## Biology

## **Recommended Reading List**



	Key Stage 5
<section-header></section-header>	The Agile Gene: How Nature Turns on Nurture Armed with extraordinary new discoveries about our genes, acclaimed science writer Matt Ridley turns his attention to the nature-versus-nurture debate in a thoughtful book about the roots of human behaviour. Ridley recounts the hundred years' war between the partisans of nature and nurture to explain how this paradoxical creature, the human being, can be simultaneously free-willed and motivated by instinct and culture. With the decoding of the human genome, we now know that genes not only predetermine the broad structure of the brain, but they also absorb formative experiences, react to social cues, and even run memory. They are consequences as well as causes of the will.
C THE RED QUEEN	The Red Queen: Sex and the Evolution of Human Nature Sex is as fascinating to scientists as it is to the rest of us. A vast pool of knowledge, therefore, has been gleaned from research into the nature of sex, from the contentious problem of why the wasteful reproductive process exists at all, to how individuals choose their mates and what traits they find attractive. This fascinating book explores those findings, and their implications for the sexual behaviour of our own species. It uses the Red Queen from Alice in Wonderland who has to run at full speed to stay where she is as a metaphor for a whole range of sexual behaviours. The book was shortlisted for the 1994 Rhone-Poulenc Prize for Science Books.
Image: Sector	<ul> <li>Genome: The Autobiography of a Species in 23 Chapters</li> <li>The most important investigation of genetic science since The Selfish Gene, from the author of the critically acclaimed and best-selling The Red Queen and The Origins of Virtue.</li> <li>The genome is our 100,000 or so genes. The genome is the collective recipe for the building and running of the human body. These 100,000 genes are sited across 23 pairs of chromosomes. Genome, a book of about 100,000 words, is divided into 23 chapters, a chapter for each chromosome. The first chromosome, for example, contains our oldest genes, genes which we have in common with plants.</li> <li>By looking at our genes we can see the story of our evolution, what makes us individual, how our sexuality is determined, how we acquire language, why we are vulnerable to certain diseases, how mind has arisen. Genome also argues for the genetic foundations of free will. While many believe that genetics proves biological determinism, Ridley will show that in fact free will is itself in the genes. Everything that makes us human can be read in our genes. Early in the next century we will have determined the function of every one of these 100,000 genes.</li> </ul>
	The selfish gene As influential today as when it was first published, The Selfish Gene has become a classic exposition of evolutionary thought. Professor Dawkins articulates a gene's eye view of evolution - a view giving centre stage to these persistent units of information, and in which organisms can be seen as vehicles for their replication. This imaginative, powerful, and stylistically brilliant work not only brought the insights of Neo-Darwinism to a wide audience, but galvanized the biology community, generating much debate and stimulating whole new areas of research. Forty years later, its insights remain as relevant today as on the day it was published.

<section-header><text><text><text><text></text></text></text></text></section-header>	The Magic of Reality: How we know what's really true Magic takes many forms. The ancient Egyptians explained the night by suggesting that the goddess Nut swallowed the sun. The Vikings believed a rainbow was the gods' bridge to earth. These are magical, extraordinary tales. But there is another kind of magic, and it lies in the exhilaration of discovering the real answers to these questions. It is the magic of reality - science. Packed with inspiring explanations of space, time, and evolution, laced with humour and clever thought experiments, The Magic of Reality explores a stunningly wide range of natural phenomena. What is stuff made of? How old is the universe? What causes tsunamis? Who was the first man, or woman? This is a page-turning, inspirational detective story that not only mines all the sciences for its clues but primes the reader to think like a scientist too.
RICHARD RICHARD DAWKINS THEORETEST DAWKENS THEORETEST DAWKENS THEORETEST DAWKENS THEORETEST THEORET	The Greatest Show on Earth: The Evidence for Evolution In The Greatest Show on Earth Richard Dawkins takes on creationists, including followers of 'Intelligent Design' and all those who question the fact of evolution through natural selection. Like a detective arriving on the scene of a crime, he sifts through fascinating layers of scientific facts and disciplines to build a cast-iron case: from the living examples of natural selection in birds and insects; the 'time clocks' of trees and radioactive dating that calibrate a timescale for evolution; the fossil record and the traces of our earliest ancestors; to confirmation from molecular biology and genetics. All of this, and much more, bears witness to the truth of evolution.
	<b>The blind watchmaker</b> Acclaimed as the most influential work on evolution written in the last hundred years, The Blind Watchmaker offers an inspiring and accessible introduction to one of the most important scientific discoveries of all time. A brilliant and controversial book which demonstrates that evolution by natural selection - the unconscious, automatic, blind yet essentially non-random process discovered by Darwin - is the only answer to the biggest question of all: why do we exist?
RICHARD DAWKINS RIVER OUT OF EDEN	<b>River out of Eden</b> The river of Dawkins's title is a river of DNA, flowing through time from the beginning of life on earth to the present - and onwards. Dawkins explains that DNA must be thought of as the most sophisticated information system imaginable: 'Life is just bytes and bytes of information,' he writes. Using this perspective, he describes the mechanisms by which evolution has taken place, gradually but inexorably, over a period of three thousand million years. It is the story of how evolution happens, rather than a narrative of what has actually happened in evolution. He discusses current views on the process of human evolution, including the idea that we all trace back to a comparatively recent African 'Eve', and speculates that the 'information explosion' that was unleashed on Earth when DNA came into being has almost certainly happened in other places in the universe.
	<b>Climbing mount improbable</b> How could such an intricate object as the human eye - so complex and so precise - have come about by chance? In this masterful piece of popular science, Richard Dawkins builds a powerful and carefully reasoned argument for evolutionary adaptation as the force behind all life on earth. The metaphor of 'Mount Improbable' represents the combination of perfection and improbability that we find in the seemingly 'designed' complexity of living things. And through it all runs the thread of DNA, the molecule of life, responsible for its own destiny on an unending pilgrimage through time.

	Evocative illustrations accompany Dawkins' eloquent descriptions of astonishing adaptations in the living world.
<text></text>	The God Delusion Dawkins attacks God in all his forms. He eviscerates the major arguments for religion and demonstrates the supreme improbability of a supreme being. He shows how religion fuels war, foments bigotry and abuses children. The God Delusion is a brilliantly argued, fascinating polemic that will be required reading for anyone interested in this most emotional and important subject.
REVISED EDITION Language The Beauseuse Kince Book Bran Providence Riser Book Bran	<b>The language of genes</b> Did you know that two of every three people reading this book will die for reasons connected with the genes they carry? That our DNA gradually changes with age, which is why older parents are more likely to give birth to children with genetic defects than younger parents? That each individual is a kind of living fossil, carrying within a genetic record that goes back to the beginnings of humanity? In <i>The Language of Genes</i> , renowned geneticist Steve Jones explores the meanings and explodes the myths of human genetics, offering up an extraordinary picture of what we are, what we were, and what we may become.
INTRODUCING Genetics	<b>Genetics for Beginners</b> This book goes from Mendel to the human gene map and the treatment of inborn disease, and with the help of Borin Van Loon's ingenious illustrations, it shows how DNA was discovered, and how some genes may act in their own interests as much as of those who carry them. No-on can afford to be ignorant of genetics and, like it or not, many of us will have to make moral decisions in which genetics plays a part.
STEVE JONESS THE DESCENT OF MEN PY: THE DESCENT OF MEN Men and and and and the men and and and the men and and and and and and and and and and and	Y: the descent of men Men, towards the end of the last millennium, felt a sudden tightening of the bowels with the news that the services of their sex had at last been dispensed with. Dolly the Sheep - conceived without male assistance - had arrived. Her birth reminded at least half the population of how precarious man's position may be. What is the point of being a man? For a brief and essential instant, he is a donor of DNA; but outside that glorious moment his role is hard to understand. This book is about science not society; about maleness not manhood. The condition is, in the end, a matter of biology, whatever limits that science may have in explaining the human condition. Today's advances in medicine and in genetics mean at last we understand why men exist and why they are so frequent. We understand from hormones to hydraulics how man's machinery works, why he dies so young and how his brain differs from that of the rest of mankind.

COLIVER SACKS The Man Who Missok His Wife for a Hat Who Missok His Wife for a Hat State Man Who Missok His Wife for a Hat	The man who mistook his wife for a hat If a man has lost a leg or an eye, he knows he has lost a leg or an eye; but if he has lost a self – himself – he cannot know it, because he is no longer there to know it. In this extraordinary book, Dr. Oliver Sacks recounts the stories of patients struggling to adapt to often bizarre worlds of neurological disorder. Here are people who can no longer recognize everyday objects or those they love, who are stricken with violent tics or shout involuntary obscenities, and yet are gifted with uncanny artistic or mathematical talents. If inconceivably strange, these brilliant tales illuminate what it means to be human.
Winy, Jacid and ulinionary enthalling' ossaver STEVEN Phow the Mind Works	How the mind works Why do we laugh? What makes memories fade? Why do people believe in ghosts? From the acclaimed author of <i>Enlightenment Now</i> and <i>Better Angels of Our</i> <i>Nature</i> , <i>How the Mind Works</i> explores every aspect of mental life, showing that our minds are not a mystery, but a system of organs of computation designed by natural selection.
BRAIN SUSAN GREENFIELD Unlocking our inner world of emotions, memories, ideas and desires	<b>Brain story</b> In this tour through the brain's workings, Susan Greenfield brings the reader right up to date on the latest theories and controversies of neuroscience. From studies of the bizarre and disturbing effects of brain injuries, she tackles the questions that have baffled philosophers since antiquity.
C THE PRIVATE LIFE OF THE BRAIN Susan A. Greenfield	The private life of the brain What is happening in the brain when we drink too much alcohol, get high on ecstasy or experience road rage? Emotion, says internationally acclaimed neuroscientist Susan Greenfield, is the building block of consciousness. As our minds develop, we create a personalized inner world based on our experiences. But during periods of intense emotion, such as anger, fear, or euphoria, we can literally lose our mind, returning to the mental state we experienced as infants. Challenging many preconceived notions, Susan Greenfield's ground-breaking book seeks to answer one of science's most enduring mysteries: how our unique sense of self is created.
OXY CEN The Molecule that made the World were of the west designs provide that have read high Lance Nick Lance Communication	Oxygen: The Molecule that Made the World Oxygen has had extraordinary effects on life. Three hundred million years ago, in Carboniferous times, dragonflies grew as big as seagulls, with wingspans of nearly a metre. Researchers claim they could have flown only if the air had contained more oxygen than today - probably as much as 35 per cent. Giant spiders, tree-ferns, marine rock formations and fossil charcoals all tell the same story. High oxygen levels may also explain the global firestorm that contributed to the demise of the dinosaurs after the asteroid impact. The strange and profound effects that oxygen has had on the evolution of life pose a riddle, which this book sets out to answer. Oxygen is a toxic gas. Divers breathing pure oxygen at depth suffer from convulsions and lung injury. Fruit flies raised at twice normal atmospheric levels of oxygen live half as long as their siblings. Reactive forms of oxygen, known as free radicals, are thought to cause ageing in people. Yet if atmospheric oxygen reached 35

	per cent in the Carboniferous, why did it promote exuberant growth, instead
	of rapid ageing and death? Oxygen takes the reader on an enthralling
	journey, as gripping as a thriller, as it unravels the unexpected ways in which
	oxygen spurred the evolution of life and death.
Olivia Judson	Dr Tatiana's sex advice to all creation.
Mick O'Hare	Why don't penguins' feet freeze
Richard Fifield	Inside science (New scientist)
Mike O'Hare	The last word (New Scientist)
Roger Highfield	Can reindeer fly? The science of Christmas
Rob DeSalle & David	The science of Jurassic Park and the lost world: how to build a dinosaur
Lindley	
Robert Youngson	Scientific blunders: a brief history of how wrong scientists can sometimes
	be
J. Butler & Bruno Vincent	Do ants have arseholes?
Robert Winston	The human mind
Kathy Robinson	Children of silence: the story of Sarah's and Joanne's triumph over deafness
Stephen Gould	Dinosaur in a haystack
Stephen Gould	The hedgehog, the fox and the magister's pox
Dunbar	The trouble with science
Atkins	Galileo's finger
Robert Winston	Human instinct
Harriet Swain	Big questions in science
Jerry Lucas	Great unsolved mysteries of science
Robert Park	Voodoo science
John Gribbin	Almost everyone's guide to science: the universe, life, and everything
Fritjof Capra	The web of life: a new synthesis of mind and matter
Richard Dawkins	Unweaving the rainbow
Stewart Cohen	The collapse of chaos
Stephen Gould	An urchin in the storm
John Brockman	What we believe but cannot prove
Hellman	Great feuds in science
Royston Murphy Roberts	Serendipity. Accidental discoveries in science
Deborah Cadbury	The dinosaur hunters: a story of scientific rivalry and the discovery of the
	prehistoric world
Richard Fortey	Life: an unauthorised biography
Watson, James	A passion for DNA
Watson, James	The double helix
Watson, James	Genes, girls & Gamov
Maddox, Brenda	Rosalind Franklin
Gribbin, John	In search of the double helix
Miller, Jonathan; Van	Darwin for beginners
Loon, Borin	Darwin for beginners
Gribbin, John	Darwin in 90 minutes
Smith, John Maynard;	The origins of life: from the hirth of life to the origin of language
Szathmary, Eors	The origins of me. Nom the birth of me to the origin of language
Davies, Merryl Wyn	Darwin and fundamentalism
Smith, John Maynard	Did Darwin get it right?
Dennett, Daniel C.	Darwin's dangerous idea: evolution and the meanings of life
Jones, Steve	In the Blood: God, genes, and destiny
Wilmut, Ian; Campbell,	The second creation
Keith; Tudge, Colin	
	A life divided
Harris, John	Clones, genes and immortality
Jones, Steve; Van Loon,	Introducing genetics
Borin	
Jones, Steve	The language of genes

Watson, James	DNA
Crawford, Dorothy	The invisible enemy: a natural history of viruses
Stott, Rebecca	Darwin & the barnacle
Charlesworth, Brian; Charlesworth, Deborah	Evolution: a very short introduction
Spector, Tim	Your genes unzipped: how your genetic inheritance shapes your life
Carroll, Sean B.	The making of the fittest
Aczel, Amir D.	Probability 1: why there must be intelligent life in the universe
Dawkins, Richard	The ancestor's tale. A pilgrimage to the dawn of life
Davies, Paul	The fifth miracle
Whitley, Edward	Gerald Durrell's army
Lavers, C.	Why elephants have big ears: understanding patterns of life on earth
Rogers, Lesley J.	Minds of their own: thinking and awareness in animals
Hellman, Hal	Great feuds in medicine
Pemberton, Max	Trust me I'm a (junior) doctor
McNeill, Daniel	The face
Nilsson, Lennart	Behold man
Starr, Douglas	Blood: an epic history of medicine and commerce
Diamond, Jared	Why is sex fun: the evolution of human sexuality
Johnson, Stephen	Mind wide open: why you are what you think
Ramachandran, V.S; Blakeslee, Sandra	Phantoms in the brain: human nature and the architecture of the mind
Spurlock	Don't eat this book
Schlosser, Eric; Wilson,	East food nation
Charles	
Mann, John	Murder, magic & medicine
Gosden, Roger	Designer babies
Wurtzel, Elizabeth	Prozac nation
Nolen, Stephanie	28 stories of AIDS in Africa
Weinberg, Robert	One renegade cell: the quest for the origins of cancer