

THE TIMETABLESTM OF SCIENCE

A Chronology of the Most Important People
and Events in the History of Science

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CONTENTS

Science before there were scientists: 2,400,000–599 BC	viii
Egyptian medicine 2	
Mesopotamian mathematics 3	
Early metallurgy 6	
The calendar 10	
Santorini and Atlantis 15	
Early measures 18	
Greek and Hellenistic science: 600 BC–529 AD	20
Three classic problems 23	
Maps of the world 24	
The first known date 26	
The elements 31	
Early atomists 32	
Mathematics and mysticism 36	
The <i>Almagest</i> 46	
Classic volcanoes 54	
Science in many lands and medieval science: 530–1452	58
Science in China 59	
The rise of time (part one) 62	
Indian science 65	
The other Omar Khayyám 73	
Perpetual motion 78	
Impetus 84	
Understanding fossils (part one) 87	
The last alchemists 88	
The Renaissance and the Scientific Revolution: 1453–1659	90
Peppers and a whole lot more 93	
Inventing signs 94	
The nature of light (part one) 96	
A great scoundrel 107	
1543: a great year in publishing 108	
The immutability of the heavens 114	
Replacing Aristotle's physics 118	
Galileo and his telescope 126	
Saturn's rings 131	
The church and science: Galileo 134	
Galileo and measurement 137	
A lot out of nothing (part one) 142	
The Newtonian epoch: 1660–1734	146
Scientific societies 146	
Newton's <i>Principia</i> 148	
The first statistician 150	
Mad Madge 158	
The velocity of light 160	
The rise of time (part two) 164	
The nature of light (part two) 172	
Verifying Newton's theory of gravitation 178	
Phlogiston 182	
Temperature 184	
The Enlightenment and the Industrial Revolution: 1735–1819	188
The taming of the longitude 190	
When was the Industrial Revolution? 192	
Voltaire the scientist 205	
The transit of Venus 214	
The Lunar Society 216	
Flight 232	
Neptunism vs. Plutonism 234	
The metric system and beyond 241	
Understanding fossils (part two) 260	

Nineteenth-century science: 1820–1984

24

Electricity and magnetism	270	The nature of heat	320
Non-Euclidean geometry	272	From action at a distance to fields	334
The theory of evolution	275	The periodic table	338
Organic chemistry	276	Lights and lighting	354
Science and its former view of women	280	The germ theory of disease	356
Predicting the planets	290	The value of n	360
The legend of Galois	296	Does the ether exist?	366
The cell theory	306		

Twentieth-century science through World War II: 1895–1945

37

The quantum	380	The size of the universe	440
Relativity	384	Penicillin and antibiotics	452
Discovering new rays	388	The limits of mathematics	462
The electron and the atom	392	The mathematics of N. Bourbaki	471
A remarkable coincidence	396	Scientists and World War II	480
The age of Earth	404		

Science after World War II: 1946–1988

44

Discovering DNA	492	Ecology and sociobiology	544
From tubes to chips	494	Exploring the planets	549
History of the computer	495	New windows on the universe	553
Genetic engineering	497	Unifying the forces	555
Creating elements	504	The rise of catastrophism	559
A lot out of nothing (part two)	506	Genetic markers	567
Plate tectonics	517	AIDS	579
Measuring with waves	520	Strings: reality in 10 or 11 dimensions?	595
Lasers	523	Superconductors	603
God is left-handed	528	Missing mass	606
Quasars	541		

PREFACE

Like the arts, science is an important part of our cultural heritage. Since earliest times people have tried to explain the universe, as in the myths that arose about the sun and the moon. By at least 600 BC a few scholars started to replace these myths with rational explanations, the beginning of science. Well before that time, the body of wisdom and skill we call technology had become essential to the human way of life.

This book tells what happened in science and technology, when it happened, and who made it happen. This information is largely in the timetables, a chronological, subject-by-subject chart.

We also want to explain the context in which science takes place as it changes from period to period. This is the purpose of the nine overviews. Each one covers a period characterized by particular trends in scientific activity. Sometimes such a period is roughly the same as a well-recognized cultural event, such as the Renaissance, or a standard time interval, such as the nineteenth century. But the scientific periods are bounded by events important to the development of science.

Historians of science have abandoned the idea that science develops linearly, according to simple rules. Instead, the growth of science is much like a stream, growing slowly from its source, meandering through plains, and fed by other small streams until it becomes a river. In the timetables, you can note that sometimes, as in the early part of the twentieth century, physics is dominant—the main part of the stream. You can also see where new streams merge into the main body of science.

Short individual entries cannot do justice to the most important or most interesting developments in science. We have selected more than a hundred significant topics for special attention. Each of these topics, ranging from the first scientists to the recent development of warm-temperature superconductors, is explained briefly in boxes within the overviews or within the timetables.

The Timetables of Science is based upon the notion that

chronology is important: when something happened tells something about the event. If you know that Lucretius supported the atomic theory, it makes a difference in understanding what that means to know when Lucretius lived. The early supporters of atomism date from the fifth century BC and almost none of their work survives; we only have second hand reports of it. The people who made atomism a general belief, on the other hand, were chemists working near the start of the nineteenth century AD. The place of Lucretius—first century BC—tells that he was neither the philosophical innovator nor the practical chemist, but was important in transmitting the idea.

Unfortunately for this premise, it is not always clear in retrospect exactly when something happened. We list about 10,000 separate events. Especially in the early years, the day, the year, or even the decade for many events are not known. We have relied upon the consensus of many historians of science whose works we consulted to help locate the events as closely as possible.

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