

Physics is one of the sciences that generate fundamental knowledge needed for the future technological advances that will continue to drive the economic engines of the world. Physics contributes to the technological infrastructure and provides trained personnel needed to take advantage of scientific advances and discoveries. Physics is an important element in the education of chemists, engineers and computer scientists, as well as practitioners of the other physical and biomedical sciences. The future of any country and its contribution to the global economy is linked to its ability to develop its human capital in the field of science and engineering. Through its scientists and engineers, it is able to develop infrastructure for trade and industry. Physics extends and enhances our understanding of other disciplines, such as the earth, agricultural, chemical, biological, and environmental sciences, plus astrophysics and cosmology subjects of substantial importance to all peoples of the world.

Physics can play an important role in developing strategies to combat climate change, in the development of cleaner energies, and in the development of technological advancements.

Physics improves our quality of life by providing the basic understanding necessary for developing new instrumentation and techniques for medical applications, such as computer tomography, magnetic resonance imaging, positron emission tomography, ultrasonic imaging, and laser surgery.

Physics and technology must work together to resolve the need for new technologies that will decrease the damage to our planet, for strategies to ensure that the people of developing countries have the tools to progress, the need for solutions to deadly diseases that remain a threat, and the need for solutions to the increasing demands we place on our resources before they are depleted. The role of physics in our modern world is more important than in any other time in history.

Society's reliance on technology represents the importance of physics in daily life. Many aspects of modern society would not have been possible without the important scientific discoveries made in the past. These discoveries became the foundation on which current technologies were developed. Discoveries such as magnetism, electricity, conductors and others made modern conveniences, such as television, computers, phones and other business and home technologies possible. Modern means of transportation, such as aircraft and telecommunications, have drawn people across the world closer together all relying on concepts in physics.

### The Influence of Physics on Society

Explain the importance of physics in transport, electronics and health.

Simple mechanical devices such as pulleys and levers, as well as complex modern machines like quantum computers and nuclear reactors, would be impossible to create without the use of physics.

Physics lies at the root of many inventions that have had an enormous impact on the everyday life of the average person. There are numerous ordinary objects that people use regularly that rely on the science of physics to function, including semiconductors, lasers, X-rays, GPS devices, radio transmitters and bar code scanners.

Transportation vehicles such as automobiles, airplanes and space shuttles could not be constructed without the help of physics experts. Physics is also useful for military purposes, informing the design of weapons. Many of the scientists responsible for inventing the atomic bomb were physicists, and today physicists are involved in the creation of nuclear weapons