EVOLUTION OF SCIENCE

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Scientific revolution began in 1543 in Europe

Copernicus (1473-1543) introduced a Helios-centric view which held that the earth revolves round the sun.

Great work "On the Revolutions of the Heavenly Spheres"

EVOLUTION OF SCIENCE

Galileo :
His contributions to observational astronomy include the telescopic confirmation of the phases of Venus, the observation of the four largest satellites of Jupiter, the observation of Saturn's rings, and the analysis of sunspots.

EVOLUTION OF SCIENCE

Other scientists of the period were

Robert Hook : cell : Micrographia
Blaise Pascal : "Treatise on the Equilibrium of Liquids"
Francis Bacon : Inductive method
Newton : Principia Mathematica
They emphasized modern experimentation and reason over traditional considerations.

EVOLUTION OF SCIENCE

Robert Boyle differentiated chemistry from alchemy. 17th century.
Lavoisier : theory of conservation of mass. 18th century
H.E. Armstrong : Heuristic method of teaching science.
Darwin's theory of Evolution : 19th century
John
Dalton (1803) described the properties of matter.
Mendeleev (1871) : Periodic Table.
Faraday and Ohm : electricity and magnetism

EVOLUTION OF SCIENCE

Francis Crick modeled DNA the secret of life.
Louis Pasteur : vaccine against rabies, Pasteurization.
Watson and Crick produced structure of DNA.

During the 19th century practice of science became professionalized , institutionalized and continued through 20th century.
Big Bang theory : George Lemaitre : 20th century

Development of Science and Technology in Ancient India

Indian Astronomer and mathematician Aryabhatta (476-550) in his Aryabhattiya (499) introduced in Trigonometric functions.

In 628 AD Brahma Gupta suggested that gravity was the force of attractions.

Development of Science and Technology in Ancient India

In Siddhanthasiromini
written by Bhaskara in the 12th century cover topics such as mean longitudes of planets, lunar eclipse , solar eclipse, latitudes of planets , rising and setting , the moons ,crest and parts of the sun.

Ayur Veda a traditional system of Medicine originated before 2500 BC

DEVELOPMENT OF SCIENCE EDUCATION IN MODERN INDIA

The important landmarks are:

- ★ Establishment of the first Medical College, Calcutta Medical College, established in 1835.
- ★ The first Research institution in science in 1876, the Indian Association for the Cultivation of Science' was founded.

DEVELOPMENT OF SCIENCE EDUCATION IN MODERN INDIA

- ★ All Indian Seminar on Teaching Science (1956)
- ★ National Science Policy Resolution (1958)
- ★ Indian Parliamentary and Scientific Committee
- ★ National Council of Educational Research and Training (1961)
- ★ Indian Education Commission (1964-66)
- ★ National Policy on Education (1986).

Indian Scientists who contributed to modern science

- ★ J C Bose (1858) Research on plants & animals. Biophysics
- ★ P C Ray (1861) Pharmaceutical Chemistry
- ★ C V Raman (1888) Raman Effect
- ★ Meghnath Saha (1893) Ionisation Formula
- ★ Satyedra Nath Bose (1894): Bose–Einstein condensate.

Indian Scientists who contributed to modern science

- ★ Homi J Bhabha : the father of Indian nuclear power
- ★ Visvesvaraya : Engineering science
- ★ R. Venkatraman : Astrophysics
- ★ Srinivasa Ramanujan : mathematician
- ★ Vikram Sarabhai : Father of India's space programme
- ★ Har Gobind Khorana : biochemist , artificial gene
- ★ Birbal Sahni : geologist , paleontology

Indian Scientists who contributed to modern science

- ★ K S Krishnan (1898) Associate of C V Raman
- ★ D S Kothari(1906) Education
- ★ Homi Jehangir Baba (1909) Atomic research
- ★ S Chandrasekhar(1910) Astrophysics
- ★ R S Krishnan (1911) Colloid Optics
- ★ Kurian Varghese (1921) : 'White Revolution'
- ★ Har Gobind Khorana (1922) Genetics

Indian Scientists who contributed to modern science

- ★ M S Viswanathan ((1925) Agricultural Scientist
- ★ Raja Ramanna(1925) Nuclear Physics
- ★ E C G Sudarsan (1931): Tachyons
- ★ P K Iyengar (1931) : Nuclear Physics
- ★ APJ Abdul Kalam – Rocket Technology(1931)
- ★ George Joseph (1938) Satellite Technology, remote sensing technology.
- ★ R N Agarwal (1941) Rocket Technology

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