

Galileo A Very Short Introduction Very Short Intro

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Knowledge: A Very Short Introduction - Jennifer Nagel 2014-09-25
What is knowledge? How does it differ from mere belief? Do you need to be able to justify a claim in order to count as knowing it? How can we know that the outer world is real and not a dream? Questions like these are ancient ones, and the branch of philosophy dedicated to answering them - epistemology - has been active for thousands of years. In this thought-provoking Very Short Introduction, Jennifer Nagel considers these classic questions alongside new puzzles arising from recent discoveries about humanity, language, and the mind. Nagel explains the formation of major historical theories of knowledge, and shows how contemporary philosophers have developed new ways of understanding knowledge, using ideas from logic, linguistics, and psychology. Covering topics ranging from relativism and the problem of scepticism to the trustworthiness of internet sources, Nagel examines how progress has been made in understanding knowledge, using everyday examples to explain the key issues and debates
ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make interesting and challenging topics highly readable.

Philosophy of Science: Very Short Introduction - Samir Okasha 2016-07-20
How much faith should we place in what scientists tell us? Is it possible for scientific knowledge to be fully 'objective'? What, really, can be defined as science? In the second edition of this Very Short Introduction, Samir Okasha explores the main themes and theories of contemporary philosophy of science, and investigates fascinating, challenging questions such as these. Starting at the very beginning, with a concise overview of the history of science, Okasha examines the nature of fundamental practices such as reasoning, causation, and explanation. Looking at scientific revolutions and the issue of scientific change, he asks whether there is a discernible pattern to the way scientific ideas change over time, and discusses realist versus anti-realist attitudes towards science. He finishes by considering science today, and the social and ethical philosophical questions surrounding modern science.
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Galileo - Stillman Drake 1990-12-15

Since publication of Stillman Drake's landmark volume, *Galileo at Work: His Scientific Biography*, new and exciting information has come to light about this towering figure in the history of Western science. Drawing largely from Galileo's manuscript working papers, Drake now adds a wealth of detail to the story. Among the findings he presents in this volume are the steps that led to discovery of the pendulum law and the law of fall, by which Galileo opened the road to modern physics; Galileo's path to the new astronomy of Copernicus, closely linked to his first essays in physics; his subsequent misgivings and final reassurances provided by the telescope. Drake focuses on Galileo's pioneering work in physics, previously unknown, and shows that time has not diminished its value. He also considers some of the factors that played a part in the development of physics, its classical Greek beginnings, the medieval interlude, the contribution of some of Galileo's contemporaries, and the resistance of others to his new science of motion. We see in a new light the relation of that science to modern dynamics, created by Newton half a century later. Galileo is better known as an astronomer than as a modern physicist. Drake sheds new light here too as he explores Galileo's pioneer invention of satellite astronomy, his sighting of Neptune two and one-half centuries before that planet was identified, and his proposal of a cosmogony based on speeds of freely falling bodies. With this book Drake confirms Galileo as the first recognizably modern scientist, in both his methods and results.

Galaxies: A Very Short Introduction - John Gribbin 2008-03-27

Galaxies are the building blocks of the Universe: standing like islands in space, each is made up of many hundreds of millions of stars in which the chemical elements are made, around which planets form, and where on at least one of those planets intelligent life has emerged. Our own galaxy, the Milky Way, is just one of several hundred million other galaxies that we can now observe through our telescopes. Yet it was only in the 1920s that we realised that there is more to the Universe than the Milky Way, and that there were in fact other 'islands' out there. In many ways, modern astronomy began with this discovery, and the story of

galaxies is therefore the story of modern astronomy. Since then, many exciting discoveries have been made about our own galaxy and about those beyond: how a supermassive black hole lurks at the centre of every galaxy, for example, how enormous forces are released when galaxies collide, how distant galaxies provide a window on the early Universe, and what the formation of young galaxies can tell us about the mysteries of Cold Dark Matter. In this Very Short Introduction, renowned science writer John Gribbin describes the extraordinary things that astronomers are learning about galaxies, and explains how this can shed light on the origins and structure of the Universe. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make interesting and challenging topics highly readable.

Galileo - Mitch Stokes 2011-04-12

Despite a debilitating life-long illness, Galileo changed physics from a purely philosophical subject into one involving mathematics and careful observation. But his innovations didn't stop there. He also challenged beliefs about the very structure of the universe, arguing that the earth moves around the sun at dizzying speeds. And, using the telescope, Galileo showed philosophers that the sun, moon, and stars aren't made of an ethereal and unchangeable "fifth element" but are composed of the same stuff that ordinary terrestrial objects are. But suggesting such dramatic changes made philosophers uncomfortable. And because philosophers were unable to refute Galileo on their own playing field, they sought help from theologians, sending Galileo head long into a conflict with church officials. Galileo appealed to church fathers like St. Augustine to prevent the theologians from making what he saw as a tragic mistake. But intrigues, personality clashes, and misunderstandings led to Galileo's famous trial and condemnation, events misinterpreted as showing a fundamental conflict between science and religion.

Galileo - Stillman Drake 1980

Advances the hypothesis that Galileo's trial and condemnation by the Inquisition was caused not by his defiance of the Church, but by the hostility of contemporary philosophers. Galileo's own beautifully lucid arguments are used to show how his scientific method was utterly divorced from the Aristotelian approach to physics in that it was based on a search not for causes but for laws. Galileo's method was of overwhelming significance for the development of modern physics, and led to a parting of the ways between science and philosophy.

Niels Bohr: a Very Short Introduction - J. L. Heilbron 2020-01-23

Niels Bohr, who pioneered the quantum theory of the atom, had a broad conception of his obligations as a physicist. They included not only a responsibility for the consequences of his work for the wider society, but also a compulsion to apply the philosophy he deduced from his physics to improving ordinary people's understanding of the moral universe they inhabit. In some of these concerns Bohr resembled Einstein, although Einstein could not accept what he called the "tranquilizing philosophy" with which Bohr tried to resolve such ancient conundrums as the nature (or possibility) of free will. In this Very Short Introduction John Heilbron draws on sources never before presented in English to cover the life and work of one of the most creative physicists of the 20th century. In addition to his role as a scientist, Heilbron considers Bohr as a statesman and Danish cultural icon, who built scientific institutions and pushed for the extension of international cooperation in science to all nation states. As a humanist he was concerned with the cultivation of all sides of the individual, and with the complementary contributions of all peoples to the sum of human culture. Throughout, Heilbron considers how all of these aspects of Bohr's personality influenced his work, as well as the science that made him, in the words of Sir Henry Dale, President of the Royal Society of London, probably the "first among all the men of all countries who are now active in any department of science." ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new

ideas, and enthusiasm to make interesting and challenging topics highly readable.

The History of Physics - J. L. Heilbron 2018

Originally published in 2015 as: *Physics: a short history from quintessence to quarks.*

Galileo at Work - Stillman Drake 2003-01-01

This fascinating, scholarly study by one of the world's foremost authorities on Galileo offers a vivid portrait of one of history's greatest minds. Detailed accounts, including many excerpts from Galileo's own writings, offer insights into his work on motion, mechanics, hydraulics, strength of materials, and projectiles. 36 black-and-white illustrations.

Nationalism: A Very Short Introduction - Steven Grosby 2005-09-08

Throughout history, humanity has borne witness to the political and moral challenges that arise when people place national identity above allegiance to geo-political states or international communities. This book discusses the concept of nations and nationalism from social, philosophical, geological, theological and anthropological perspectives. It examines the subject through conflicts past and present, including recent conflicts in the Balkans and the Middle East, rather than exclusively focusing on theory. Above all, this fascinating and comprehensive work clearly shows how feelings of nationalism are an inescapable part of being human.

Christian Ethics: A Very Short Introduction - D. Stephen Long 2010-07-29

This book provides both a short history of Christian ethics and looks at its basic sources as they arise from Judaism, Greco-Roman ethics, and Christianity

Galileo's Finger - Peter Atkins 2004-05-27

Any literate person should be familiar with the central ideas of modern science. In his sparkling new book, Peter Atkins introduces his choice of the ten great ideas of science. With wit, charm, patience, and astonishing insights, he leads the reader through the emergence of the concepts, and then presents them in a strikingly effective manner. At the same time, he works into his engaging narrative an illustration of the scientific method

and shows how simple ideas can have enormous consequences. His choice of the ten great ideas are: * Evolution occurs by natural selection, in which the early attempts at explaining the origin of species is followed by an account of the modern approach and some of its unsolved problems. * Inheritance is encoded in DNA, in which the story of the emergence of an understanding of inheritance is followed through to the mapping of the human genome. * Energy is conserved, in which we see how the central concept of energy gradually dawned on scientists as they mastered the motion of particles and the concept of heat. * All change is the consequence of the purposeless collapse of energy and matter into disorder, in which the extraordinarily simple concept of entropy is used to account for events in the world. * Matter is atomic, in which we see how the concept of atoms emerged and how the different personalities of the elements arise from the structures of their atoms. * Symmetry limits, guides, and drives, in which we see how concepts related to beauty can be extended to understand the nature of fundamental particles and the forces that act between them. * Waves behave like particles and particles behave like waves, in which we see how old familiar ideas gave way to the extraordinary insights of quantum theory and transformed our perception of matter. * The universe is expanding, in which we see how a combination of astronomy and a knowledge of elementary particles accounts for the origin of the universe and its long term future. * Spacetime is curved by matter, in which we see the emergence of the theories of special and general relativity and come to understand the nature of space and time. * If arithmetic is consistent, then it is incomplete, in which we learn the origin of numbers and arithmetic, see how the philosophy of mathematics lets us understand the nature of this most cerebral of subjects, and are brought to the limits of its power. C. P. Snow once said 'not knowing the second law of thermodynamics is like never having read a work by Shakespeare'. This is an extraordinary, exciting book that not only will make you literate in science but give you deep enjoyment on the way.

Newton - Rob Iliffe 2007-01-25

Newton's contributions to an understanding of the heavens and the earth

are considered to be unparalleled. This very short introduction explains his scientific theories, and uses Newton's unpublished writings to paint a picture of an extremely complex man whose beliefs had a huge impact on Europe's political, intellectual, and religious landscape.

Relativity: A Very Short Introduction - Russell Stannard 2008-07-24

100 years ago, Einstein's theory of relativity shattered the world of physics. Our comforting Newtonian ideas of space and time were replaced by bizarre and counterintuitive conclusions: if you move at high speed, time slows down, space squashes up and you get heavier; travel fast enough and you could weigh as much as a jumbo jet, be squashed thinner than a CD without feeling a thing - and live for ever. And that was just the Special Theory. With the General Theory came even stranger ideas of curved space-time, and changed our understanding of gravity and the cosmos. This authoritative and entertaining Very Short Introduction makes the theory of relativity accessible and understandable. Using very little mathematics, Russell Stannard explains the important concepts of relativity, from $E=mc^2$ to black holes, and explores the theory's impact on science and on our understanding of the universe. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make interesting and challenging topics highly readable.

Chemistry - Peter Atkins 2015

Most people remember chemistry from their schooldays as largely incomprehensible, a subject that was fact-rich but understanding-poor, smelly, and so far removed from the real world of events and pleasures that there seemed little point, except for the most introverted, in coming to terms with its grubby concepts, spells, recipes, and rules. Peter Atkins wants to change all that. In this Very Short Introduction to Chemistry, he encourages us to look at chemistry anew, through a chemist's eyes, in order to understand its central concepts and to see how it contributes not only towards our material comfort, but also to human culture. Atkins

shows how chemistry provides the infrastructure of our world, through the chemical industry, the fuels of heating, power generation, and transport, as well as the fabrics of our clothing and furnishings. By considering the remarkable achievements that chemistry has made, and examining its place between both physics and biology, Atkins presents a fascinating, clear, and rigorous exploration of the world of chemistry - its structure, core concepts, and exciting contributions to new cutting-edge technologies. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make interesting and challenging topics highly readable.

Epicureanism: A Very Short Introduction - Catherine Wilson 2015-12-10
Epicureanism is commonly associated with a carefree view of life and the pursuit of pleasures, particularly the pleasures of the table. However it was a complex and distinctive system of philosophy that emphasized simplicity and moderation, and considered nature to consist of atoms and the void. Epicureanism is a school of thought whose legacy continues to reverberate today. In this Very Short Introduction, Catherine Wilson explains the key ideas of the School, comparing them with those of the rival Stoics and with Kantian ethics, and tracing their influence on the development of scientific and political thought from Locke, Newton, and Galileo to Rousseau, Marx, Bentham, and Mill. She discusses the adoption and adaptation of Epicurean motifs in science, morality, and politics from the 17th Century onwards and contextualises the significance of Epicureanism in modern life. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make interesting and challenging topics highly readable.

Galileo: A Very Short Introduction - Stillman Drake 2001-02-22
In a startling reinterpretation of the evidence, Stillman Drake advances

the hypothesis that Galileo's trial and condemnation by the Inquisition was caused not by his defiance of the Church, but by the hostility of contemporary philosophers. Galileo's own beautifully lucid arguments are used to show how his scientific method was utterly divorced from the Aristotelian approach to physics in that it was based on a search not for causes but for laws. Galileo's method was of overwhelming significance for the development of modern physics, and led to a final parting of the ways between science and philosophy. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make interesting and challenging topics highly readable.

Moons: A Very Short Introduction - David A. Rothery 2015-11-26
Proving to be both varied and fascinating, moons are far more common than planets in our Solar System. Our own Moon has had a profound influence on Earth, not only through tidal effects, but even on the behaviour of some marine animals. Many remarkable things have been discovered about the moons of the giant outer planets from Voyager, Galileo, Cassini, and other spacecraft. Scientists have glimpsed volcanic activity on Io, found oceans of water on Titan, and captured photos of icy geysers bursting from Enceladus. It looks likely that microbial life beyond the Earth may be discovered on a moon rather than a planet. In this Very Short Introduction David Rothery introduces the reader to the moons of our Solar System, beginning with the early discoveries of Galileo and others, describing their variety of mostly mythological names, and the early use of Jupiter's moons to establish position at sea and to estimate the speed of light. Rothery discusses the structure, formation, and influence of our Moon, and those of the other planets, and ends with the recent discovery of moons orbiting asteroids, whilst looking forward to the possibility of finding moons of exoplanets in planetary systems far beyond our own. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books

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Science and Religion: A Very Short Introduction - Thomas Dixon
2008-07-24

The debate between science and religion is never out of the news: emotions run high, fuelled by polemical bestsellers like *The God Delusion* and, at the other end of the spectrum, high-profile campaigns to teach 'Intelligent Design' in schools. Yet there is much more to the debate than the clash of these extremes. As Thomas Dixon shows in this balanced and thought-provoking introduction, a whole range of views, subtle arguments, and fascinating perspectives can be taken on this complex and centuries-old subject. He explores not only the key philosophical questions that underlie the debate, but also highlights the social, political, and ethical contexts that have made 'science and religion' such a fraught and interesting topic in the modern world. Along the way, he examines landmark historical episodes such as the Galileo affair, Charles Darwin's own religious and scientific odyssey, the Scopes 'Monkey Trial' in Tennessee in 1925, and the Dover Area School Board case of 2005, and includes perspectives from non-Christian religions and examples from across the physical, biological, and social sciences.

Who Was Nicolaus Copernicus? | A Very Short Introduction on Space Grade 3 | Children's Biographies - Dissected Lives 2019-11-22

Read about the story of Nicolaus Copernicus and how he challenged the Church with his theory of heliocentrism. Be inspired by his brilliance and also learn about the theory that he developed, too. What an amazing book on biography and space this is! So grab a copy and encourage your third grader to begin today.

Galileo: A Very Short Introduction - Stillman Drake 2001-02-22

In a startling reinterpretation of the evidence, Stillman Drake advances the hypothesis that Galileo's trial and condemnation by the Inquisition was caused not by his defiance of the Church, but by the hostility of contemporary philosophers. Galileo's own beautifully lucid arguments are used to show how his scientific method was utterly divorced from the

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Gravity: A Very Short Introduction - Timothy Clifton 2017-02-10

Gravity is one of the four fundamental interactions that exist in nature. It also has the distinction of being the oldest, weakest, and most difficult force to quantize. Understanding gravity is not only essential for understanding the motion of objects on Earth, but also the motion of all celestial objects, and even the expansion of the Universe itself. It was the study of gravity that led Einstein to his profound realisations about the nature of space and time. Gravity is not only universal, it is also essential for understanding the behaviour of the Universe, and all astrophysical bodies within it. In this Very Short Introduction Timothy Clifton looks at the development of our understanding of gravity since the early observations of Kepler and Newtonian theory. He discusses Einstein's theory of gravity, which now supplants Newton's, showing how it allows us to understand why the frequency of light changes as it passes through a gravitational field, why GPS satellites need their clocks corrected as they orbit the Earth, and why the orbits of distant neutron stars speed up. Today, almost 100 years after Einstein published his theory of gravity, we have even detected the waves of gravitational radiation that he predicted. Clifton concludes by considering the testing and application of general relativity in astrophysics and cosmology, and looks at dark energy and efforts such as string theory to combine gravity with quantum mechanics. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts,

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Gravity - Timothy Clifton 2017

Gravity is the most immediately familiar of the four fundamental forces of nature, and its effects dominate many of the phenomena commonly observed. Timothy Clifton looks at the development of our understanding of gravity, from Newton's apple to gravitational waves and efforts such as string theory to combine gravity with quantum mechanics

The Scientific Revolution: A Very Short Introduction - Lawrence Principe 2011-04-28

Lawrence M. Principe takes a fresh approach to the story of the scientific revolution, emphasising the historical context of the society and its world view at the time. From astronomy to alchemy and medicine to geology, he tells this fascinating story from the perspective of the historical characters involved.

Probability: A Very Short Introduction - John Haigh 2012-04-26

Making good decisions under conditions of uncertainty - which is the norm - requires a sound appreciation of the way random chance works. As analysis and modelling of most aspects of the world, and all measurement, are necessarily imprecise and involve uncertainties of varying degrees, the understanding and management of probabilities is central to much work in the sciences and economics. In this Very Short Introduction, John Haigh introduces the ideas of probability and different philosophical approaches to probability, and gives a brief account of the history of development of probability theory, from Galileo and Pascal to Bayes, Laplace, Poisson, and Markov. He describes the basic probability distributions, and goes on to discuss a wide range of applications in science, economics, and a variety of other contexts such as games and betting. He concludes with an intriguing discussion of coincidences and some curious paradoxes. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make

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Hobbes: A Very Short Introduction - Richard Tuck 2002-05-30

Thomas Hobbes (1588-1679) was the first great English political philosopher, and his book *Leviathan* was one of the first truly modern works of philosophy. Richard Tuck shows that while Hobbes may indeed have been an atheist, he was far from pessimistic about human nature, nor did he advocate totalitarianism. By locating him against the context of his age, we learn that Hobbes developed a theory of knowledge which rivalled that of Descartes in its importance for the formation of modern philosophy.

The History of Astronomy: A Very Short Introduction - Michael Hoskin 2003-05-08

Astronomy, perhaps the first of the sciences, was already well developed by the time of Christ. Seventeen centuries later, after Newton showed that the movements of the planets could be explained in terms of gravitation, it became the paradigm for the mathematical sciences. In the nineteenth century the analysis of star-light allowed astrophysicists to determine both the chemical composition and the radial velocities of celestial bodies, while the development of photography enabled distant objects invisible to the human eye, to be studied and measured in comfort. Technical developments during and since the Second World War have greatly enlarged the scope of the science by permitting the study of radiation. This is a fascinating introduction to the history of Western astronomy, from prehistoric times to the origins of astrophysics in the mid-nineteenth century. Historical records are first found in Babylon and Egypt, and after two millennia the arithmetical astronomy of the Babylonians merged with the Greek geometrical approach to culminate in the *Almagest* of Ptolemy. This legacy was transmitted to the Latin West via Islam, and led to Copernicus's claim that the Earth is in motion. In justifying this Kepler converted astronomy into a branch of dynamics, leading to Newton's universal law of gravity. The book concludes with eighteenth- and nineteenth-century applications of Newton's law, and the first explorations of the universe of stars. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains

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Telescopes - Geoff Cottrell 2016

Geoffrey Cottrell describes the rise of telescopes from early optical examples to the sophisticated range of modern telescopes on Earth and in space, opening up the cosmos in views from radio waves to gamma rays. Looking forward, he discusses the possibilities of the new generation of telescopes in construction today.

Chemistry: A Very Short Introduction - Peter Atkins 2015-02-26

Most people remember chemistry from their schooldays as largely incomprehensible, a subject that was fact-rich but understanding-poor, smelly, and so far removed from the real world of events and pleasures that there seemed little point, except for the most introverted, in coming to terms with its grubby concepts, spells, recipes, and rules. Peter Atkins wants to change all that. In this Very Short Introduction to Chemistry, he encourages us to look at chemistry anew, through a chemist's eyes, in order to understand its central concepts and to see how it contributes not only towards our material comfort, but also to human culture. Atkins shows how chemistry provides the infrastructure of our world, through the chemical industry, the fuels of heating, power generation, and transport, as well as the fabrics of our clothing and furnishings. By considering the remarkable achievements that chemistry has made, and examining its place between both physics and biology, Atkins presents a fascinating, clear, and rigorous exploration of the world of chemistry - its structure, core concepts, and exciting contributions to new cutting-edge technologies. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make interesting and challenging topics highly readable.

Niels Bohr: A Very Short Introduction - J. L. Heilbron 2020-01-23

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The History of Chemistry: A Very Short Introduction - William H. Brock 2016-01-28

From man's first exploration of natural materials and their transformations to today's materials science, chemistry has always been the central discipline that underpins both the physical and biological sciences, as well as technology. In this Very Short Introduction, William H Brock traces the unique appeal of this fundamental science throughout

history. Covering alchemy, early-modern chemistry, pneumatic chemistry and Lavoisier's re-interpretation of chemical change, the rise of organic and physical chemistry, and the transforming power of synthesis, Brock explores the extraordinary and often puzzling transformations of natural and artificial materials, as well as the men and women who experimented, speculated, and explained matter and change. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area These pocket-sized books are the perfect way to get ahead in a new subject quickly Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make interesting and challenging topics highly readable.

Telescopes: A Very Short Introduction - Geoff Cottrell 2016-12-01

From the first, telescopes have made dramatic revelations about the Universe and our place in it. Galileo's observations of the Moon's cratered surface and discovery of Jupiter's four big satellites profoundly altered the perception of the heavens, overturning a two-thousand year cosmology that held the Earth to be the centre of the Universe. Over the past century, the rapid development of computer technology and sophisticated materials allowed enormous strides in the construction of telescopes. Modern telescopes range from large Earth-based optical telescopes and radio arrays linking up across continents, to space-based telescopes capturing the Universe in infrared, ultraviolet, X-rays, and gamma rays. In combination, they have enabled us to look deep into the Universe and far back in time, capturing phenomena from galactic collisions to the formation of stars and planetary systems, and mapping the faint glow remaining from the Big Bang. In this Very Short Introduction, Dr. Geoff Cottrell describes the basic physics of telescopes, the challenges of overcoming turbulence and distortion from the Earth's atmosphere, and the special techniques used to capture X-rays and gamma rays in space telescopes. He explains the crucial developments in detectors and spectrographs that have enabled the high resolution achieved by modern telescopes, and the hopes for the new generation of telescopes currently being built across the world. ABOUT THE SERIES:

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Four Laws That Drive the Universe - Peter Atkins 2007-09-06

The laws of thermodynamics drive everything that happens in the universe. From the sudden expansion of a cloud of gas to the cooling of hot metal, and from the unfurling of a leaf to the course of life itself - everything is directed and constrained by four simple laws. They establish fundamental concepts such as temperature and heat, and reveal the arrow of time and even the nature of energy itself. Peter Atkins' powerful and compelling introduction explains what the laws are and how they work, using accessible language and virtually no mathematics. Guiding the reader from the Zeroth Law to the Third Law, he introduces the fascinating concept of entropy, and how it not only explains why your desk tends to get messier, but also how its unstoppable rise constitutes the engine of the universe.

Copernicus - Owen Gingerich 2016

Leading historian of science Owen Gingerich offers a fascinating portrait of Nicolaus Copernicus (1473-1543), who developed the concept of a heliocentric universe and is a pivotal figure in the birth of modern science.

Wittgenstein: A Very Short Introduction - A. C. Grayling 2001-02-22

Ludwig Wittgenstein (1889-1951) was an extraordinarily original philosopher, whose influence on twentieth-century thinking goes well beyond philosophy itself. In this book, which aims to make Wittgenstein's thought accessible to the general non-specialist reader, A. C. Grayling explains the nature and impact of Wittgenstein's views. He describes both his early and later philosophy, the differences and connections between them, and gives a fresh assessment of Wittgenstein's continuing influence on contemporary thought. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books

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The Laws of Thermodynamics: A Very Short Introduction - Peter Atkins 2010-03-25

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