

Science, Society & Self

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How our scientific beliefs form our self and our world

— A 3 day workshop or a full semester course —

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High Level Topic Outline

UNIT I

- Sustainable Science: Part I
- Wholeness of Nature
- Ancient Astronomy to Present Science

UNIT II

- BioPhysics and Genetics
- Fields and Philosophy
- ElectroMagnetism and Great Scientists

UNIT III

- BioChemistry: Aristotle to BioTechnology
- Earth Science: Nature's Cycles
- Thermal Trends and Stewardship

UNIT IV

- Color, Waves, and Perception
- Relativity, Quantum, and Child Intuition
- Sustainable Science: Part II

Chronology

THE ANCIENTS...

- Definition of Science vs. Technology
- India, Egypt, Islam, & China
- Mathematics
- Astronomy
- Technology
- Greco-Roman Culture
- Pre-Socratics, Pythagorists, & Atomists
- Greek Science: Platonism and Aristotelianism
- Medicine
- Engineering
- The Middle Ages: Christian & Islamic Science
- Physics

- Pyramid
- Magnet
- Compass
- Abacus
- Odometer
- Astrolabe
- Sun Dial
- Lever
- Wheel
- Inclined Plane
- Acids, Bases & Salts
- Trebuchet
- Parabolic Motion

THE 16TH & 17TH CENTURIES...

- The Renaissance and Copernicus
- Copernicus, Brahe, and Kepler
- Galileo and the Church
- Experimental Science
- Science and the Relation to Technology
- Descartes, Pascal, and Newton
- Mechanical and Mathematical Models
- Newtonian Physics

- Pendulum
- Clock
- Telescope
- Vacuum Tube

- Mass
- Velocity
- Momentum
- Acceleration

THE 18TH CENTURY...

- Newton's Effect on Science & Society
- The Early Industrial Revolution
- Steam Power & Machines
- Psychology
- The Birth of Chemistry, Geology, & Biology
- Darwin
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- Geared Machines
- Steam Engine
- Railroads
- The Mind
- Phylogeny

THE 19TH CENTURY...

- Industrialization and European Expansion
- Darwin & Evolution
- Faraday & Field Theory
- The Birth of Electromagnetic Devices
- Universal Lighting
- Aviation
- Automation
- What is Human Progress?
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- Chemical Battery
- Generator
- Electric Motor
- Transformer
- Airplane
- Automaton
- Mass Production

THE 20TH & 21ST CENTURIES...

- Outer Space & Inner Consciousness
- Genetic Engineering & Epigenetics
- Albert Einstein, New Physics, & The Bomb
- The Uncertainty Principle
- The Age of the Smart Machines

- The Internet
- Science, Technology, and Biotechnology
- Conclusion and Review

- Rocket
- DNA
- Fission
- Photoelectric
- Computer
- Network
- Virtual Reality
- AI
- Matter Responding to Consciousness

