



# Einstein's Theories of Relativity; Splitting the Atom; The Discovery of DNA; The Discovery of Penicillin; The First Computers; The First Polio Vaccine

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Editorial Choice:

off

Media type:

Book

BfK Rating:

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These six books, in a series called 'Milestones in Modern Science', explain some twentieth-century scientific developments by putting them into historical context. Each book is peppered with sidebars on Facts, Points to Remember, and Key People, and ends with a Timeline of dates of relevant events, a Glossary, and Further Information in short, sometimes too short, lists of web sites and books. The explanations are generally clear and accurate.

**Einstein's Theories of Relativity** sketches the special and general theories, makes clear how nuclear weapons depend on his formula  $E=mc^2$ , and points to the challenge of the continuing search for Theories of Everything which he initiated. Minor cavils: X-Rays are misdefined, perhaps by over-editing, and the explanation of free fall is rather muddled. **Splitting the Atom** nods to Democritus, Dalton and Mendeleev, and goes on to radioactivity, the Rutherford atom, the electron, proton and neutron, nuclear fission and fusion and their uses, ending with quarks and the Standard

Model of elementary particles. **The Discovery of DNA** shows how the ideas underlying the understanding of genetics and evolution culminated in the discovery of the structure of DNA and its manipulation for the potential prevention or cure of diseases. Many of the current major topics, including stem cell research and genetically modified (GM) organisms, are presented in an unbiased and clear way. **The Discovery of Penicillin**, presents the history behind the discovery of penicillin by Alexander Fleming in 1928. By alternating history, anecdotes, and beautifully selected images, the author leads the reader to understand the main differences between bacteria and human cells and the enormous impact antibiotics have had on people's lives. The book also gives the reader some insight into the work of scientists, where an occasional stroke of luck is combined with precise and systematic work. The author pays due attention to the dangers of the current abuse of antibiotics as exemplified by the resurgence of the antibiotic resistant MRSA 'superbug'. **The First Computers** nicely describes their development in the context of inventions in electronics, including the relay, the vacuum tube (valve), the transistor and its miniaturisation, and makes clear the utility of binary arithmetic. The World War II uses of computers for coding and decoding are described, and the importance of software compatibility is emphasised. **The First Polio Vaccine** carefully describes the investigation of the causes of infections and how the first vaccines were developed. It then focuses on the outbreaks of poliomyelitis in the western world and how Salk, Sabin and their collaborators addressed and resolved the problem in two different but complementary ways. Minor point: the link between the MMR multiple vaccine and the resurgence of autism in children has recently been ruled out.

Running Order:

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