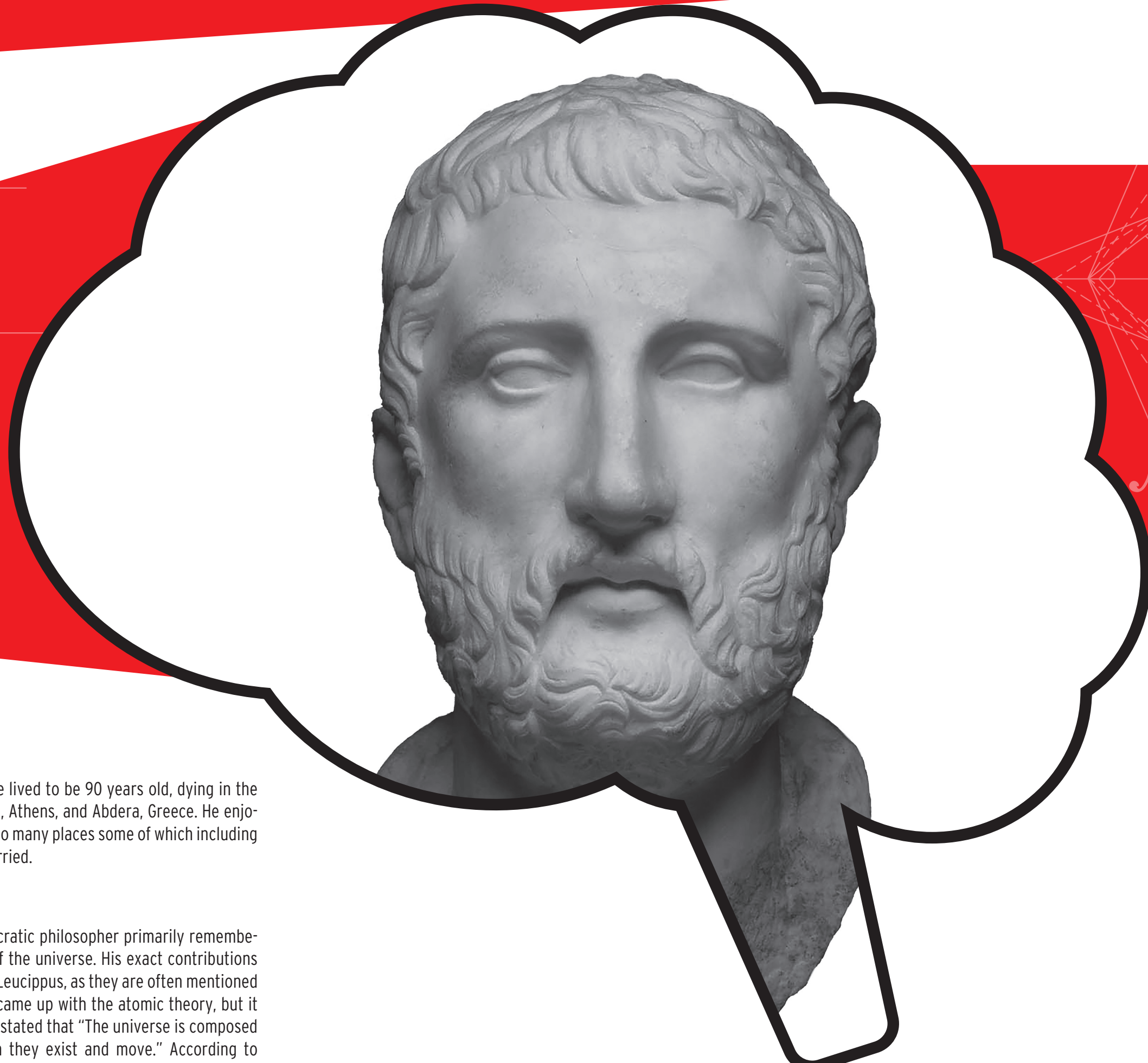


ANATOLIA "THE LAND WHERE SCIENCE WAS BORN AND FLOURISHED"



LIFE

Democritus was born in Abdera, Greece in 460BC. He lived to be 90 years old, dying in the year 370BC. He studied natural philosophy in Thrace, Athens, and Abdera, Greece. He enjoyed studying geometry as well. Democritus traveled to many places some of which including India, Egypt, and Babylon. Democritus was never married.

STUDY

Democritus was an influential Ancient Greek pre-Socratic philosopher primarily remembered today for his formulation of an atomic theory of the universe. His exact contributions are difficult to disentangle from those of his mentor Leucippus, as they are often mentioned together in texts. His mentor, Leucippus, originally came up with the atomic theory, but it was then adopted by Democritus. The atomic theory stated that "The universe is composed of two elements: the atoms and the void in which they exist and move." According to Democritus atoms were minuscule quantities of matter. Democritus hypothesized that atoms cannot be destroyed, differ in size, shape and temperature, are always moving, and are invisible. He believed that there are an infinite number of atoms. This hypothesis was created in 465BC. Their speculation on atoms, taken from Leucippus, bears a passing and partial resemblance to the 19th-century understanding of atomic structure that has led some to regard Democritus as more of a scientist than other Greek philosophers; however, their ideas rested on very different bases. Largely ignored in ancient Athens, Democritus is said to have been disliked so much by Plato that the latter wished all of his books burned. He was nevertheless well known to his fellow northern-born philosopher Aristotle. Many consider Democritus to be the "father of modern science". None of his writings have survived; only fragments are known from his vast body of work. He studied natural philosophy in Thrace, Athens, and Abdera, Greece. He enjoyed studying geometry as well. Also known as the 'laughing philosopher' because of the importance he placed on 'cheerfulness', Democritus was the first philosopher to posit that what we refer to as the 'Milky Way' was the light of stars reaching our perception and that the universe may in fact be a multi-verse with other planets sustaining life (a theory which Physicists today are increasingly recognizing as mathematically probable).

WORKS

During that long career Democritus wrote many books.

Little Cosmology, a veritable encyclopedia, has perished because its contents displeased those, such as the philosopher Plato, whose decisions determined which works should be preserved. Of all of Democritus's many-sided interests, his espousal of the atomic theory accounts for his renown and also for the disappearance of the treatises which won him that renown.

This is Democritus' atomic theory exactly:

1. All matter consists of invisible particles called atoms.
 2. Atoms are indestructible.
 3. Atoms are solid but invisible.
 4. Atoms are homogenous.
 5. Atoms differ in size, shape, mass, position, and arrangement.
- > Solids are made of small, pointy atoms.
-> Liquids are made of large, round atoms.
-> Oils are made of very fine, small atoms that can easily slip past each other.

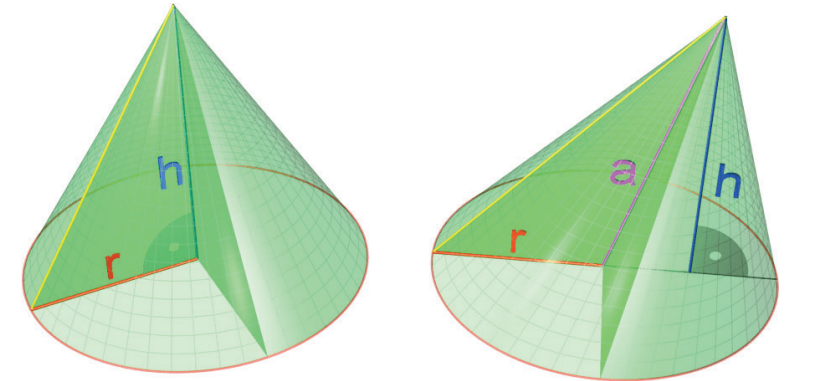


DEMOCRITUS 400 BC

This was Democritus' atomic model. It was simply a round sphere with no electrons, protons, or neutrons. Democritus created the first atomic model. His contribution helped people with understanding the idea of an atom, and helped other scientists further look into the science of the atom and its generic makeup.

Mathematics

Democritus was also a pioneer of mathematics and geometry in particular. We only know this through citations of his works (titled On Numbers, On Geometrics, On Tangencies, On Mapping, and On Irrationals) in other writings, since most of Democritus's body of work did not survive the Middle Ages. Democritus was among the first to observe that a cone or pyramid has one-third the volume of a cylinder or prism respectively with the same base and height.



Right circular and oblique circular cones

DEMOCRITUS

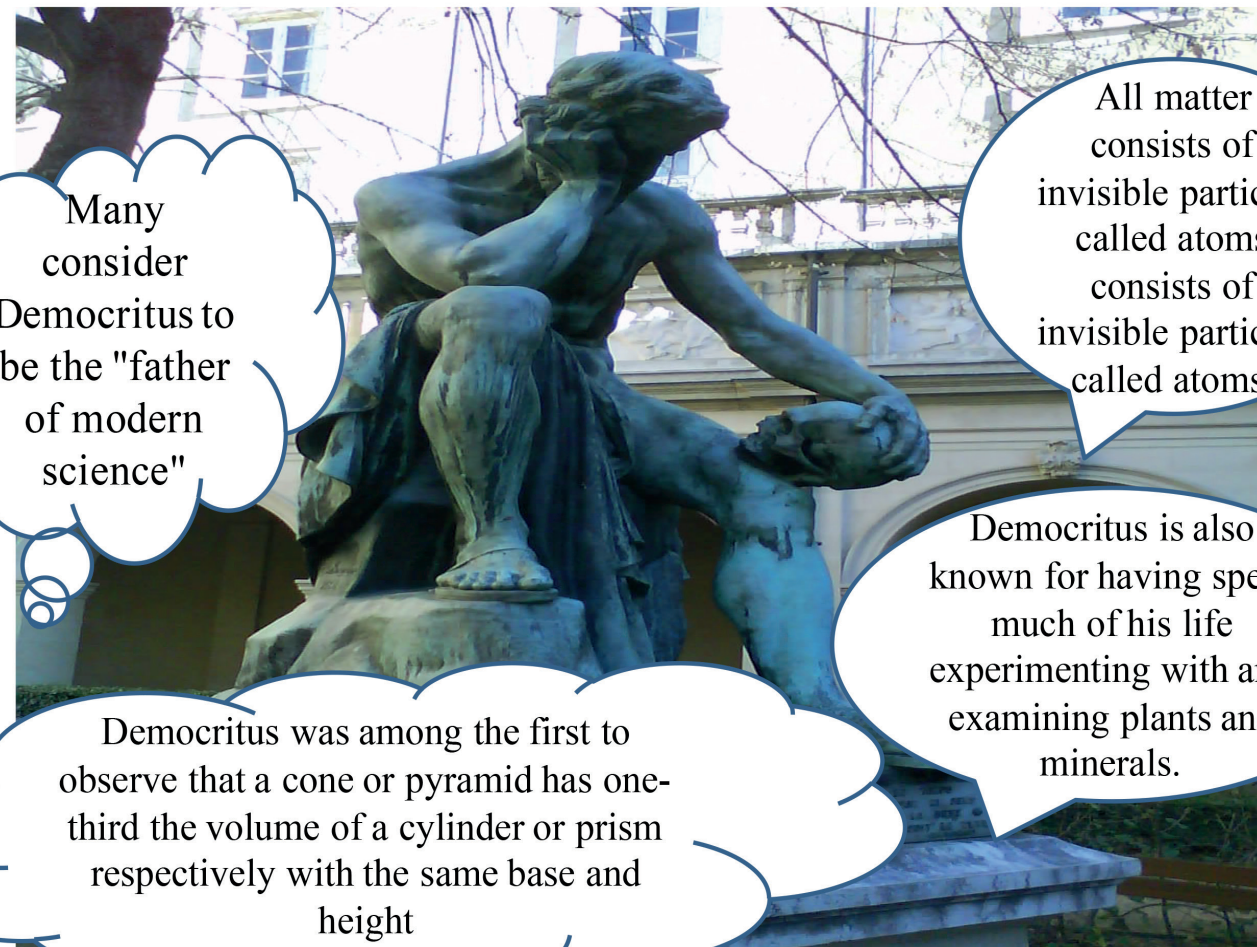
Born & Died: C. 460 – C. 370 BC

Main Interest: Metaphysics, Mathematics

School: Ionian, Miletus School

Notable Ideas: Atomism, Aetiology

Ultimately, Democritus is credited as being one of the founders of the modern science because his methods and theories closely resemble those of modern astronomers and physicists. And while his version of the atomic model differs greatly from our modern conceptions, his work was of undoubted value, and was a step in an ongoing process that included such scientists as John Dalton, Neils Bohr and even Albert Einstein. Nothing exists except atoms and empty space everything else is opinion Happiness resides not in possessions and not in gold; the feeling of happiness dwells in the soul.



Many consider Democritus to be the "father of modern science"

All matter consists of invisible particles called atoms consists of invisible particles called atoms.

Democritus is also known for having spent much of his life experimenting with and examining plants and minerals.

Democritus was among the first to observe that a cone or pyramid has one-third the volume of a cylinder or prism respectively with the same base and height

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