

	Reading List	Advanced	Biology
Call No. FICTION	Author	Title	Annotation
FIC B 812 de	Brown, Dan	Deception Point	When a NASA satellite discovers an astonishingly rare object buried deep in the Arctic ice, the floundering space agency proclaims a much-needed victory—a victory with profound implications for NASA policy and the impending presidential election. To verify the authenticity of the find, the White House calls upon the skills of intelligence analyst, Rachel Sexton. Accompanied by a team of experts, including the charismatic scholar, Michael Tolland, Rachel travels to the Arctic and uncovers the unthinkable: evidence of scientific trickery—a bold deception that threatens to plunge the world into controversy. But before she can warn the President, Rachel and Michael are ambushed by a deadly team of assassins. Fleeing for their lives across a desolate and lethal landscape, their only hope for survival is to discover who is behind this masterful plot. The truth, they will learn, is the most shocking deception of all.
FIC C 773 ch	Cook, Robin	Chromosome 6	Behind the headlines on cloning—Dr. Robin Cook blends fact with fiction in one of his most terrifying bestsellers. <u>Chromosome 6</u> is a prophetic thriller that challenges the medical ethics of genetic manipulation and cloning in the jungles of equatorial Africa, where one mistake could bridge the gap between man and ape--and forever change the genetic map of our existence...
FIC C 773 co	Cook, Robin	Contagion	The underlying theme—how easily could someone start an epidemic—is answered in a pretty chilling way in this best selling novel.
FIC C 773 ve	Cook, Robin	Vector	Forensic pathologists, Jack Stapleton and Laurie Montgomery, match wits with New York City cab driver, Yuri Davydov, a former technician with the Soviet biological weapons program and disgruntled emigrant, who unleashes a deadly reign of terror on the streets of Manhattan.
FIC C 867 ti	Crichton, Michael	Andromeda Strain	The United States government is given a warning by the pre-eminent biophysicists in the country: current sterilization procedures applied to returning space probes may be inadequate to guarantee uncontaminated re-entry to the atmosphere. Two years later, 17 satellites are sent into the outer fringes of space to "collect organisms and dust for study." One of them falls to earth, landing in a desolate area of Arizona. Twelve miles from the landing site, in the town of Piedmont, a shocking discovery is made: the streets are littered with the dead bodies of the town's inhabitants, as if they dropped dead in their tracks. What has happened?
FIC C 867 ti	Crichton, Michael	Timeline	The novel opens on the threshold of the 21 st century. It is a world of exploding advances on the frontiers of technology. Information moves instantly between two points, without wires or networks. Computers are built from single molecules. Any moment of the past can be actualized—and a group of historians can enter, literally, life in 14 th century.

FIC C 867 pr	Crichton, Michael	Prey	In the Nevada desert, an experiment has gone horribly wrong. A cloud of nanoparticles—micro-robots—has escaped from the laboratory. This cloud is self-sustaining and self-reproducing. It is intelligent and learns from experience. For all practical purposes, it is alive. It has been programmed as a predator. It is evolving swiftly, becoming more deadly with each passing hour. As fresh as today's headlines, Michael Crichton's most compelling novel yet tells the story of a mechanical plague and the desperate efforts of a handful of scientists to stop it. Drawing on up-to-the-minute scientific fact, it takes the reader into the emerging realms of nanotechnology and artificial distributed intelligence.
FIC C 867 st	Crichton, Michael	State of Fear	In Tokyo, in Los Angeles, in Antarctica, in the Solomon Islands . . . an intelligence agent races to put all the pieces together to prevent a global catastrophe.
FIC P 588 my	Picoult, Jodi	My Sister's Keeper	Anna is not sick, but she might as well be. By age 13, she has undergone countless surgeries, transfusions, and shots, so that her older sister, Kate, can somehow fight the leukemia that has plagued her since childhood. The product of preimplantation genetic diagnosis, Anna was conceived as a bone marrow match for Kate a life and a role that she has never challenged until now. Like most teenagers, Anna is beginning to question who she truly is. But unlike most teenagers, she has always been defined in terms of her sister and so Anna makes a decision that for most would be unthinkable, a decision that will tear her family apart and have perhaps fatal consequences for the sister she loves. My Sister's Keeper examines what it means to be a good parent, a good sister, a good person.
FIC P 926 co	Preston, Richard	The Cobra Effect	What happens when one crazed scientist takes it upon himself to develop and release a new biological weapon that will "thin out" the human race? A doctor working for the Centers for Disease Control first notices some strange evidence in a young girl's death. Soon other bodies are arriving at the morgue in similar condition. The police, the FBI, and national medical and science personnel become involved in trying to get to the bottom of the deadly disease that is attacking New York City. Though the details in this novel are fictional, they are based on the history of biological weapons and the advanced genetic engineering and biotechnology that are available today. Despite the use of potentially confusing technical terms, the story line is easy to follow and fast paced. (Amazon)

Non-Fiction	Author	Title	Annotation
174.4 R 83 sc	Rudacille, Deborah	The Scalpel and the Butterfly: The War between Animal Research and Animal Protection	In this sweeping history of animal research and the animal protection movement, the author examines the ethical question of whether enhancement of human life justifies the use of animals for research. She shows how the question and the answers provided by both scientists and anti-vivisectionists over the past 150 years have shaped contemporary society. The author anchors her narrative in events from the lives of key players in the history of the war between science and animal protection, describing the work of activists who work outside the law as well as those working to change the system from within.
303.4 D 541 gu	Diamond, Jared	Guns, Germs, and Steel: The Fates of Human Societies	Why did Eurasians conquer, displace, or decimate Native Americans, Australians, and Africans, instead of the reverse? In this groundbreaking book, evolutionary biologist, Jared Diamond, dismantles racially based theories of human history by revealing the environmental factors actually responsible for history's broadest patterns—a world history that really is a history of all the world's peoples, a unified narrative of human life. <u>Guns, Germs, and Steel</u> chronicles the way the modern world, and its inequalities, came to be.
306.0973 J 637 ev (iPac)	Johnson, Steven	Everything Bad is Good for You	Worried about how much time children spend playing video games? Don't be, advises Johnson—not only are they learning valuable problem-solving skills, they'd probably do better on an IQ test than you or your parents could at their age. Go ahead and let them watch more television, too, since even reality shows can function as "elaborately staged group psychology experiments" to stimulate rather than pacify the brain. The author shatters the conventional wisdom about pop culture as pabulum, showing how video games, television shows and movies have become increasingly complex. Furthermore, he says, consumers are drawn specifically to those products that require the most mental engagement, from small children who can't get enough of their favorite Disney DVDs to adults who find new layers of meaning with each repeated viewing of <i>Seinfeld</i> . Johnson lays out a strong case that what we do for fun is just as educational in its way as what we study in the classroom (although it's still worthwhile to encourage good reading habits, too). There's an important message here for every parent—one they should hear from the source before savvy kids (especially teens) try to take advantage of it.
362.196 Zi 65 pl	Zimmer, Carl	A Planet of Viruses*	Viruses are the smallest living things known to science, yet they hold the entire planet in their sway. We are most familiar with the viruses that give us colds or the flu, but viruses also cause a vast range of other diseases, including one disorder that makes people sprout branch-like growths as if they were trees. Viruses have been a part of our lives for so long, in fact, that <i>we</i> are actually part virus: the human genome contains more DNA from viruses than our own genes. Meanwhile, scientists are discovering viruses everywhere they look: in the soil, in the ocean, even in caves miles underground. This fascinating book explores the hidden world of viruses—a world that we all inhabit.*

363.19 L 176 di	Lambrecht, Bill	Dinner at the New Gene Café	Biotech companies are racing to alter the genetic building blocks of the world's food. In the United States, the primary venue for this quiet revolution, the acreage of genetically modified crops has soared from zero to 70 million acres since 1996. More than half of America's processed grocery products—from cornflakes to granola bars to diet drinks—contain gene-altered ingredients. But the U.S., unlike Europe and other democratic nations, does not require labeling of modified food. Dinner at the New Gene Café expertly lays out the battle lines of the impending collision between a powerful but unproved technology and a gathering resistance from people worried about the safety of genetic change.
508.73 L 555 sa	Leopold, Aldo	A Sand County Almanac	Combining some of the finest nature writing since Thoreau with an outspoken and highly ethical regard for America's relationship to the land, this volume includes a section on the monthly changes of the Wisconsin countryside; another section that gathers together the informal pieces written by Leopold over a 40-year period as he traveled around the woodlands of Wisconsin, Iowa, Arizona, Sonora, Oregon, Manitoba, and elsewhere; and a final section in which Leopold addresses more formally the philosophical issues involved in wildlife conservation.
540.92 J 637 in	Johnson, Steven	The Invention of Air: A Story of Science, Faith, Revolution, and the Birth of America*	The author provides an entertaining account of the 18th-century scientist and radical Joseph Priestley's monumental discovery that plants restore "something fundamental"—what we now know as oxygen—to the air. Johnson also offers a clear-sighted and intelligent exploration of the conditions that are propitious to scientific innovation, such as the availability of coffee and the unfettered circulation of information through social networks. The members of the networks that Priestley belonged to, including Benjamin Franklin and Thomas Jefferson, provide Johnson with some of his strongest material.*
571.8 C 236 en	Carroll, Sean B.	Endless Forms Most Beautiful: The New Science of EVO DEVO	Evolutionary natural selection offers a pretty straightforward explanation for the forward march of species through history; a mutation that better equips a given organism to survive is passed along to its heirs, becoming more common as successive generations flourish. The actual process by which mutations happen, however, was far more mysterious until scientists turned to the study of evolutionary development (known by the somewhat unfortunate moniker "Evo Devo"). One such scientist is the author, a genetics professor at the University of Wisconsin–Madison, who guides the reader along the broad contours of development ("the process through which a single-celled egg gives rise to a complex, multibillion-celled animal") and the ways in which its study sheds light on the underlying mechanisms of evolution. He explains in concrete terms how small changes in the species' genetic code of a given species can lead to dramatic differences in physiology and is the "missing piece" of evolutionary theory.
572 N 528 le (iPac)	Nelson, D. L. and M. M. Cox	Lehninger Principles of Biochemistry (5th edition)	The hemoglobin section and associated respiration physiology sections in this textbook provides a good background for Advanced Biology students. (Required reading for many AP Advanced Biology classes.)
574 D 259 vo	Darwin, Charles	Voyage of the Beagle	An account of the five years that English naturalist, Charles Darwin, spent traveling around the world on the <i>HMS Beagle</i> , a voyage that led him to develop his theory of the evolution of the species. (Required reading for many AP

574.87 W 334 do	Watson, James D.	The Double Helix: A Personal Account of the Discovery of the Structure of DNA	As in all of history, the real story behind the deceptively simple outcome was messy, intense, and sometimes truly hilarious. To preserve the "real" story for the world, James Watson attempted to record his first impressions as soon after the events of 1951-1953 as possible, with all their unpleasant realities and "spirit of adventure" intact. (Amazon)
574.8732 J 923 ei (iPac)	Judson, H. F.	The Eighth Day of Creation: Makers of the Revolution in Biology*	This book provides some key history to the beginning of molecular biology and the solution of the crystal structures of myoglobin and hemoglobin and is worth buying and reading for anyone interested in the history of the revolution in modern biology. (Required reading for many AP Advanced Biology classes.)*
574.91 Q 35 so (iPac)	Quammen, David	The Song of the Dodo: Island Biogeography in an Age of Extinction	In a wonderful weave of science, metaphor, and prose, the author applies the lessons of island biogeography - the study of the distribution of species on islands and island-like patches of landscape - to modern ecosystem decay, offering insight into the origin and extinction of species, man's relationship to nature, and the future of our world.
575 G 736 di	Gould, Stephen Jay	Dinosaur in a Haystack: Reflections in Natural History	Evolutionary biologist and paleontologist, Stephen Jay Gould, has perfected the art of the essay in this brilliant new collection. These 34 essays, most originally published in "Natural History" magazine, exemplify the keen insight with which Dr. Gould observes the natural world and convey the infectious enthusiasm for fossils and evolutionary theory that has made his books award-winning, national best-sellers. In his latest musings on evolution and other natural phenomena, Gould reveals the uncanny interconnections among distinctly human creations—museums, literature, music, politics, and culture—encompassing a delightfully, wide range of topics, from giant fossils, fads, and fungus to baseball, beeswax, and blaauwbosch, from a humanistic look at Mary Shelley's Frankenstein and Erasmus Darwin's poetry to the fallacies of eugenics and creationism and the moral imperatives of thinking people to meet the ethical challenges that pseudo-science presents. (Google Books)
576.8 Al 87 ty	Alvarez, Walter	T. Rex and the Crater of Doom	When Nobel prize-winning physicist, Louis Alvarez, and his geophysicist son, Walter, announced that they had discovered evidence of a giant meteor that slammed into Earth 65 million years ago, causing the extinction of the dinosaurs, they were met with much fanfare from the popular press and skepticism from the scientific community. The Alvarazes were vindicated in 1991 when a huge impact crater was discovered on the Yucatan Peninsula, and the possible connection with dinosaur extinction is becoming more widely accepted. After a vivid description imagining the global devastation that would be caused by such an impact, Alvarez offers a first-person account of the discovery. It's a nicely told and well-written tale of scientific discovery, and though he occasionally comes across as a bit smug, Alvarez is quite generous in crediting objectors for helping show the direction to improve and refine the theory with further research. (Amazon)

<p>576.8 H 363 ch</p>	<p>Heiligman, Deborah</p>	<p>Charles and Emma: The Darwins' Leap of Faith</p>	<p>When the book opens, Charles Darwin is trying to make a decision, and he is doing so in time-honored fashion: drawing a line down a piece of paper and putting the pros of marriage on one side and the cons on the other. As much as Darwin is interested in wedded life, he is afraid that family life will take him away from the revolutionary work he is doing on the evolution of species. However, the pluses triumph, and he finds the perfect mate in his first-cousin Emma, who becomes his comforter, editor, mother of his 10 children—and sparring partner. Although highly congenial, Charles and Emma were on opposite sides when it came to the role of God in creation. Heiligman uses the Darwin family letters and papers to craft a full-bodied look at the personal influences that shaped Charles' life as he worked mightily to shape his theories. This intersection between religion and science is where the book shines, but it is also an excellent portrait of what life was like during the Victorian era, a time when illness and death were ever present, and, in a way, a real-time example of the survival of the fittest.</p>
<p>595.78 H 163 fo</p>	<p>Halpern, Sue</p>	<p>Four Wings and a Prayer: Caught in the Mystery of the Monarch Butterfly</p>	<p>Every autumn, the monarch butterflies east of the Rockies migrate from as far north as Canada to Mexico. Memory is not their guide, but each year they somehow find their way to the same 50 acres of forest on the high slopes of Mexico's Neovolcanic Mountains, and then make the return trip in the spring. The author sets off on an adventure to delve into the secrets behind this extraordinary phenomenon. She visits scientists and butterfly lovers across the country, offering a keenly observed portrait of the monarchs' migration and of the people for whom they have become a glorious obsession. Combining science, memoir, and travel writing, <i>Four Wings and a Prayer</i> is an absorbing travelogue and a fascinating meditation on a profound mystery of the natural world. (Google Books)</p>
<p>597.92 Sa 17 vo</p>	<p>Safina, Carl</p>	<p>Voyage of the Turtle: In Pursuit of the Earth's Last Dinosaur</p>	<p>The story of an ancient sea turtle and what its survival says about our future. (Google Books)</p>
<p>598.8 W 431 b (iPac)</p>	<p>Weiner, Jonathan</p>	<p>The Song of the Finch: A Story of Evolution in Our Time</p>	<p>Rosemary and Peter Grant and those assisting them have spent 20 years on Daphne Major, an island in the Galapagos, studying natural selection. They recognize each individual bird on the island, when there are 400 at the time of the author's visit, or when there are over 1,000. They have observed about 20 generations of finches--continuously. The author follows these scientists as they watch Darwin's finches and come up with a new understanding of life itself.</p>
<p>599.93 R 437 ge</p>	<p>Ridley, Matt</p>	<p>Genome</p>	<p><u>Genome: The Autobiography of a Species in 23 Chapters</u> delves deep within your body (and, to be fair, the author's, too) looking for dirt dug up by the Human Genome Project. Each chapter pries one gene out of its chromosome and focuses on its role in our development and adult life, but also goes further, exploring the implications of genetic research and our quickly changing social attitudes toward this information. <u>Genome</u> examines the genes associated with cancer, intelligence, sex, and more.</p>

<p>612.8 J 637 mi (iPac)</p>	<p>Johnson, Steven</p>	<p>Mind Wide Open: Your Brain and the Neuroscience of Everyday Life</p>	<p>In the 21st century, The author observes, we have become used to ideas such as "adrenaline rushes" and "serotonin levels," without really recognizing that complex neurobiology has become a commonplace thing to talk about. He sees recent laboratory revelations about the brain as crucial for understanding ourselves and our psyches in new, post-Freudian ways. Readers shy about slapping electrodes on their own temples can get a vicarious scientific thrill as Johnson tries out empathy tests, neuro-feedback, and fMRI scans. The results paint a distinct picture of the author, and uncover general brain secrets at the same time. Memory, fear, love, alertness--all the multitude of states housed in our brains are shown to be the results of chemical and electrical interactions constantly fed and changed by input from our senses.</p>
<p>614.5 J 637 gh</p>	<p>Johnson, Steven</p>	<p>The Ghost Map: The Story of London's Most Terrifying Epidemic—and How It Changed Science, Cities, and the Modern World*</p>	<p>A thrilling historical account of the worst cholera outbreak in Victorian London, and a brilliant exploration of how Dr. John Snow's solution revolutionized the way we think about disease, cities, science, and the modern world, this book is a riveting page-turner with a real-life historical hero that illuminates the intertwined histories of the spread of viruses, rise of cities, and the nature of scientific inquiry.*</p>
<p>614.5 M 954 am JH</p>	<p>Murphy, Jim</p>	<p>An American Plague: The True and Terrifying Story of the Yellow Fever Epidemic of 1793</p>	<p>It is 1793, and there's an invisible killer roaming the streets of Philadelphia. The city's residents are fleeing in fear. This killer has a name—yellow fever—but everything else about it is a mystery. Its cause is unknown, and there is no cure. This powerful dramatic account by award-winning author, Jim Murphy, traces the devastating course of the epidemic. An American Plague offers a fascinating glimpse into the conditions in American cities at the time of our nation's birth while drawing thought-provoking parallels to modern-day epidemics. (Google Books)</p>
<p>616.01 P 926 de</p>	<p>Preston, Richard</p>	<p>The Demon in the Freezer</p>	<p>The first major bio-terror event in the United States—the anthrax attacks in October 2001—was a clarion call for scientists who work with “hot” agents to find ways of protecting civilian populations against biological weapons. The author takes us into the heart of Usamriid, the United States Army Medical Research Institute of Infectious Diseases at Fort Detrick, Maryland, once the headquarters of the U.S. biological weapons program and now the epicenter of national biodefense. Peter Jahrling, the top scientist at Usamriid, has ORCON security clearance that gives him access to top secret information on bio-weapons. His most urgent priority is to develop a drug that will take on smallpox—and win. Eradicated from the planet in 1979 in one of the great triumphs of modern science, the smallpox virus now resides, officially, in only 2 high-security freezers at the Centers for Disease Control in Atlanta and in Siberia, at a Russian virology institute called Vector. But the demon in the freezer has been set loose. It is almost certain that illegal stocks are in the possession of hostile states, including Iraq and North Korea. Jahrling is haunted by the thought that biologists in secret labs are using genetic engineering to create a new superpox virus, a smallpox resistant to all vaccines.</p>

<p>616.02 P 926 pa</p>	<p>Preston, Richard</p>	<p>Panic in Level 4: Cannibals, Killer Viruses, and Other Journeys to the Edge of Science</p>	<p>The "panic" of the book's title refers to the author's own when his biohazard suit was breached, and he feared he may have been exposed to one of the deadliest known viruses. Two of the pieces involve the brothers Chudnovsky, mathematicians so closely dependent on one another that they refer to themselves as "The Mathematician." The author was able to disappear as an interviewer to the extent that he became part of the brothers' portrait. At one point, one Chudnovsky says to the other: "The interviewer answers our questions.... The interviewer becomes a person in the story." Preston used this skill of blending into his accounts to his advantage. Whether he was strapping on gear to climb mammoth hemlocks with arborists trying to understand the diseases killing the great trees of the world or acting as an off-road driver for a couple of men with the disease of self-cannibalization, Preston fit in like a good supporting actor who also happened to be the cameraman, writer, and director. Readers will find these stories compelling. The author has the eyes and language of a fine novelist, but he has the mind of a scientist who is trying to understand some of the most fascinating mysteries of our age. (Amazon)</p>
<p>616.027 Sk 45 im</p>	<p>Skloot, Rebecca</p>	<p>The Immortal Life of Henrietta Lacks*</p>	<p>Henrietta Lacks was a mother of five in Baltimore, a poor African American migrant from the tobacco farms of Virginia, who died from a cruelly aggressive cancer at the age of 30 in 1951. A sample of her cancerous tissue, taken without her knowledge or consent, as was the custom then, turned out to provide one of the holy grails of mid-century biology: human cells that could survive--even thrive--in the lab. Known as HeLa cells, their stunning potency gave scientists a building block for countless breakthroughs, beginning with the cure for polio. Meanwhile, Henrietta's family continued to live in poverty.*</p>
<p>616.5 P 926 ho</p>	<p>Preston, Richard</p>	<p>The Hot Zone: A Terrifying True Story*</p>	<p>The dramatic and chilling story of an Ebola virus outbreak in a suburban Washington, D.C. laboratory, with descriptions of frightening historical epidemics of rare and lethal viruses. More hair-raising than anything Hollywood could think of, because it is all true.*</p>
<p>808.8 H 97 gr</p>	<p>Darwin, Charles</p>	<p>The Decent of Man and Selection in Relation to Sex</p>	<p>In his introduction, Darwin reveals that for many years he had no intention of publishing his notes on this topic, 'as I thought that I should thus only add to the prejudices against my views'. By 1871, he felt that his fellow scientists would show a greater openness of mind to his arguments, even when taken to their logical conclusion and applied to the descent of man from the apes – the aspect of his theory which had been so widely mocked since the notorious question asked by Bishop Wilberforce at the Oxford debate of 1860: was it through his grandmother or his grandfather that Thomas Huxley, Darwin's champion, considered himself descended from a monkey? However, the book's focus on the area of sexual selection and the evolutionary importance of secondary sexual characteristics across the animal kingdom meant that the book was received without the public outrage that Darwin had feared. (Required reading for many AP Advanced Biology classes.)</p>

808.8 H 97 gr	Darwin, Charles	The Origin of Species by Means of Natural Selection	Published amid a firestorm of controversy in 1859, this is a book that changed the world. Reasoned and well-documented in its arguments, it offers coherent views of natural selection, adaptation, the struggle for existence, survival of the fittest, and other concepts that form the foundation of evolutionary theory. (Required reading for many AP Advanced Biology classes.)
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The	following books are	on my list to purchase for our	Library. All of these books may be ordered through Heartland.
	Ball, Philip	Life's Matrix: A Biography of Water	One of the 4 elements of classical antiquity, water is central to the environment of our planet. In <u>Life's Matrix</u> , Philip Ball writes of water's origins, history, and unique physical character. As a geological agent, water shapes mountains, canyons, and coastlines, and when unleashed in hurricanes and floods its destructive power is awesome. Ball's provocative exploration of water on other planets highlights the possibilities of life beyond Earth as well as examines the grim realities of depletion of natural resources and its effects on the availability of water in the 21 st century.
	Carson, Rachel	Silent Spring	<u>Silent Spring</u> alerted a large audience to the environmental and human dangers of indiscriminate use of pesticides, spurring revolutionary changes in the laws affecting our air, land, and water.
	Dockery, Michael and Michael Reiss	Behaviour	<u>Behaviour</u> describes animal and human behaviour, including environmental influence, behavioral development, courtship and social interaction. It covers all the material required for the study of behavior at A-level, while at the same time providing an accessible and informative introduction to the fascinating science of behavior. The authors provide a list of further reading for those who wish to learn more. The Advanced Biology Topics series of books will be of interest to students studying a wide variety of biological subjects at A-level, or as part of a vocational or undergraduate course.
	Edey, M. A. & D. C. Johanson	Blueprints: Solving the Mystery of Evolution	Explores both the development of the science of evolution and the potentials of new technologies to change future evolution, as well as examining the implications of these developments.
	Finch, Robert	The Primal Place	A richly detailed observance of Cape Cod's seemingly vanished natural and human past, as it clings to its present landscape, this is a voyage of discovery, a personal odyssey into the nature of a single Cape Cod neighborhood. It is a rich portrait, beautifully drawn, of a landscape and a community whose essential character lies in their penetrating interface with the sea.
	Goodall, Jane	In the Shadow of Man	This best-selling classic tells the story of one of the world's greatest scientific adventures. Jane Goodall was a young secretarial school graduate when the legendary, Louis Leakey, chose her to undertake a landmark study of chimpanzees in the wild. <u>In the Shadow of Man</u> is an absorbing account of her early years at Gombe Stream Reserve and tells the reader of the remarkable discoveries she made as she got to know the chimps, and they got to know her.
	Goodall, Jane	Reason for Hope: A Spiritual Journey	Dr. Jane Goodall's revolutionary study of chimpanzees in Tanzania's Gombe preserve forever altered the very definition of humanity. Written in a poignant and insightful memoir, Jane Goodall explores her extraordinary life and personal spiritual odyssey.
	Gould, Stephen Jay	The Panda's Thumb: More Reflections in Natural History	The Panda's Thumb will introduce readers to this unique writer, who has taken the art of the scientific essay to new heights. Illustrations.

	Gould, Stephen Jay	Wonderful Life: The Burgess Shale and the Nature of History	High in the Canadian Rockies is a small limestone quarry formed 530 million years ago called the Burgess Shale. It holds the remains of an ancient sea where dozens of strange creatures lived--a forgotten corner of evolution preserved in awesome detail. In this book, the author explores what the Burgess Shale tells us about evolution and the nature of history. (Amazon)
	Hawking, Stephen	A Brief History of Time	Stephen Hawking has earned a reputation as the most brilliant theoretical physicist since Einstein. In this landmark book, Professor Hawking shares his intellect with nonscientists everywhere, guiding readers expertly to confront the supreme questions of the nature of time and the universe. Was there a beginning of time? Will there be an end? Is the universe infinite or does it have boundaries? From Galileo and Newton to modern astrophysics, Professor Hawking leads the reader on an exhilarating journey to distant galaxies, black holes, and alternate dimensions. (Amazon)
	Hawking, Stephen	The Universe in a Nutshell	In this book the author takes the reader to the cutting edge of theoretical physics, where truth is often stranger than fiction, to explain in laymen's terms the principles that control our universe. (Google Books)
	Hellerman, Hal	Great Feuds in Science: Ten of the Liveliest Disputes Ever	Tells the lively stories of ten of the most outrageous and intriguing disputes from the 17 th to the 20 th centuries. Bringing the cataclysmic clash of ideas and personalities to colorful life, Hellman explores both the science and the spirit of the times. Along the way, he reveals that scientific feuds are fueled not only by the purest of intellectual disagreements, but also by intransigence, ambition, jealousy, politics, faith, and the irresistible human urge to be right (Google Books)
	Henderson, D. A.	Smallpox—The Death of a Disease: The Inside Story of Eradicating a Worldwide Killer	In his introduction, <i>The Hot Zone</i> author, Richard Preston, points to the fact that "in smallpox's last hundred years," 1879-1979, it killed more people than "all the wars on the planet during that time." For more than 50 years, doctor and public health expert Henderson combated the disease, first as director of the Center for Disease Control's Epidemic Intelligence Service, then (from 1965 on) as director of the World Health Organization initiative which would later be known as The Eradication. Henderson provides an overview of the painful disease, "a monster" that killed roughly a third of the unimmunized it infected. Chillingly, "variolation," the direct subcutaneous injection of a patient's pus into a healthy person, was used to spur immunity from before the 10 th century. The much safer cowpox vaccination was discovered in 1796 (mandated by Washington for the Continental army); meanwhile, smallpox had decimated the Native American population. Henderson's "surveillance and containment strategy" would indeed eradicate smallpox globally; India, the last holdout, was rid of it in 1974 by 115,000 health workers, dispatched to villages throughout the country to identify, quarantine, and vaccinate. This inspiring achievement makes a stirring read for medical history fans.
	Henig, Robin Marantz	The Monk in the Garden: The Lost and Found Genius of Gregor Mendel, the Father of Genetics	The author, Robin Marantz Henig, vividly evokes a little-known chapter in science, taking us back to the birth of genetics, a field that continues to challenge the way we think about life itself. Shrouded in mystery, Gregor Mendel's quiet life and discoveries make for fascinating reading. Among his pea plants, Henig finds a tale filled with intrigue, jealousy, and a healthy dose of bad timing.

	Horwitz, Tony	A Voyage Long and Strange: Rediscovering the New World	A blend of history, myth, and misadventure, the book captures the wonder and drama of first contact. Vikings, conquistadors, French voyageurs—these and many others roamed an unknown continent in quest of grapes, gold, converts, even a cure for syphilis. Though most failed, their remarkable exploits left an enduring mark on the land and people encountered by late-arriving English settlers. Displaying his trademark talent for humor, narrative, and historical insight, this author allows us to rediscover the New World for ourselves. (Google Books)
	Johnson, Steven	Emergence: The Connected Lives of Ants, Brains, Cities, and Software	The author takes readers on an eye-opening journey through emergence theory and its applications. Explaining why the whole is sometimes smarter than the sum of its parts, Johnson presents surprising examples of feedback, self-organization, and adaptive learning. How does a lively neighborhood evolve out of a disconnected group of shopkeepers, bartenders, and real estate developers? How does a media event take on a life of its own? How will new software programs create an intelligent World Wide Web? In the coming years, the power of self-organization—coupled with the connective technology of the Internet—will usher in a revolution every bit as significant as the introduction of electricity. Provocative and engaging, <i>Emergence</i> puts you on the front lines of this exciting upheaval in science and thought. (Google Books)
	McGowan, Christopher	Dinosaurs, Spitfires and Sea Dragons	The author sets out to solve some of the enduring mysteries about dinosaurs and other prehistoric reptiles. He makes fascinating comparisons between living and extinct animals while presenting topics that range from gigantism to intellect. In addition to exploring the natural history of the Mesozoic Era, McGowan draws on science and engineering concepts to explain curiosities such as the similarities between the aerodynamics of pteranodons and Spitfire planes. (Google Books)
	Maddox, Brenda	Rosalind Franklin: The Dark Lady of DNA	In 1962, Maurice Wilkins, Francis Crick, and James Watson received the Nobel Prize, but it was Rosalind Franklin's data and photographs of DNA that led to their discovery. Brenda Maddox tells a powerful story of a remarkably single-minded, forthright, and tempestuous young woman who, at the age of 15, decided she was going to be a scientist, but who was airbrushed out of the greatest scientific discovery of the 20 th century.
	Margulis, Lynn	Symbiosis in Cell Evolution: Microbial Communities in the Achaean and Proterozoic Eons	
	Margulis, Lynn	Symbiotic Planet: A New Look at Evolution	Named "best biology book of the year" by <i>Library Journal</i> in 1998, this book describes how symbiosis is the key to understanding the origins of cells, the evolution of sex, the emergence of life on land, and even the physiology of our planet.
	Mayr, Ernst	The Growth of Biological Thought	No one in this century can speak with greater authority on the progress of ideas in biology than Ernst Mayr. And no book has ever established the life sciences so firmly in the mainstream of Western intellectual history as <u>The Growth of Biological Thought</u> . Ten years in preparation, this is a work of epic proportions, tracing the development of the major problems of biology from the earliest attempts to find order in the diversity of life, to modern research into the mechanisms of gene transmission.

	Powell, James Lawrence	Night Comes to the Cretaceous: Comets, Craters and Controversy, and the Last Days of the Dinosaurs	What killed the dinosaurs? For more than a century, this question has been one of the greatest unsolved mysteries in science. But, in 1980, Nobel Prize-winning physicist, Luis Alvarez, and his son, Walter, proposed a radical answer: 65 million years ago an asteroid or comet as big as Mt. Everest slammed into the earth, raising a dust cloud vast enough to cause mass extinction. A revolutionary idea that challenged the ice-age extinction theory, the asteroid-impact theory was scorned and derided by the science community. But after years of bitter debate and intense research, an astonishing discovery was made—an immense impact crater in the Yucatan Peninsula that was identified as Ground Zero. The Alvarez team had its proof. A dramatic scientific detective story, <u>Night Comes to the Cretaceous</u> is a brilliant example of science at work—in the trenches, complete with passionate struggles and occasional victories.
	Quammen, David	The Flight of the Iguana: A Sidelong View of Science and Nature	Naturalist Quammen's essays, originally appearing as magazine columns, are here compiled into a lively book. His unusual way of seeing leads him into fascinating realms. How many of us have studied the face of a spider or spent an hour thinking about earthworms? Quammen ha--and shares his observations with us. His widely varied and thought-provoking essays range over humans and their interactions with ecology, including both desert and swamp. The only central focus of the book is Quammen's unified view of the world's natural life, which of course includes us. (Amazon)
	Quammen, David	The Song of the Dodo: Island Biogeography in an Age of Extinctions	In <u>The Song of the Dodo</u> , the reader can trail after the author as he travels the world, tracking the subject of island biogeography, which encompasses nothing less than the study of the origin and extinction of all species. Why are islands so important? Islands are where species most commonly go extinct—and because, as Quammen points out, we live in an age when all of Earth's landscapes are being chopped into island-like fragments by human activity. Through his eyes, the reader can glimpse the nature of evolution and extinction, and in so doing come to understand the monumental diversity of our planet, and the importance of preserving its wild landscapes, animals, and plants.. (Google Books)
	Sagan, Carl	Shadows of Forgotten Ancestors	It tells of the origins of life on earth, describes its variety and character, and culminates in a discussion of human nature and the complex traces of humankind's evolutionary past. The author shows with humor and drama that many of our key traits--self-awareness, technology, family ties, submission to authority, hatred for those a little different from ourselves, reason, and ethics--are rooted in the deep past, and illuminated by our kinship with other animals. (Google Books)
FIC	Sayers, Dorothy L.	Strong Poison	Mystery novelist, Harriet Vane, knows all about poisons, and when her fiance dies in a manner described in one of her books, a jury of her peers thinks a hangman's noose is the answer. But Lord Peter Wimsey is determined to find Harriet innocent—and make her his wife. Originally published in 1930. (Google Books)

	Sayre, Anne	Rosalind Franklin & DNA	James Watson's <u>Double Helix</u> , an account of his work on the structure of the DNA molecule, has been delighting lay audiences since 1968, but was greeted with suspicion from the start by many scientists, including Watson's co-worker Francis Crick and the third Nobel laureate Maurice Wilkins. Anne Sayre is a personal friend of the late Rosalind Franklin, who appears in Watson's book as "Rosy," a cranky, unattractive, humorless, uppity underling of Maurice Wilkins at Kings College (where a line of research was being pursued parallel to Watson and Click's simultaneous work at Cambridge). Sayre presents a wholly different version of what Watson calls the "race" to discover the molecule's structure: nobody except Watson knew there was supposed to be a race; if Wilkins and Franklin had not hated each other they would have made more rapid headway on the DNA problem; in any case Franklin would have discovered the correct solution on her own in three months or maybe three weeks (Francis Crick's opinion); Watson could not have found the answer when he did without semi-clandestine briefings on Franklin's progress; Franklin might well have replaced Wilkins as the third laureate had she not died in 1958, four years before the Nobel award. The experts and the surviving members of the original teams will have to thrash out the facts among them; what is clear is that—aside from an overly didactic, magisterial tone—Sayre makes an extremely sharp and impassioned case. Deserves wide attention. (Amazon)
	Stap, Don	A Parrot without a Name	Describes the work of two ornithologists, John O'Neill and Ted Parker, searching for unidentified species of birds in the rain forests of Peru. (Google Books)
	Thomas, Lewis	The Lives of a Cell—Notes of a Biology Watcher	A physician and cancer researcher shares his personal observations on the uniformity, diversity, interdependence, and strange powers of the earth's life forms. (Google Books)
	Watson, James	The Double Helix: A Personal Account of the Discovery of the Structure of DNA	By identifying the structure of DNA, the molecule of life, Francis Crick and James Watson revolutionized biochemistry and won a Nobel Prize. At the time, Watson was only 24, a brilliant young zoologist hungry to make his mark. His uncompromisingly honest account of the heady days of their thrilling sprint against other world-class researchers to solve one of science's greatest unsolved mysteries gives a clear picture of a world of brilliant scientists with great gifts, human ambitions, and bitter rivalries. Watson relates his and Crick's desperate efforts to beat Linus Pauling to the "Holy Grail of the life sciences," the identification of the basic building block of life.
	Weiner, J.	The Beak of the Finch	On a desert island in the heart of the Galapagos archipelago, where Darwin received his first inklings of the theory of evolution, two scientists, Peter and Rosemary Grant, have spent 20 years proving that Darwin did not know the strength of his own theory. For among the finches of Daphne Major, natural selection is neither rare nor slow: it is taking place by the hour, and we can watch. The author follows these scientists as they watch Darwin's finches and come up with a new understanding of life itself.

	White, Michael	Acid Tongues and Tranquil Dreamers	This book covers a long history of scientific rivalry, and encompasses a diverse collection of disciplines and rivalries (personal, national, and industrial). Whatever form it takes, and however it may be transmogrified, rivalry exists in every lab, in every corner of the world, and in every age. It has spurred great minds on to world-altering breakthroughs in science and technology; in <u>Acid Tongues and Tranquil Dreamers</u> , Michael White illuminates the bitterness and the beauty, the genius and the humanity behind eight such breakthroughs.
	Zimmer, C.	At the Water's Edge: Fish with Fingers, Whales with Legs, and How Life Came Ashore but Then Went Back to the Sea	Discussion of macro-and microevolution in light of modern molecular biology and paleontology. From the first page, the author sets his book apart by diving into the most neglected, least understood mystery of all: how wholly new body plans and parts could have been created by natural forces that at first glance would seem to work to destroy innovation. (Required reading for many AP Advanced Biology classes.)
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