

## A Brief History

mass and  
volume

Volume  
only

Physics is the branch of science that studies matter and energy. Physicists investigate the nature of matter. They study force and motion and forms of energy including heat, sound, light, electricity and magnetism.

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Vacuum (absence of matter)

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Void (outside the Universe)

1. Ancient Greece ~ (600 B.C.E. - 100 B.C.E.)

- ~ Study of physics begins
- ~ Greeks look for physical causes for phenomena that occur naturally.
- ~ Ideas based more on reasoning than actual experience.
- ~ philosophers of mathematics and science included Democritus, Archimedes, Plato, Pythagoras, Thales and Aristotle.
- ~ Aristotle's ideas influenced physics for 2000 years despite the fact that many of them were fundamentally flawed.

2. **Middle Ages** ~ (1100 C.E. ~ 1300 C.E.)
  - ~ First universities founded in Europe.
  - ~ Greek physics is the basis of the study of the natural world.

3. **Renaissance** ~ (1400 C.E. ~ 1600 C.E.)

~ “rebirth”

~ New approaches to scientific thinking.

~ Galileo Galilei develops the scientific method for performing investigations which is still used today.

4. **Classical Physics** ~ (1650 C.E. ~ 1750 C.E.)
  - ~ a.k.a Newtonian Physics due to the influence of Sir Isaac Newton.
  - ~ Many of today's ideas on mechanics, optics and gravitation, as well as mathematics were developed during this time (Calculus >Leibniz/Newton)

5. **Modern Physics** (1800 C.E. ~ present day)

~ Albert Einstein

~ high speed motion of particles, relativity and quantum physics.

~ electromagnetic radiation acts as both particles and waves.

(Wave/Particle Duality of Light)

~ Existence and behaviour of atoms, light and electrons understood and predicted with incredible accuracy.