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Importance of Science Education in Schools

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Why is science



education important in our schools? We are surrounded by technology and the products of science every day. Public policy decisions that affect every aspect of our lives are based in scientific evidence. And, of course, the immensely complex natural world that surrounds us illustrates infinite scientific concepts. As children grow up in an increasingly technologically and scientifically advanced world, they need to be scientifically literate to succeed.

Ideally, teaching the scientific method to students is teaching them how to think, learn, solve problems and make informed decisions. These skills are integral to every aspect of a student’s education and life, from school to career. With a graduate degree in science education such as the [University of Texas at Arlington’s online Master of Education in Curriculum](#)

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How Is Science Involved in Students' Everyday Lives?

Science is everywhere. A student rides to school on a bus, and in that instance alone, there are many examples of technology based on the scientific method. The school bus is a product of many areas of science and technology, including mechanical engineering and innovation. The systems of roads, lights, sidewalks and other infrastructure are carefully designed by civil engineers and planners. The smartphone in the student's hand is a miracle of modern computer engineering.

Outside the window, trees turn sunlight into stored energy and create the oxygen we need to survive. Whether "natural" or human-derived, every aspect of a student's life is filled with science — from their own internal biology to the flat-screen TV in the living room.

Scientific Inquiry and Scientific Method

Perhaps even more important than specific examples of science in our lives are the ways we use scientific thought, method and inquiry to come to our decisions. This is not necessarily a conscious thing. The human need to solve problems can arise from curiosity or from necessity. The process of inquiry is how we find answers and substantiate those answers.

In the fields of hard science, the process of inquiry is more direct and finite: Take a question; use evidence to form an explanation; connect that explanation to existing knowledge; and communicate that evidence-based explanation. Experimentation based on the scientific method follows a similar course: Combine a scientific question with research to construct a hypothesis; conduct experiments to test that hypothesis; evaluate the results to draw



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Although inquiry and the scientific method are integral to science education and practice, every decision we make is based on these processes. Natural human curiosity and necessity lead to asking questions (What is the problem?), constructing a hypothesis (How do I solve it?), testing it with evidence and evaluating the result (Did the solution work?), and making future decisions based on that result.

This is problem-solving: using critical thinking and evidence to create solutions and make decisions. Problem-solving and critical thinking are two of the most important skills students learn in school. They are essential to making good decisions that lead to achievement and success during and after school.

Yet, although they are nearly synonymous, scientific inquiry in schools is not always explicitly tied to problem-solving and critical thinking. The process students learn when creating, executing, evaluating and communicating the results of an experiment can be applied to any challenge they face in school, from proving a point in a persuasive essay to developing a photo in the darkroom. In this way, science is one of the most important subjects students study, because it gives them the critical thinking skills they need in every subject.

The Importance of Science in Early Education

Governmental guidelines and tests often focus on middle and high school-level STEM (science, technology, engineering and math) education. Yet, many educators believe science education should begin much earlier. Not only does science education teach young learners problem-solving skills that will help them throughout their schooling, it also engages them in science from the start.

Kids usually form a basic opinion about the sciences



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motivates them to learn and pursue the sciences throughout school.

Science education is one of the most important subjects in school due to its relevance to students' lives and the universally applicable problem-solving and critical thinking skills it uses and develops. These are lifelong skills that allow students to generate ideas, weigh decisions intelligently and even understand the evidence behind public policy-making. Teaching technological literacy, critical thinking and problem-solving through science education gives students the skills and knowledge they need to succeed in school and beyond.

Learn more about the [UTA online M.Ed. in Curriculum and Instruction – Science Education program](#).

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