breathtaking technological advances promise a wealth of new observational data on the

first stars and galaxies.
Provides a concise introduction to cosmology
Covers all the basic concepts
Gives an overview of the gravitational growth of perturbations in an expanding universe
Explains the process of reionization
Describes the observational methods used to detect the earliest galaxies

Space Chronicles: Facing the Ultimate Frontier - Neil deGrasse Tyson 2012-02-27
“A compelling appeal, at just the right time, for continuing to look up.”—Air & Space
America’s space program is at a turning point. After decades of global primacy, NASA has ended the space-shuttle program, cutting off its access to space. No astronauts will be launched in an American craft, from American soil, until the 2020s, and NASA may soon find itself eclipsed by other countries’ space programs. With his signature wit and thought-provoking insights, Neil deGrasse Tyson—one of our foremost thinkers on all things space—illuminates the past, present, and future of

space exploration and brilliantly reminds us why NASA matters now as much as ever. As Tyson reveals, exploring the space frontier can profoundly enrich many aspects of our daily lives, from education systems and the economy to national security and morale. For America to maintain its status as a global leader and a technological innovator, he explains, we must regain our enthusiasm and curiosity about what lies beyond our world. Provocative, humorous, and wonderfully readable, *Space Chronicles* represents the best of Tyson’s recent commentary, including a must-read prologue on NASA and partisan politics. Reflecting on topics that range from scientific literacy to space-travel missteps, Tyson gives us an urgent, clear-eyed, and ultimately inspiring vision for the future.

Cosmic Queries - Neil deGrasse Tyson 2021-03-02
In this thought-provoking follow-up to his acclaimed *StarTalk* book, uber astrophysicist Neil deGrasse

Tyson tackles the world's most important philosophical questions about the universe with wit, wisdom, and cutting-edge science. For science geeks, space and physics nerds, and all who want to understand their place in the universe, this enlightening new book from Neil deGrasse Tyson offers a unique take on the mysteries and curiosities of the cosmos, building on rich material from his beloved StarTalk podcast. In these illuminating pages, illustrated with dazzling photos and revealing graphics, Tyson and co-author James Trefil, a renowned physicist and science popularizer, take on the big questions that humanity has been posing for millennia--How did life begin? What is our place in the universe? Are we alone?--and provide answers based on the most current data, observations, and theories. Populated with paradigm-shifting discoveries that help explain the building blocks of astrophysics, this relatable and entertaining book will engage and inspire readers

of all ages, bring sophisticated concepts within reach, and offer a window into the complexities of the cosmos. or all who loved National Geographic's StarTalk with Neil deGrasse Tyson, *Cosmos: Possible Worlds*, and *Space Atlas*, this new book will take them on more journeys into the wonders of the universe and beyond.

[Origins: Fourteen Billion Years of Cosmic Evolution](#) - Neil

deGrasse Tyson 2022-09-20

"Who can ask for better cosmic tour guides?" —Michio Kaku
Our true origins are not only human, or even terrestrial, but in fact cosmic. Drawing on recent scientific breakthroughs and cross-pollination among geology, biology, astrophysics, and cosmology, *Origins* illuminates the soul-stirring leaps in our understanding of the cosmos. This revised and updated edition features such startling discoveries as the now more than 5,000 detected exoplanets that promise to reveal exciting possibilities for life in the cosmos, and data from a new generation of

ground-based and spaceborne observatories that have fundamentally changed what we know about the expanding universe?and maybe even the laws of physics themselves. From the first image of a galaxy's birth to tantalizing evidence of water not only on Mars but also on the asteroid Ceres, as well as on moons of Jupiter and Saturn, coauthors Neil deGrasse Tyson and Donald Goldsmith conduct an exhilarating tour of the cosmos with clarity and exuberance.

[Sizing Up the Universe](#) - J.

Richard Gott 2011

Using space photographs and scaled maps, demonstrates the actual size of objects in the cosmos, from Buzz Aldrin's historic footprint on the Moon to the entire visible universe, with a gatefold of the Gott-Juric Map of the Universe.

The Sky Is Not the Limit -

Neil deGrasse Tyson

2010-03-19

From the author of *Astrophysics for People in a Hurry* and the host of *Cosmos: A Spacetime Odyssey*, a memoir about growing up and

a young man's budding scientific curiosity. This is the absorbing story of Neil deGrasse Tyson's lifelong fascination with the night sky, a restless wonder that began some thirty years ago on the roof of his Bronx apartment building and eventually led him to become the director of the Hayden Planetarium. A unique chronicle of a young man who at one time was both nerd and jock, Tyson's memoir could well inspire other similarly curious youngsters to pursue their dreams. Like many athletic kids he played baseball, won medals in track and swimming, and was captain of his high school wrestling team. But at the same time he was setting up a telescope on winter nights, taking an advanced astronomy course at the Hayden Planetarium, and spending a summer vacation at an astronomy camp in the Mojave Desert. Eventually, his scientific curiosity prevailed, and he went on to graduate in physics from Harvard and to earn a Ph.D. in astrophysics

from Columbia. There followed postdoctoral research at Princeton. In 1996, he became the director of the Hayden Planetarium, where some twenty-five years earlier he had been awed by the spectacular vista in the sky theater. Tyson pays tribute to the key teachers and mentors who recognized his precocious interests and abilities, and helped him succeed. He intersperses personal reminiscences with thoughts on scientific literacy, careful science vs. media hype, the possibility that a meteor could someday hit the Earth, dealing with society's racial stereotypes, what science can and cannot say about the existence of God, and many other interesting insights about science, society, and the nature of the universe. Now available in paperback with a new preface and other additions, this engaging memoir will enlighten and inspire an appreciation of astronomy and the wonders of our universe.

Explore the Cosmos Like Neil DeGrasse Tyson - Cap Saucier 2015

An introduction to space science traces the life and achievements of the famous astrophysicist and host of *Cosmos* while sharing non-technical scientific facts and striking Hubble Space Telescope images. Original. Simultaneous eBook. [Starry Messenger](#) - Neil deGrasse Tyson 2022-09-20 Bringing his cosmic perspective to civilization on Earth, Neil deGrasse Tyson shines new light on the crucial fault lines of our time—war, politics, religion, truth, beauty, gender, and race—in a way that stimulates a deeper sense of unity for us all. In a time when our political and cultural views feel more polarized than ever, Tyson provides a much-needed antidote to so much of what divides us, while making a passionate case for the twin chariots of enlightenment—a cosmic perspective and the rationality of science. After thinking deeply about how science sees the world and about Earth as a planet, the human brain has the capacity to reset and recalibrates life's

priorities, shaping the actions we might take in response. No outlook on culture, society, or civilization remains untouched. With crystalline prose, *Starry Messenger* walks us through the scientific palette that sees and paints the world differently. From insights on resolving global conflict to reminders of how precious it is to be alive, Tyson reveals, with warmth and eloquence, an array of brilliant and beautiful truths that apply to us all, informed and enlightened by knowledge of our place in the universe.

A Brief Welcome to the Universe - Neil deGrasse Tyson

2021-09-07

A pocket-style edition based on the New York Times bestseller *A Brief Welcome to the Universe* offers a breathtaking tour of the cosmos, from planets, stars, and galaxies to black holes and time loops. Bestselling authors and acclaimed astrophysicists Neil deGrasse Tyson, Michael A. Strauss, and J. Richard Gott take readers on an unforgettable journey of

exploration to reveal how our universe actually works. Propelling you from our home solar system to the outermost frontiers of space, this book builds your cosmic insight and perspective through a marvelously entertaining narrative. How do stars live and die? What are the prospects of intelligent life elsewhere in the universe? How did the universe begin? Why is it expanding and accelerating? Is our universe alone or part of an infinite multiverse? Exploring these and many other questions, this pocket-friendly book is your passport into the wonders of our evolving cosmos.

Chaser - John W. Pilley 2013

Shares the uplifting story of a Border Collie who recognized an unprecedented number of human words to explore her role in advancing understandings about animal intelligence, recounting how she also demonstrated an ability to use deductive reasoning and imitation. 100,000 first printing.

The Cosmic Web - J. Richard

Gott 2018-06-26

Semi-autobiographical discussion of astronomy and astronomers, and history of astronomy and cosmology.--

Time Travel in Einstein's Universe - J. Richard Gott
2015-08-25

A Princeton astrophysicist explores whether journeying to the past or future is scientifically possible in this “intriguing” volume (Neil deGrasse Tyson). It was H. G. Wells who coined the term “time machine”—but the concept of time travel, both forward and backward, has always provoked fascination and yearning. It has mostly been dismissed as an impossibility in the world of physics; yet theories posited by Einstein, and advanced by scientists including Stephen Hawking and Kip Thorne, suggest that the phenomenon could actually occur. Building on these ideas, J. Richard Gott, a professor who has written on the subject for *Scientific American*, *Time*, and other publications, describes how travel to the future is not only

possible but has already happened—and contemplates whether travel to the past is also conceivable. This look at the surprising facts behind the science fiction of time travel “deserves the attention of anyone wanting wider intellectual horizons” (Booklist). “Impressively clear language. Practical tips for chrononauts on their options for travel and the contingencies to prepare for make everything sound bizarrely plausible. Gott clearly enjoys his subject and his excitement and humor are contagious; this book is a delight to read.” —Publishers Weekly

[Black Hole Blues and Other Songs from Outer Space](#) -
Janna Levin 2016-03-29

The authoritative story of the headline-making discovery of gravitational waves—by an eminent theoretical astrophysicist and award-winning writer. From the author of *How the Universe Got Its Spots* and *A Madman Dreams of Turing Machines*, the epic story of the scientific

campaign to record the soundtrack of our universe. Black holes are dark. That is their essence. When black holes collide, they will do so unilluminated. Yet the black hole collision is an event more powerful than any since the origin of the universe. The profusion of energy will emanate as waves in the shape of spacetime: gravitational waves. No telescope will ever record the event; instead, the only evidence would be the sound of spacetime ringing. In 1916, Einstein predicted the existence of gravitational waves, his top priority after he proposed his theory of curved spacetime. One century later, we are recording the first sounds from space, the soundtrack to accompany astronomy's silent movie. In *Black Hole Blues and Other Songs from Outer Space*, Janna Levin recounts the fascinating story of the obsessions, the aspirations, and the trials of the scientists who embarked on an arduous, fifty-year endeavor to capture these elusive waves. An experimental ambition that

began as an amusing thought experiment, a mad idea, became the object of fixation for the original architects—Rai Weiss, Kip Thorne, and Ron Drever. Striving to make the ambition a reality, the original three gradually accumulated an international team of hundreds. As this book was written, two massive instruments of remarkably delicate sensitivity were brought to advanced capability. As the book draws to a close, five decades after the experimental ambition began, the team races to intercept a wisp of a sound with two colossal machines, hoping to succeed in time for the centenary of Einstein's most radical idea. Janna Levin's absorbing account of the surprises, disappointments, achievements, and risks in this unfolding story offers a portrait of modern science that is unlike anything we've seen before.

[Who Is Neil deGrasse Tyson? - Pam Pollack 2021-06-01](#)
Discover how Neil deGrasse Tyson became one of the

world's most successful and well-known scientists in this new addition to the #1 New York Times bestselling series. When he was nine years old, Neil deGrasse Tyson went on a trip that would change his life. While visiting the Hayden Planetarium at the Museum of Natural History in New York City, he discovered the world of astronomy and felt like the universe was calling to him. He answered that call by diving deep into astronomy courses. After graduating from the Bronx High School of Science, he went on to earn a doctorate in astrophysics and eventually found his way back to the Hayden Planetarium as a staff scientist and, later, as its director. Neil has not only found an exciting way to share his love and knowledge of space through his documentaries and podcasts, he's also broken barriers for Black scientists and become one of the most famous astrophysicists ever. He is a published author, television host, and winner of the prestigious Public Welfare

Medal for the role he has played in exciting the public about the wonders of science. *Just Visiting This Planet* - Neil deGrasse Tyson 2011-04-06 From the #1 New York Times bestselling author of *Astrophysics for People in a Hurry* comes a follow-up guide to more of the most popular questions about the universe. In this companion volume to *Merlin's Tour of the Universe*, Neil de Grasse Tyson presents a completely new collection of questions and answers about the cosmos for stargazers of all ages. Whether waxing about Earth and its environs, the Sun and its stellar siblings, the world of light, physical laws, or galaxies near and far, *Merlin--a fictional visitor from Planet Omniscia and our guide to the universe--is easy to understand, often humorous, and always entertaining.* Merlin fields a wide range of questions from many curious mortals, and in so doing draws on his own vast knowledge as well as the expertise of many close friends, including Archimedes, Galileo, Einstein,

and Santa. Merlin hasn't been stumped yet, responding to questions including: If aliens exploded our moon, what effect would it have on us? What are your thoughts on the theory that a star named Nemesis is circling our solar system and was responsible for killing off the dinosaurs? Is it true that if I leave a container on my roof for a period of time, I can actually collect space particles from outer space? Delightfully illustrated throughout, *Just Visiting This Planet* is a timeless book for lovers of the universe by one of its brightest lights.

Simply Complexity - Neil

Johnson 2009-10

"First published in hardcover by Oneworld Publications as *Two's Company, Three is Complexity*, 2007"--T.p. verso.

Universe Down to Earth - Neil deGrasse Tyson 1994

Bringing demonstrations of the principles of nature into the living room, Tyson writes in a lucid, easygoing style that finally makes scientific literacy possible for enthusiasts and those with math and science

phobias alike.

One Universe: - Charles Tsun-Chu Liu 1999-12-20

A new window opens onto the cosmos... Almost every day we are challenged by new information from the outermost reaches of space. Using straightforward language, *One Universe* explores the physical principles that govern the workings of our own world so that we can appreciate how they operate in the cosmos around us. Bands of color in a sunlit crystal and the spectrum of starlight in giant telescopes, the arc of a hard-hit baseball and the orbit of the moon, traffic patterns on a freeway and the spiral arms in a galaxy full of stars--they're all tied together in grand and simple ways. We can understand the vast cosmos in which we live by exploring three basic concepts: motion, matter, and energy. With these as a starting point, *One Universe* shows how the physical principles that operate in our kitchens and backyards are actually down-to-Earth versions of cosmic processes. The book then takes us to the

limits of our knowledge, asking the ultimate questions about the origins and existence of life as we know it and where the universe came from--and where it is going. Glorious photographs--many seen for the first time in these pages--and original illustrations expand and enrich our understanding. Evocative and clearly written, *One Universe* explains complex ideas in ways that every reader can grasp and enjoy. This book captures the grandeur of the heavens while making us feel at home in the cosmos. Above all, it helps us realize that galaxies, stars, planets, and we ourselves all belong to One Universe.

The Day We Found the Universe - Marcia Bartusiak
2010-03-09

The riveting and mesmerizing story behind a watershed period in human history, the discovery of the startling size and true nature of our universe. On New Years Day in 1925, a young Edwin Hubble released his finding that our Universe was far bigger, eventually measured as a

thousand trillion times larger than previously believed. Hubble's proclamation sent shock waves through the scientific community. Six years later, in a series of meetings at Mount Wilson Observatory, Hubble and others convinced Albert Einstein that the Universe was not static but in fact expanding. Here Marcia Bartusiak reveals the key players, battles of will, clever insights, incredible technology, ground-breaking research, and wrong turns made by the early investigators of the heavens as they raced to uncover what many consider one of most significant discoveries in scientific history.

The Extravagant Universe - Robert P. Kirshner 2016-09-13
The Extravagant Universe tells the story of a remarkable adventure of scientific discovery. One of the world's leading astronomers, Robert Kirshner, takes readers inside a lively research team on the quest that led them to an extraordinary cosmological discovery: the expansion of the universe is accelerating under

the influence of a dark energy that makes space itself expand. In addition to sharing the story of this exciting discovery, Kirshner also brings the science up-to-date in a new epilogue. He explains how the idea of an accelerating universe--once a daring interpretation of sketchy data--is now the standard assumption in cosmology today. This measurement of dark energy--a quality of space itself that causes cosmic acceleration--points to a gaping hole in our understanding of fundamental physics. In 1917, Einstein proposed the "cosmological constant" to explain a static universe. When observations proved that the universe was expanding, he cast this early form of dark energy aside. But recent observations described first-hand in this book show that the cosmological constant--or something just like it--dominates the universe's mass and energy budget and determines its fate and shape. Warned by Einstein's blunder, and contradicted by the initial results of a competing research

team, Kirshner and his colleagues were reluctant to accept their own result. But, convinced by evidence built on their hard-earned understanding of exploding stars, they announced their conclusion that the universe is accelerating in February 1998. Other lines of inquiry and parallel supernova research now support a new synthesis of a cosmos dominated by dark energy but also containing several forms of dark matter. We live in an extravagant universe with a surprising number of essential ingredients: the real universe we measure is not the simplest one we could imagine.

Making Sense - Sam Harris
2020-08-11

A New York Times New and Noteworthy Book From the bestselling author of Waking Up and The End of Faith, an adaptation of his wildly popular, often controversial podcast "Sam Harris is the most intellectually courageous man I know, unafraid to speak truths out in the open where others keep those very same

thoughts buried, fearful of the modish thought police. With his literate intelligence and fluency with words, he brings out the best in his guests, including those with whom he disagrees.” -- Richard Dawkins, author of *The Selfish Gene* “Civilization rests on a series of successful conversations.”

—Sam Harris Sam

Harris—neuroscientist, philosopher, and bestselling author—has been exploring some of the most important questions about the human mind, society, and current events on his podcast, *Making Sense*. With over one million downloads per episode, these discussions have clearly hit a nerve, frequently walking a tightrope where either host or guest—and sometimes both—lose their footing, but always in search of a greater understanding of the world in which we live. For Harris, honest conversation, no matter how difficult or controversial, represents the only path to moral and intellectual progress. This book includes a dozen of the best conversations

from *Making Sense*, including talks with Daniel Kahneman, Timothy Snyder, Nick Bostrom, and Glenn Loury, on topics that range from the nature of consciousness and free will, to politics and extremism, to living ethically. Together they shine a light on what it means to “make sense” in the modern world.

StarTalk - Neil deGrasse Tyson
2019-02-19

This illustrated companion to the popular podcast and National Geographic Channel show is an eye-opening journey for anyone curious about our universe, space, astronomy and the complexities of the cosmos. For decades, beloved astrophysicist Neil deGrasse Tyson has interpreted science with a combination of brainpower and charm that resonates with fans everywhere. This pioneering, provocative book brings together the best of *StarTalk*, his beloved podcast and television show devoted to solving the most confounding mysteries of Earth, space, and what it means to be human.

Filled with brilliant sidebars, vivid photography, and unforgettable quotes from Tyson and his brilliant cohort of science and entertainment luminaries, StarTalk will help answer all of your most pressing questions about our world—from how the brain works to the physics of comic book superheroes. Fun, smart, and laugh-out-loud funny, this book is the perfect guide to everything you ever wanted to know about the universe—and beyond.

The Preacher's Wife - Kate Bowler 2020-09-15

Although most evangelical traditions bar women from ordained ministry, many women have carved out unofficial positions of power in their husbands' spiritual empires or their own ministries. The biggest stars write bestselling books, grab high ratings on Christian television, and even preach. Bowler offers a sympathetic and revealing portrait of megachurch women celebrities, showing how they must balance the demands of

celebrity culture and conservative, male-dominated faiths. And black celebrity preachers' wives carry a special burden of respectability. A compelling account of women's search for spiritual authority in the age of celebrity. -- adapted from jacket

Welcome to the Universe - Neil deGrasse Tyson
2017-09-12

An essential companion to the New York Times bestseller *Welcome to the Universe* Here is the essential companion to *Welcome to the Universe*, a New York Times bestseller that was inspired by the enormously popular introductory astronomy course for non science majors that Neil deGrasse Tyson, Michael A. Strauss, and J. Richard Gott taught together at Princeton. This problem book features more than one hundred problems and exercises used in the original course—ideal for anyone who wants to deepen their understanding of the original material and to learn to think like an astrophysicist.

Whether you're a student or teacher, citizen scientist or science enthusiast, your guided tour of the cosmos just got even more hands-on with *Welcome to the Universe: The Problem Book*. The essential companion book to the acclaimed bestseller *Welcome to the Universe*, featuring the problems used in the original introductory astronomy course for non-science majors at Princeton University. Organized according to the structure of *Welcome to the Universe*, empowering readers to explore real astrophysical problems that are conceptually introduced in each chapter. Problems are designed to stimulate physical insight into the frontier of astrophysics. Problems develop quantitative skills, yet use math no more advanced than high school algebra. Problems are often multipart, building critical thinking and quantitative skills and developing readers' insight into what astrophysicists do. Ideal for course use—either in tandem with *Welcome to the Universe* or as a supplement to

courses using standard astronomy textbooks—or self-study. Tested in the classroom over numerous semesters for more than a decade. Prefaced with a review of relevant concepts and equations. Full solutions and explanations are provided, allowing students and other readers to check their own understanding.

[At the Edge of Time](#) - Dan Hooper 2021-04-06

At the edge of time -- A world of time and space -- A world without a beginning? -- Glimpses of the big bang -- The universe and the accelerator -- The origins of everything -- Hearts of darkness -- A beacon in the dark? -- Radically rethinking dark matter -- A flash in time -- Endless worlds most beautiful -- Touching the edge of time.

[A Brief Welcome to the Universe](#) - Neil deGrasse Tyson 2021-09-07

"This is a condensed edition of *Welcome to the Universe* - essentially a pocket-sized version of the original "astrophysical tour" of the cosmos. In 8 chapters

(compared to the original 24 chapters), the reader learns the essential astrophysics everyone should know -- about the size and scale of the universe; the solar system; the lives/deaths of stars; the search for life in the galaxy; our Milky Way; galaxies, the Big Bang and the expanding universe; inflation and the multiverse; and our future in the cosmos. For those who may have felt that Welcome to the Universe was a bit beyond them, this book covers all the essentials in an even more accessible and concise fashion, while imparting real physical insight into how the universe works by the book's end"--

[Astrophysics for Young People in a Hurry](#) - Neil deGrasse Tyson 2019-02-05

Neil deGrasse Tyson's #1 New York Times best-selling guide to the cosmos, adapted for young readers. From the basics of physics to big questions about the nature of space and time, celebrated astrophysicist and science communicator Neil deGrasse Tyson breaks down the mysteries of the cosmos

into bite-sized pieces.

Astrophysics for Young People in a Hurry describes the fundamental rules and unknowns of our universe clearly—and with Tyson's characteristic wit, there's a lot of fun thrown in, too. This adaptation by Gregory Mone includes full-color photos, infographics, and extra explanations to make even the trickiest concepts accessible. Building on the wonder inspired by outer space, Astrophysics for Young People in a Hurry introduces an exciting field and the principles of scientific inquiry to young readers.

How to Make a Spaceship -

Julian Guthrie 2016-09-20

A New York Times bestseller!

The historic race that

reawakened the promise of

manned spaceflight A Finalist

for the PEN/E. O. Wilson

Literary Science Writing Award

Alone in a Spartan black

cockpit, test pilot Mike Melvill

rocketed toward space. He had

eighty seconds to exceed the

speed of sound and begin the

climb to a target no civilian

pilot had ever reached. He might not make it back alive. If he did, he would make history as the world's first commercial astronaut. The spectacle defied reason, the result of a competition dreamed up by entrepreneur Peter Diamandis, whose vision for a new race to space required small teams to do what only the world's largest governments had done before. Peter Diamandis was the son of hardworking immigrants who wanted their science prodigy to make the family proud and become a doctor. But from the age of eight, when he watched Apollo 11 land on the Moon, his singular goal was to get to space. When he realized NASA was winding down manned space flight, Diamandis set out on one of the great entrepreneurial adventure stories of our time. If the government wouldn't send him to space, he would create a private space flight industry himself. In the 1990s, this idea was the stuff of science fiction. Undaunted, Diamandis found inspiration in an unlikely place:

the golden age of aviation. He discovered that Charles Lindbergh made his transatlantic flight to win a \$25,000 prize. The flight made Lindbergh the most famous man on earth and galvanized the airline industry. Why, Diamandis thought, couldn't the same be done for space flight? The story of the bullet-shaped SpaceShipOne, and the other teams in the hunt, is an extraordinary tale of making the impossible possible. It is driven by outsized characters—Burt Rutan, Richard Branson, John Carmack, Paul Allen—and obsessive pursuits. In the end, as Diamandis dreamed, the result wasn't just a victory for one team; it was the foundation for a new industry and a new age.

Alien Oceans - Kevin Hand
2021-09-21

Inside the epic quest to find life on the water-rich moons at the outer reaches of the solar system Where is the best place to find life beyond Earth? We often look to Mars as the most promising site in our solar

system, but recent scientific missions have revealed that some of the most habitable real estate may actually lie farther away. Beneath the frozen crusts of several of the small, ice-covered moons of Jupiter and Saturn lurk vast oceans that may have existed for as long as Earth, and together may contain more than fifty times its total volume of liquid water. Could there be organisms living in their depths? *Alien Oceans* reveals the science behind the thrilling quest to find out. Kevin Peter Hand is one of today's leading NASA scientists, and his pioneering research has taken him on expeditions around the world. In this captivating account of scientific discovery, he brings together insights from planetary science, biology, and the adventures of scientists like himself to explain how we know that oceans exist within moons of the outer solar system, like Europa, Titan, and Enceladus. He shows how the exploration of Earth's oceans is informing our understanding of the

potential habitability of these icy moons, and draws lessons from what we have learned about the origins of life on our own planet to consider how life could arise on these distant worlds. *Alien Oceans* describes what lies ahead in our search for life in our solar system and beyond, setting the stage for the transformative discoveries that may await us.

Look Up with Me - Jennifer Berne 2020-09

A 2020 Outstanding Science Trade Book for Students K-12! With an introduction from Neil DeGrasse Tyson about the importance of kid-like curiosity, this lyrical picture book biography on the beloved astrophysicist and host of *Cosmos* is the perfect gift for young astronomers and fans of all ages. Neil deGrasse Tyson was born curious. And the secrets of a billion galaxies lay there--waiting for him to explore its cosmic mysteries. He just had to look up. Up beyond the city lights, up at the shining stars, up through the Milky Way, and past the veil of the night sky. Follow young

Neil's journey as he discovers the wonders of space, the thrill of science, and the joy in sharing the beauty of our amazing universe. Read his favorite mind-blowing facts and learn what mysteries are left to solve. From *On a Beam of Light* author Jennifer Berne and debut paper illustrator Lorraine Nam comes the inspiring true tale of Neil's life and how he became a world-famous astrophysicist. The future of discovery lays with you. Look up with Neil and begin your own journey into the cosmos.

Welcome to the Universe -

Neil deGrasse Tyson

2016-09-12

The New York Times

bestselling tour of the cosmos from three of today's leading astrophysicists *Welcome to the Universe* is a personal guided tour of the cosmos by three of today's leading astrophysicists. Inspired by the enormously popular introductory astronomy course that Neil deGrasse Tyson, Michael A. Strauss, and J. Richard Gott taught together at Princeton,

this book covers it all—from planets, stars, and galaxies to black holes, wormholes, and time travel. Describing the latest discoveries in astrophysics, the informative and entertaining narrative propels you from our home solar system to the outermost frontiers of space. How do stars live and die? Why did Pluto lose its planetary status? What are the prospects of intelligent life elsewhere in the universe? How did the universe begin? Why is it expanding and why is its expansion accelerating? Is our universe alone or part of an infinite multiverse? Answering these and many other questions, the authors open your eyes to the wonders of the cosmos, sharing their knowledge of how the universe works. Breathtaking in scope and stunningly illustrated throughout, *Welcome to the Universe* is for those who hunger for insights into our evolving universe that only world-class astrophysicists can provide.

Letters from an

Astrophysicist - Neil deGrasse

Tyson 2019-10-08
New York Times Bestseller A
luminous companion to the
phenomenal bestseller
Astrophysics for People in a
Hurry. Astrophysicist Neil
deGrasse Tyson has attracted
one of the world's largest
online followings with his
fascinating, widely accessible
insights into science and our
universe. Now, Tyson invites us
to go behind the scenes of his
public fame by revealing his
correspondence with people
across the globe who have
sought him out in search of
answers. In this hand-picked
collection of 101 letters, Tyson
draws upon cosmic
perspectives to address a vast
array of questions about
science, faith, philosophy, life,
and of course, Pluto. His
succinct, opinionated,
passionate, and often funny
responses reflect his popularity
and standing as a leading
educator. Tyson's 2017
bestseller *Astrophysics for
People in a Hurry* offered more
than one million readers an
insightful and accessible
understanding of the universe.

Tyson's most candid and
heartfelt writing yet, *Letters
from an Astrophysicist*
introduces us to a newly
personal dimension of Tyson's
quest to explore our place in
the cosmos.

*Death by Black Hole: And
Other Cosmic Quandaries* -
Neil deGrasse Tyson
2007-11-17

"[Tyson] tackles a great range
of subjects...with great humor,
humility, and—most
important—humanity."

—Entertainment Weekly Loyal
readers of the monthly
"Universe" essays in *Natural
History* magazine have long
recognized Neil deGrasse
Tyson's talent for guiding them
through the mysteries of the
cosmos with clarity and
enthusiasm. Bringing together
more than forty of Tyson's
favorite essays, *Death by Black
Hole* explores a myriad of
cosmic topics, from what it
would be like to be inside a
black hole to the movie
industry's feeble efforts to get
its night skies right. One of
America's best-known
astrophysicists, Tyson is a

natural teacher who simplifies the complexities of astrophysics while sharing his infectious fascination for our universe.

Dreams of Other Worlds - Chris Impey 2016-04-19

The story of unmanned space exploration, from Viking to today Dreams of Other Worlds describes the unmanned space missions that have opened new windows on distant worlds. Spanning four decades of dramatic advances in astronomy and planetary science, this book tells the story of eleven iconic exploratory missions and how they have fundamentally transformed our scientific and cultural perspectives on the universe and our place in it. The journey begins with the Viking and Mars Exploration Rover missions to Mars, which paint a startling picture of a planet at the cusp of habitability. It then moves into the realm of the gas giants with the Voyager probes and Cassini's ongoing exploration of the moons of Saturn. The Stardust probe's dramatic

round-trip encounter with a comet is brought vividly to life, as are the SOHO and Hipparcos missions to study the Sun and Milky Way. This stunningly illustrated book also explores how our view of the universe has been brought into sharp focus by NASA's great observatories—Spitzer, Chandra, and Hubble—and how the WMAP mission has provided rare glimpses of the dawn of creation. Dreams of Other Worlds reveals how these unmanned exploratory missions have redefined what it means to be the temporary tenants of a small planet in a vast cosmos.

The Pluto Files: The Rise and Fall of America's Favorite Planet - Neil

deGrasse Tyson 2010-07-12

The New York Times bestseller: "You gotta read this. It is the most exciting book about Pluto you will ever read in your life." —Jon Stewart When the Rose Center for Earth and Space at the American Museum of Natural History reclassified Pluto as an icy comet, the New York Times proclaimed on page

one, "Pluto Not a Planet? Only in New York." Immediately, the public, professionals, and press were choosing sides over Pluto's planethood. Pluto is entrenched in our cultural and emotional view of the cosmos, and Neil deGrasse Tyson, award-winning author and director of the Rose Center, is on a quest to discover why. He stood at the heart of the controversy over Pluto's demotion, and consequently Plutophiles have freely shared their opinions with him, including endless hate mail from third-graders. With his inimitable wit, Tyson delivers a minihistory of planets, describes the oversized characters of the people who study them, and recounts how America's favorite planet was ousted from the cosmic hub. [Welcome to the Universe](#) - Neil deGrasse Tyson 2016-09-29 The New York Times bestselling tour of the cosmos from three of today's leading astrophysicists [Welcome to the Universe](#) is a personal guided tour of the cosmos by three of today's leading astrophysicists.

Inspired by the enormously popular introductory astronomy course that Neil deGrasse Tyson, Michael A. Strauss, and J. Richard Gott taught together at Princeton, this book covers it all—from planets, stars, and galaxies to black holes, wormholes, and time travel. Describing the latest discoveries in astrophysics, the informative and entertaining narrative propels you from our home solar system to the outermost frontiers of space. How do stars live and die? Why did Pluto lose its planetary status? What are the prospects of intelligent life elsewhere in the universe? How did the universe begin? Why is it expanding and why is its expansion accelerating? Is our universe alone or part of an infinite multiverse? Answering these and many other questions, the authors open your eyes to the wonders of the cosmos, sharing their knowledge of how the universe works. Breathtaking in scope and stunningly illustrated throughout, [Welcome to the Universe](#) is for

those who hunger for insights into our evolving universe that only world-class astrophysicists can provide.

Welcome to the Universe in 3D - Neil deGrasse Tyson

2022-04-19

Presenting a rich array of stereoscopic color images, which can be viewed in 3D using a special stereo viewer that folds easily out of the cover of the book, this book reveals your cosmic environment as you have never seen it before. Journey into the vast depths of the observable universe by visualising the most spectacular images in astronomy in stereoscopic 3D. Welcome to the Universe in 3D takes you on a grand tour of the observable universe, guiding you through the most spectacular sights in the cosmos in a breathtaking 3D. Astronomy is the story of how humankind's perception of the two-dimensional dome of the sky evolved into a far deeper comprehension of an expanding three-dimensional cosmos. This book invites you to take part in this story by

exploring the universe in depth, as revealed by cutting-edge astronomical research and observations. You will journey from the Moon through the solar system, out to exoplanets, distant nebulae, and galaxy clusters, until you finally reach the cosmic microwave background radiation (or CMB), the most distant light we can observe. The distances to these celestial wonders range from 1.3 light-seconds to 13.8 billion light-years. Along the way, the authors explain the fascinating features of what you are seeing, including how the 3D images were made using the same technique that early astronomers devised to measure distances to objects in space. The dramatic 3D images in this one-of-a-kind book will astonish you, extending your vision out to the farthest reaches of the universe. You will never look up into the night sky the same way again. [Accessory to War: The Unspoken Alliance Between Astrophysics and the Military](#) - Neil deGrasse Tyson

2018-09-11

“Extraordinary.... A feast of history, an expert tour through thousands of years of war and conquest.” —Jennifer Carson, New York Times Book Review
In this far-reaching foray into the millennia-long relationship between science and military power, acclaimed astrophysicist Neil deGrasse Tyson and co-author Avis Lang examine how the methods and

tools of astrophysics have been enlisted in the service of war. Spanning early celestial navigation to satellite-enabled warfare, *Accessory to War* is a richly researched and provocative examination of the intersection of science, technology, industry, and power that will introduce Tyson’s millions of fans to yet another dimension of how the universe has shaped our lives and our world.