**SCIENCE UNIVERSE**

*For other use*e as deduced by the prevailing [Big Bang theory](https://en.wikipedia.org/wiki/Big_Bang), a result from science and obtained knowledge

**Science** is a systematic endeavor that [builds](https://en.wikipedia.org/wiki/Scientific_method) and organizes [knowledge](https://en.wikipedia.org/wiki/Knowledge) in the form of [testable](https://en.wikipedia.org/wiki/Testability) [explanations](https://en.wikipedia.org/wiki/Explanation) and [predictions](https://en.wikipedia.org/wiki/Prediction) about the [universe](https://en.wikipedia.org/wiki/Universe).[[1]](https://en.wikipedia.org/wiki/Science#cite_note-EOWilson1999a2-1)[[2]](https://en.wikipedia.org/wiki/Science#cite_note-Heilbron-2)

The earliest written records of identifiable [predecessors to modern science](https://en.wikipedia.org/wiki/History_of_science) come from [Ancient Egypt](https://en.wikipedia.org/wiki/Ancient_Egypt) and [Mesopotamia](https://en.wikipedia.org/wiki/Mesopotamia) from around 3000 to 1200 [BCE](https://en.wikipedia.org/wiki/Common_Era). Their contributions to [mathematics](https://en.wikipedia.org/wiki/Mathematics), [astronomy](https://en.wikipedia.org/wiki/Astronomy), and [medicine](https://en.wikipedia.org/wiki/Medicine) entered and shaped the Greek [natural philosophy](https://en.wikipedia.org/wiki/Natural_philosophy) of [classical antiquity](https://en.wikipedia.org/wiki/Classical_antiquity), whereby formal attempts were made to provide explanations of events in the [physical world](https://en.wikipedia.org/wiki/Universe) based on natural causes.[[3]](https://en.wikipedia.org/wiki/Science#cite_note-Lindberg2007a-3): 12[[4]](https://en.wikipedia.org/wiki/Science#cite_note-Grant2007a-4) After the [fall of the Western Roman Empire](https://en.wikipedia.org/wiki/Fall_of_the_Western_Roman_Empire), knowledge of [Greek conceptions of the world](https://en.wikipedia.org/wiki/History_of_science_in_classical_antiquity) deteriorated in [Western Europe](https://en.wikipedia.org/wiki/Western_Europe) during the early centuries (400 to 1000 CE) of the [Middle Ages](https://en.wikipedia.org/wiki/Middle_Ages), but was preserved in the [Muslim world](https://en.wikipedia.org/wiki/Muslim_world) during the [Islamic Golden Age](https://en.wikipedia.org/wiki/Islamic_Golden_Age)[[5]](https://en.wikipedia.org/wiki/Science#cite_note-Lindberg8-5) and later by the efforts of [Byzantine Greek scholars](https://en.wikipedia.org/wiki/Greek_scholars_in_the_Renaissance) who brought Greek manuscripts from the dying Byzantine Empire to Western Europe in the [Renaissance](https://en.wikipedia.org/wiki/Renaissance).

The recovery and assimilation of [Greek works](https://en.wikipedia.org/wiki/Ancient_Greek_literature) and [Islamic inquiries](https://en.wikipedia.org/wiki/Science_in_the_medieval_Islamic_world) into Western Europe from the 10th to 13th century revived "[natural philosophy](https://en.wikipedia.org/wiki/Natural_philosophy)",[[6]](https://en.wikipedia.org/wiki/Science#cite_note-Lindberg9-6)[[7]](https://en.wikipedia.org/wiki/Science#cite_note-Lindberg10-7) which was later transformed by the [Scientific Revolution](https://en.wikipedia.org/wiki/Scientific_Revolution) that began in the 16th century[[8]](https://en.wikipedia.org/wiki/Science#cite_note-Principe2011-8) as new ideas and discoveries departed from previous Greek conceptions and traditions.[[9]](https://en.wikipedia.org/wiki/Science#cite_note-Lindberg14-9)[[10]](https://en.wikipedia.org/wiki/Science#cite_note-Grant2007c-10) The [scientific method](https://en.wikipedia.org/wiki/Scientific_method) soon played a greater role in knowledge creation and it was not until the [19th century](https://en.wikipedia.org/wiki/19th_century_in_science) that many of the [institutional](https://en.wikipedia.org/wiki/Institutionalisation) and [professional](https://en.wikipedia.org/wiki/Professionalization) features of science began to take shape,[[11]](https://en.wikipedia.org/wiki/Science#cite_note-Cahan_Natural_Philosophy-11)[[12]](https://en.wikipedia.org/wiki/Science#cite_note-Lightman_19th2-12) along with the changing of "natural philosophy" to "natural science".[[13]](https://en.wikipedia.org/wiki/Science#cite_note-13)

Modern science is typically divided into three major branches:[[14]](https://en.wikipedia.org/wiki/Science#cite_note-cohen2021-14) [natural sciences](https://en.wikipedia.org/wiki/Natural_science) (e.g., [biology](https://en.wikipedia.org/wiki/Biology), [chemistry](https://en.wikipedia.org/wiki/Chemistry), and [physics](https://en.wikipedia.org/wiki/Physics)), which study the [physical world](https://en.wikipedia.org/wiki/Universe); the [social sciences](https://en.wikipedia.org/wiki/Social_science) (e.g., [economics](https://en.wikipedia.org/wiki/Economics), [psychology](https://en.wikipedia.org/wiki/Psychology), and [sociology](https://en.wikipedia.org/wiki/Sociology)), which study [individuals](https://en.wikipedia.org/wiki/Individual) and [societies](https://en.wikipedia.org/wiki/Society);[[15]](https://en.wikipedia.org/wiki/Science#cite_note-colanderhunt2019-15)[[16]](https://en.wikipedia.org/wiki/Science#cite_note-nisbetgreenfeld2021-16) and the [formal sciences](https://en.wikipedia.org/wiki/Formal_science) (e.g., [logic](https://en.wikipedia.org/wiki/Logic), [mathematics](https://en.wikipedia.org/wiki/Mathematics), and [theoretical computer science](https://en.wikipedia.org/wiki/Theoretical_computer_science)), which study [formal systems](https://en.wikipedia.org/wiki/Formal_system), governed by [axioms](https://en.wikipedia.org/wiki/Axiom) and rules.[[17]](https://en.wikipedia.org/wiki/Science#cite_note-l%C3%B6we2002-17)[[18]](https://en.wikipedia.org/wiki/Science#cite_note-rucker2019-18) There is disagreement whether the formal sciences are science disciplines,[[19]](https://en.wikipedia.org/wiki/Science#cite_note-Bishop1991-19)[[20]](https://en.wikipedia.org/wiki/Science#cite_note-nickles2013-20)[[21]](https://en.wikipedia.org/wiki/Science#cite_note-Bunge_19982-21) because they do not rely on [empirical evidence](https://en.wikipedia.org/wiki/Empirical_evidence).[[22]](https://en.wikipedia.org/wiki/Science#cite_note-Fetzer2013-22)[[20]](https://en.wikipedia.org/wiki/Science#cite_note-nickles2013-20) [Applied sciences](https://en.wikipedia.org/wiki/Applied_science) are disciplines that use scientific knowledge for practical purposes, such as in [engineering](https://en.wikipedia.org/wiki/Engineering) and [medicine](https://en.wikipedia.org/wiki/Medicine).[[23]](https://en.wikipedia.org/wiki/Science#cite_note-fischer20142-23)[[24]](https://en.wikipedia.org/wiki/Science#cite_note-sinclair19932-24)[[25]](https://en.wikipedia.org/wiki/Science#cite_note-mbunge1966-25)

New knowledge in science is advanced by [research](https://en.wikipedia.org/wiki/Research) from [scientists](https://en.wikipedia.org/wiki/Scientist) who are motivated by curiosity about the world and a desire to solve problems.[[26]](https://en.wikipedia.org/wiki/Science#cite_note-macritchie2011-26)[[27]](https://en.wikipedia.org/wiki/Science#cite_note-marder2011-27) Contemporary scientific research is highly collaborative and is usually done by teams in [academic](https://en.wikipedia.org/wiki/Academic_institution) and [research institutions](https://en.wikipedia.org/wiki/Research_institute),[[28]](https://en.wikipedia.org/wiki/Science#cite_note-deridder2020-28) [government agencies](https://en.wikipedia.org/wiki/Government_agency), and [companies](https://en.wikipedia.org/wiki/Company).[[29]](https://en.wikipedia.org/wiki/Science#cite_note-lindberg2007h-29)[[30]](https://en.wikipedia.org/wiki/Science#cite_note-gertner2013-30) The practical impact of their work has led to the emergence of [science policies](https://en.wikipedia.org/wiki/Science_policy) that seek to influence the scientific enterprise by prioritizing the [ethical and moral development](https://en.wikipedia.org/wiki/Responsible_Research_and_Innovation) of [commercial products](https://en.wikipedia.org/wiki/Product_(business)), [armaments](https://en.wikipedia.org/wiki/Weapon), [health care](https://en.wikipedia.org/wiki/Health_care), [public infrastructure](https://en.wikipedia.org/wiki/Public_infrastructure), and [environmental protection](https://en.wikipedia.org/wiki/Environmental_protection).

Etymology

https://upload.wikimedia.org/wikipedia/commons/thumb/9/99/Wiktionary-logo-en-v2.svg/40px-Wiktionary-logo-en-v2.svg.png

Look up [***science***](https://en.wiktionary.org/wiki/science) in Wiktionary, the free dictionary.

The word *science* has been used in [Middle English](https://en.wikipedia.org/wiki/Middle_English) since the 14th century in the sense of "the state of knowing". The word was borrowed from the [Anglo-Norman language](https://en.wikipedia.org/wiki/Anglo-Norman_language) as the suffix *-cience*, which was borrowed from the [Latin](https://en.wikipedia.org/wiki/Latin) word [*scientia*](https://en.wiktionary.org/wiki/scientia), meaning "knowledge, awareness, understanding". It is a [noun derivative](https://en.wikipedia.org/wiki/Morphological_derivation) of the Latin [*sciens*](https://en.wiktionary.org/wiki/sciens) meaning "knowing", and undisputedly derived from the Latin [*sciō*](https://en.wiktionary.org/wiki/scio), the [present participle](https://en.wikipedia.org/wiki/Present_participle) [*scīre*](https://en.wiktionary.org/wiki/scire), meaning "to know".[[31]](https://en.wikipedia.org/wiki/Science#cite_note-webster-31)

There are many hypotheses for *science*'s ultimate word origin. According to [Michiel de Vaan](https://en.wikipedia.org/wiki/Michiel_de_Vaan" \o "Michiel de Vaan), [Dutch](https://en.wikipedia.org/wiki/Dutch_people) linguist and [Indo-Europeanist](https://en.wikipedia.org/wiki/Indo-European_studies), *sciō* may have its origin in the [Proto-Italic language](https://en.wikipedia.org/wiki/Proto-Italic_language) as \**skije-* or \**skijo-* meaning "to know", which may originate from [Proto-Indo-European language](https://en.wikipedia.org/wiki/Proto-Indo-European_language) as *\*skh1-ie, \*skh1-io*, meaning "to incise". The *[Lexikon der indogermanischen Verben](https://en.wikipedia.org/wiki/Lexikon_der_indogermanischen_Verben" \o "Lexikon der indogermanischen Verben)* proposed *sciō* is a [back-formation](https://en.wikipedia.org/wiki/Back-formation) of [*nescīre*](https://en.wiktionary.org/wiki/nescire), meaning "to not know, be unfamiliar with", which may derive from Proto-Indo-European [*\*sekH-*](https://en.wiktionary.org/wiki/Reconstruction:Proto-Indo-European/sek-) in Latin [*secāre*](https://en.wiktionary.org/wiki/secare), or *\*skh2-*, from *\*sḱʰeh2(i)-* meaning "to cut".[[32]](https://en.wikipedia.org/wiki/Science#cite_note-32)

In the past, science was a synonym for "knowledge" or "study", in keeping with its [Latin](https://en.wikipedia.org/wiki/Latin) origin. A person who conducted scientific research was called a "natural philosopher" or "man of science".[[33]](https://en.wikipedia.org/wiki/Science#cite_note-33) In 1834, [William Whewell](https://en.wikipedia.org/wiki/William_Whewell) introduced the term *scientist* in a review of [Mary Somerville](https://en.wikipedia.org/wiki/Mary_Somerville)'s book [*On the Connexion of the Physical Sciences*](https://en.wikipedia.org/wiki/On_the_Connexion_of_the_Physical_Sciences)*,*[[34]](https://en.wikipedia.org/wiki/Science#cite_note-Whewell_scientist-34) crediting it to "some ingenious gentleman" (possibly himself.

**Early history**

*Main article:*[*History of science in early cultures*](https://en.wikipedia.org/wiki/History_of_science_in_early_cultures)

[](https://en.wikipedia.org/wiki/File:Plimpton_322.jpg)

The [Plimpton 322 tablet](https://en.wikipedia.org/wiki/Plimpton_322) by the [Babylonians](https://en.wikipedia.org/wiki/Babylonia) records [Pythagorean triples](https://en.wikipedia.org/wiki/Pythagorean_triple), written in about 1800 BCE.

Science has no single origin. Rather, systematic methods emerged gradually over the course of tens of thousands of years,[[36]](https://en.wikipedia.org/wiki/Science" \l "cite_note-cognitive-basis-36)[[37]](https://en.wikipedia.org/wiki/Science#cite_note-causal-cognition-37) taking different forms around the world, and few details are known about the very earliest developments. [Women](https://en.wikipedia.org/wiki/Women_in_science) likely played a central role in prehistoric science,[[38]](https://en.wikipedia.org/wiki/Science" \l "cite_note-38) as did [religious rituals](https://en.wikipedia.org/wiki/Ritual#Religious_perspectives).[[39]](https://en.wikipedia.org/wiki/Science#cite_note-39) Some scholars use the term "[protoscience](https://en.wikipedia.org/wiki/Protoscience" \o "Protoscience)" to label activities in the past that resemble modern science in some but not all features;[[40]](https://en.wikipedia.org/wiki/Science#cite_note-40)[[41]](https://en.wikipedia.org/wiki/Science#cite_note-41)[[42]](https://en.wikipedia.org/wiki/Science#cite_note-42) however, this label has also been criticized as denigrating[[43]](https://en.wikipedia.org/wiki/Science#cite_note-43) or too suggestive of [presentism](https://en.wikipedia.org/wiki/Presentism_(literary_and_historical_analysis)), thinking about those activities only in relation to modern categories.[[44]](https://en.wikipedia.org/wiki/Science#cite_note-44)

Direct evidence for scientific processes becomes clearer with the advent of [writing systems](https://en.wikipedia.org/wiki/Writing_systems) in early civilizations like [Ancient Egypt](https://en.wikipedia.org/wiki/Ancient_Egypt) and [Mesopotamia](https://en.wikipedia.org/wiki/Mesopotamia), creating the earliest written records in the [history of science](https://en.wikipedia.org/wiki/History_of_science) in around 3000 to 1200 [BCE](https://en.wikipedia.org/wiki/Common_Era).[[3]](https://en.wikipedia.org/wiki/Science#cite_note-Lindberg2007a-3): 12–15[[4]](https://en.wikipedia.org/wiki/Science#cite_note-Grant2007a-4) Although the words and concepts of "science" and "nature" were not part of the conceptual landscape at the time, the ancient Egyptians and Mesopotamians made contributions that would later find a place in Greek and medieval science: mathematics, astronomy, and medicine.[[45]](https://en.wikipedia.org/wiki/Science#cite_note-45)[[3]](https://en.wikipedia.org/wiki/Science#cite_note-Lindberg2007a-3): 12 From the 3rd millennium BCE, the ancient Egyptians developed a [decimal numbering system](https://en.wikipedia.org/wiki/Decimal),[[46]](https://en.wikipedia.org/wiki/Science#cite_note-46) solved practical problems using [geometry](https://en.wikipedia.org/wiki/Geometry),[[47]](https://en.wikipedia.org/wiki/Science#cite_note-47) and developed a [calendar](https://en.wikipedia.org/wiki/Egyptian_calendar).[[48]](https://en.wikipedia.org/wiki/Science#cite_note-48) Their healing therapies involved drug treatments and the supernatural, such as [prayers](https://en.wikipedia.org/wiki/Prayer), [incantations](https://en.wikipedia.org/wiki/Incantation), and rituals.[[3]](https://en.wikipedia.org/wiki/Science#cite_note-Lindberg2007a-3): 9

The ancient [Mesopotamians](https://en.wikipedia.org/wiki/Mesopotamia) used knowledge about the properties of various natural chemicals for manufacturing [pottery](https://en.wikipedia.org/wiki/Pottery), [faience](https://en.wikipedia.org/wiki/Faience), glass, soap, metals, [lime plaster](https://en.wikipedia.org/wiki/Lime_plaster), and waterproofing.[[49]](https://en.wikipedia.org/wiki/Science#cite_note-McIntosh2005-49) They studied [animal physiology](https://en.wikipedia.org/wiki/Animal_physiology), [anatomy](https://en.wikipedia.org/wiki/Anatomy), [behavior](https://en.wikipedia.org/wiki/Animal_behavior" \o "Animal behavior), and [astrology](https://en.wikipedia.org/wiki/Astrology) for [divinatory](https://en.wikipedia.org/wiki/Divination) purposes.[[50]](https://en.wikipedia.org/wiki/Science#cite_note-50) The Mesopotamians had an [intense interest in medicine](https://en.wikipedia.org/wiki/Babylonian_medicine)[[49]](https://en.wikipedia.org/wiki/Science#cite_note-McIntosh2005-49) and the earliest [medical prescriptions](https://en.wikipedia.org/wiki/Medical_prescription) appeared in [Sumerian](https://en.wikipedia.org/wiki/Sumerian_language) during the [Third Dynasty of Ur](https://en.wikipedia.org/wiki/Third_Dynasty_of_Ur).[[51]](https://en.wikipedia.org/wiki/Science#cite_note-51) They seem to study scientific subjects which have practical or religious applications and have little interest of satisfying curiosity.[[49]](https://en.wikipedia.org/wiki/Science#cite_note-McIntosh2005-49)

**Classical antiquity**

*Main article:*[*History of science in classical antiquity*](https://en.wikipedia.org/wiki/History_of_science_in_classical_antiquity)

[](https://en.wikipedia.org/wiki/File:MANNapoli_124545_plato's_academy_mosaic.jpg)

[Plato's Academy mosaic](https://en.wikipedia.org/wiki/Plato%27s_Academy_mosaic), made between 100 BCE to 79 AD, shows many Greek philosophers and scholars.

In [classical antiquity](https://en.wikipedia.org/wiki/Classical_antiquity), there is no real ancient analog of a modern [scientist](https://en.wikipedia.org/wiki/Scientist). Instead, well-educated, usually upper-class, and almost universally male individuals performed various investigations into nature whenever they could afford the time.[[52]](https://en.wikipedia.org/wiki/Science#cite_note-Lehoux-52) Before the invention or discovery of the [concept](https://en.wikipedia.org/wiki/Concept) of *[phusis](https://en.wikipedia.org/wiki/Phusis" \o "Phusis)* or nature by the [pre-Socratic philosophers](https://en.wikipedia.org/wiki/Pre-Socratic_philosopher), the same words tend to be used to describe the natural "way" in which a plant grows,[[53]](https://en.wikipedia.org/wiki/Science#cite_note-naddaf-53) and the "way" in which, for example, one tribe worships a particular god. For this reason, it is claimed that these men were the first philosophers in the strict sense and the first to clearly distinguish "nature" and "convention".[[54]](https://en.wikipedia.org/wiki/Science#cite_note-54)

The early [Greek philosophers](https://en.wikipedia.org/wiki/Ancient_Greek_philosophy) of the [Milesian school](https://en.wikipedia.org/wiki/Milesian_school" \o "Milesian school), which was founded by [Thales of Miletus](https://en.wikipedia.org/wiki/Thales_of_Miletus) and later continued by his successors [Anaximander](https://en.wikipedia.org/wiki/Anaximander) and [Anaximenes](https://en.wikipedia.org/wiki/Anaximenes_of_Miletus" \o "Anaximenes of Miletus), were the first to attempt to explain [natural phenomena](https://en.wikipedia.org/wiki/List_of_natural_phenomena) without relying on the [supernatural](https://en.wikipedia.org/wiki/Supernatural).[[55]](https://en.wikipedia.org/wiki/Science#cite_note-O'Grady-55) The [Pythagoreans](https://en.wikipedia.org/wiki/Pythagoreanism) developed a complex number philosophy[[56]](https://en.wikipedia.org/wiki/Science" \l "cite_note-Burkert1972-56): 467–68 and contributed significantly to the development of mathematical science.[[56]](https://en.wikipedia.org/wiki/Science#cite_note-Burkert1972-56): 465 The [theory of atoms](https://en.wikipedia.org/wiki/Atomism) was developed by the Greek philosopher [Leucippus](https://en.wikipedia.org/wiki/Leucippus) and his student [Democritus](https://en.wikipedia.org/wiki/Democritus).[[57]](https://en.wikipedia.org/wiki/Science#cite_note-57)[[58]](https://en.wikipedia.org/wiki/Science#cite_note-58) Later, [Epicurus](https://en.wikipedia.org/wiki/Epicurus) would develop a full natural cosmology based on atomism, and would adopt a "canon" (ruler, standard) which established physical criteria or standards of scientific truth.[[59]](https://en.wikipedia.org/wiki/Science#cite_note-canon-59) The Greek doctor [Hippocrates](https://en.wikipedia.org/wiki/Hippocrates) established the tradition of systematic medical science[[60]](https://en.wikipedia.org/wiki/Science#cite_note-60)[[61]](https://en.wikipedia.org/wiki/Science#cite_note-Touwaide2005-61) and is known as "[The Father of Medicine](https://en.wikipedia.org/wiki/List_of_persons_considered_father_or_mother_of_a_scientific_field#Medicine_and_physiology)".[[62]](https://en.wikipedia.org/wiki/Science#cite_note-62)

A turning point in the history of early philosophical science was [Socrates](https://en.wikipedia.org/wiki/Socrates)' example of applying philosophy to the study of human matters, including human nature, the nature of political communities, and human knowledge itself. The [Socratic method](https://en.wikipedia.org/wiki/Socratic_method) as documented by [Plato](https://en.wikipedia.org/wiki/Plato)'s dialogues is a [dialectic](https://en.wikipedia.org/wiki/Dialectic) method of hypothesis elimination: better hypotheses are found by steadily identifying and eliminating those that lead to contradictions. The Socratic method searches for general commonly-held truths that shape beliefs and scrutinizes them for consistency.[[63]](https://en.wikipedia.org/wiki/Science#cite_note-63) Socrates criticized the older type of study of physics as too purely speculative and lacking in [self-criticism](https://en.wikipedia.org/wiki/Self-criticism).[[64]](https://en.wikipedia.org/wiki/Science#cite_note-64)

[Aristotle](https://en.wikipedia.org/wiki/Aristotle) in the 4th century BCE created a systematic program of [teleological](https://en.wikipedia.org/wiki/Teleological) philosophy.[[65]](https://en.wikipedia.org/wiki/Science#cite_note-65) In the 3rd century BCE, Greek astronomer [Aristarchus of Samos](https://en.wikipedia.org/wiki/Aristarchus_of_Samos) was the first to propose a [heliocentric model](https://en.wikipedia.org/wiki/Heliocentrism) of the universe, with the [Sun](https://en.wikipedia.org/wiki/Sun) at the center and all the planets orbiting it.[[66]](https://en.wikipedia.org/wiki/Science#cite_note-McClellan2015-66) Aristarchus's model was widely rejected because it was believed to violate the law.

**TABLE**

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| NAME | CLASS/DEPT | ROLL.NO | PH.NUMBER | J.DATE |
| ARUN | B.COM CS | 112 | 915427845 | 25/10/20 |
| ABI | B.COM BM | 124 | 957846124 | 15/02/20 |
| BARATH | B.COM CS | 122 | 964518842 | 05/12/20 |

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