

SCIENCE OVERVIEW

What Is Science?

Science is a human endeavour in which curiosity, creativity, and perseverance are used to obtain a deeper understanding of the natural world. Science includes the interconnected disciplines of physics, chemistry, biology, Earth science, astronomy, and computer science. Science is a self-correcting way of knowing about the world that uses cyclical and iterative scientific methods to develop and refine scientific knowledge. Scientific methods include formulating scientific questions and hypotheses, then investigating them through objectively observing, collecting, and analyzing data to formulate conclusions and explanations based on evidence. Scientific knowledge refers to objective, evidence-based observations and explanations of testable phenomena that are accepted by the scientific community. Scientific knowledge is organized according to classification systems and subject to change when new evidence is presented. Science includes the critical thinking skills, scientific knowledge, and civic literacy required to respond to relevant personal, societal, and environmental issues. Science knowledge is enriched through the shared contributions of people from diverse cultures and perspectives. Science is essential in developing innovative ideas and solutions to address local and global challenges now and in the future.

Why Is Science Important?

Science allows students to nurture their innate curiosity and acquire knowledge through the process of investigation. Investigation in science provides students with opportunities to apply their knowledge, communicate their thoughts, and evaluate evidence to make informed decisions. The study of science enables students to develop critical thinking skills and scientific literacy. Scientifically literate citizens are better equipped to evaluate sources of information encountered in daily life and to pursue a wide variety of scientific and technological interests, studies, or career options.

Science and technology are deeply interwoven into many aspects of daily life. Together, they allow society to generate and share knowledge, innovate, improve quality of life, and predict future events. The study of science allows students to develop a deeper understanding of the natural world, consider the impact of their actions, and recognize the responsibility we share for environmental stewardship and sustainability.