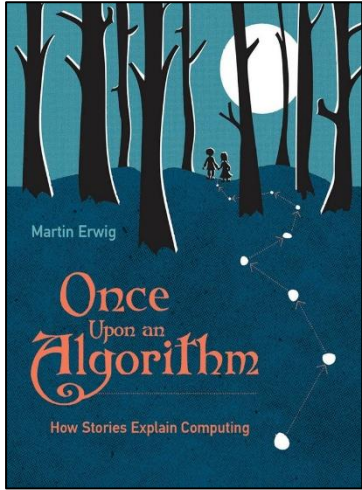
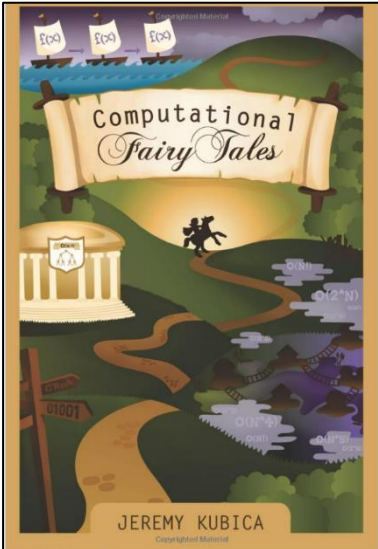
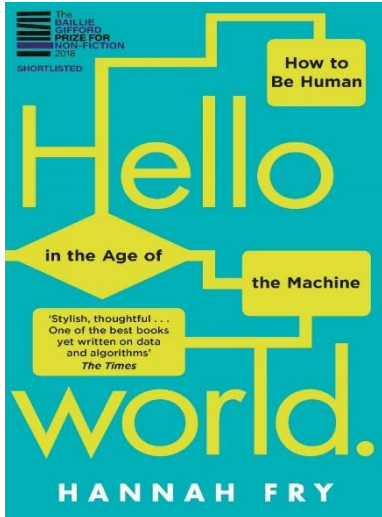
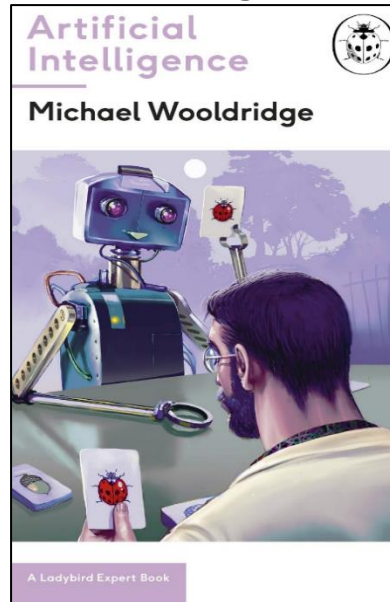


Reading Book Recommendations	
Year 7	<p style="text-align: center;">Once Upon an Algorithm</p>  <p>How Hansel and Gretel, Sherlock Holmes, the movie Groundhog Day, Harry Potter, and other familiar stories illustrate the concepts of computing. Picture a computer scientist, staring at a screen and clicking away frantically on a keyboard, hacking into a system, or perhaps developing an app. Now delete that picture. In <i>Once Upon an Algorithm</i>, Martin Erwig explains computation as something that takes place beyond electronic computers, and computer science as the study of systematic problem solving. Erwig points out that many daily activities involve problem solving.</p> <p style="text-align: center;">Computational Fairy Tales</p>  <p>Have you ever thought that computer science should include more dragons and wizards? <i>Computational Fairy Tales</i> introduces principles of computational thinking, illustrating high-level computer science concepts, the motivation behind them, and their application in a non-computer—fairy tale—domain. The goal of this book is not to provide comprehensive coverage of each topic, but rather to provide a high level overview of the breadth and excitement of computer science. It's a quest that will take you from learning the basics of programming in a blacksmith's forge to fighting curses with recursion. Fifteen seers delivered the same prophecy, without so much as a single minstrel to lighten the mood: an unknown darkness threatens the kingdom. Suddenly, Princess Ann finds herself sent forth alone to save the kingdom.</p>
Year 8	<p style="text-align: center;">Hello World</p>  <p>Hannah Fry takes us on a tour of the good, the bad and the downright ugly of the algorithms that surround us. In <i>Hello World</i> she lifts the lid on their inner workings, demonstrates their power, exposes their limitations, and examines whether they really are an improvement on the humans they are replacing.</p>

Artificial Intelligence



Written by computer scientist Michael Wooldridge, *Artificial Intelligence* chronicles the development of intelligent machines, from Turing's dream of machines that think, to today's digital assistants like Siri and Alexa.

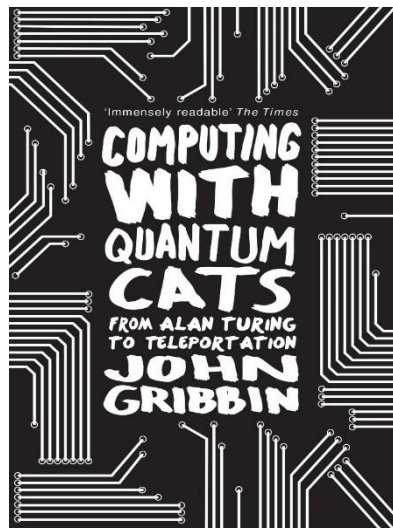
AI is not something that awaits us in the future. Inside you'll learn how we have come to rely on embedded AI software and what a world of ubiquitous AI might look like.

What's inside?

- The British mathematician Alan Turing
- Can machines 'understand'?
- Logical and Behavioural AI
- The reality of AI today
- AI tomorrow
- And much more . . .

Year 9

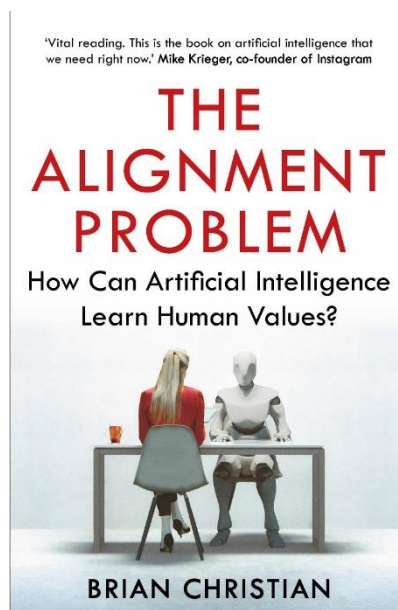
Computing with Quantum Cats



In his fascinating study of this cutting-edge technology, John Gribbin updates his previous views on the nature of quantum reality, arguing for a universe of many parallel worlds where 'everything is real'. Looking back to Alan Turing's work on the Enigma machine and the first electronic computer, Gribbin explains how quantum theory developed to make quantum computers work in practice as well as in principle. He takes us beyond the arena of theoretical physics to explore their practical applications – from machines which learn through 'intuition' and trial and error to unhackable laptops and smartphones. And he investigates the potential for this extraordinary science to create a world where communication occurs faster than light and teleportation is possible.

Year 10

The Alignment Problem



This conundrum - dubbed 'The Alignment Problem' by experts - is the subject of this timely and important book. From the AI program which cheats at computer games to the sexist algorithm behind Google Translate, bestselling author Brian Christian explains how, as AI develops, we rapidly approach a collision between artificial intelligence and ethics. If we stand by, we face a future with unregulated algorithms that propagate our biases - and worse - violate our most sacred values. Urgent and fascinating, this is an accessible primer to the most important issue facing AI researchers today.

Algorithms to Live By



The
COMPUTER SCIENCE
of
HUMAN DECISIONS

Brian Christian and Tom Griffiths

"Compelling and entertaining... Whether you want to optimize your to-do list, organize your closet, or understand human memory, this is a great read." —Charles Dubigg, author of *Smarter, Faster, Better*

PICADOR

In this dazzlingly interdisciplinary work, acclaimed author Brian Christian and cognitive scientist Tom Griffiths show us how the simple, precise algorithms used by computers can also untangle very human questions. Modern life is constrained by limited space and time, limits that give rise to a particular set of problems. What should we do, or leave undone, in a day or a lifetime? How much messiness should we accept? The authors explain how to have better hunches and when to leave things to chance, how to deal with overwhelming choices and how best to connect with others.