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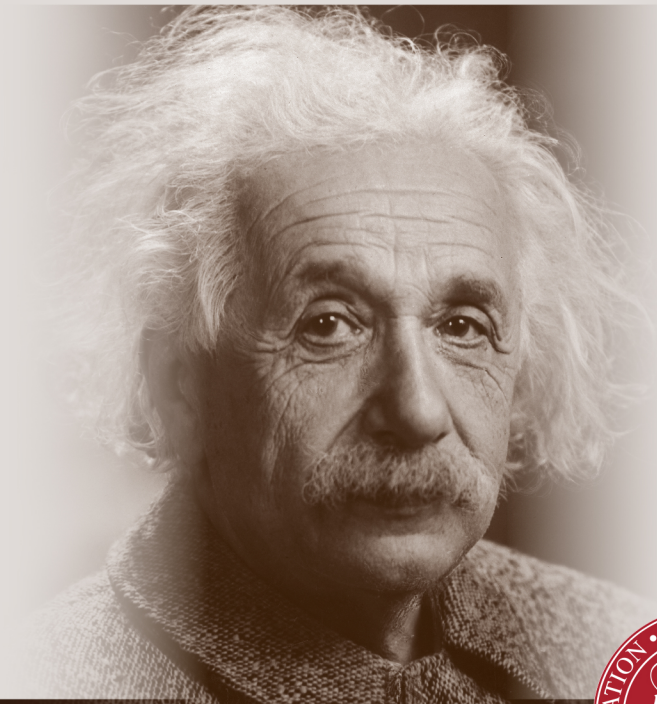
Number 1 in a Series

NOAH TECHNOLOGIES HONORS *in memory of*

ALBERT *theoretical physicist* EINSTEIN

The THEORY OF RELATIVITY

"ONCE WE ACCEPT OUR LIMITS, WE GO BEYOND THEM."

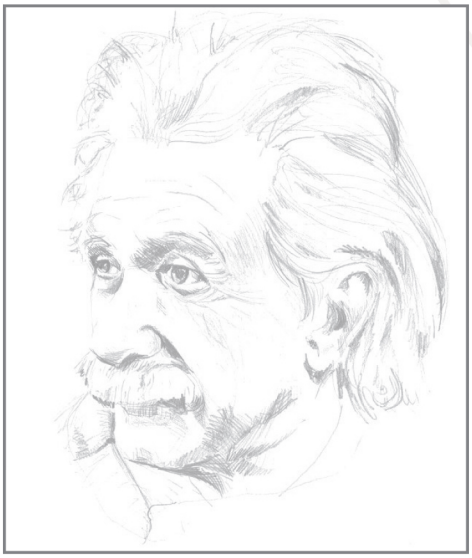


Contact us to cast your vote for additional scientists to be honored.

Albert Einstein – The Father of Modern Life?

Do you know how Einstein changed our modern life? Few might know the wide-reaching impact he has had on almost all forms of science.

Therein lies possibly the most tangible impact Einstein had on science–he is one of the most influential foundation-setters in history, both directly and indirectly. He is truly the rare figure who made impacts even with half-completed theories and concepts that did nothing more than introduce new ideas or ways of thinking about a subject. Einstein published countless works on theories that changed how people viewed a topic, bringing scientific knowledge into a new age.



Many of his theories continue to be applied to new applications even today. If scientific discovery can be compared to creation using building blocks, Einstein provided the blocks that made up the foundation of so many discoveries, both big and small.

The Grand Theory of Relativity and GPS

No discussion about Einstein's impact on the world would be complete without an extensive look at his Theory of Relativity. Published in 1905, the world-famous $E=mc^2$ equation completely changed the way we look at time, space, gravity, energy, and mass.

At its most basic, Einstein's Theory of Relativity concluded that fast-moving objects appear to have more mass relative to slow-moving objects. This is due to the increase in an object's velocity which increases its kinetic energy, which also (because the theory also states that mass is equal to energy) increases its mass.

Not only were its impacts on theoretical science far-reaching, the theory had and continues to have practical impacts as well. GPS systems must take into account relativistic effects to function accurately. They do so by speeding up the clocks on the satellites by 38,000 nanoseconds compared to the clocks on Earth. If no relativistic effects were taken into consideration when determining speed, distance and direction of the signals being sent back to Earth, after just one day your GPS would tell you that your destination is only a half mile away and it would really be five miles further. That's quite a difference!

LASERs, Atomic Bombs, Solar Electricity and Remote Controls

As impactful as it was, the Theory of Relativity was not Einstein's only contribution to the field of physics. For instance, in 1917, Einstein proposed the possibility of stimulated emission. You may have heard of stimulated emission from its inclusion in the term "Light Amplification by Stimulated Emission of Radiation," or its better-known acronym: LASER.

In a development that can be seen as both positive and negative, Einstein's work on mass-energy equivalence – which was a precursor to the development of $E=mc^2$ – introduced the idea that tiny articles of mass could be converted into much larger amounts of energy. Later, this work and the related concepts were developed into the concepts of nuclear power and the atomic bomb. While Einstein lamented the destructive world-altering application of his work, nuclear technology has proved useful in a number of constructive ways, including nuclear power.

Einstein was a man who never stopped wondering, never stopped searching, and never stopped asking the "how" behind what we see in the universe.

Surprisingly, Einstein was not awarded a Nobel Prize for his Theory of Relativity. He was, however, given his lone Nobel Prize in 1922 for his work discovering the law of the Photoelectric Effect and its impact on theoretical physics.

Einstein theorized that light could create electricity if it could vary its behavior state; sometimes it behaved like a wave, and sometimes like a particle. In this state, a light particle could deliver enough energy to create an electrical current. And in doing so, he produced a theory that was the foundation for many of the great scientific breakthroughs of our time.

Ever use solar energy or another device that turns light into energy or point the remote control at the television and turn it on? The Photoelectric Effect is the basis for the invention of both. How about having elevator doors not close on you when walking through, or observing lights automatically turn on when it gets dark? The sciences behind all these inventions, among many others, are descended from Einstein's work on photoelectricity.

Carbon Dating, the Big Bang and Person of the Century

While the vast majority of Einstein's work fell under the umbrella of physics, his impact isn't constrained to work in that one field. In yet another example of how his work transcends segmented areas of study, even some of his most famous physics-based equations are finding varied uses.

The connection between mass and energy shown in the equation $E=mc^2$ explains how biologists and archeologists can use the decay of carbon nuclei in the atoms of organic materials. This information has led to the emergence of carbon dating, which is used in everything from archeological explorations to discoveries of new organisms.

Unsurprisingly, given how much he's impacted science as a whole, Einstein started and helped develop the entire field of cosmology, which is the science of the origin and developmental observations of the universe. Led by studies of the Big Bang theory (which his theories helped advance), his work led to the discovery of black holes and the possibility of wormholes.

In 1999, Time magazine named Einstein a "Person of the Century." He is well-deserving of this honor based on the theories and discoveries he achieved and his tangible impact on science and our daily lives.

Not only did his observations provide the theoretical basis for much of today's scientific fields, they also provided the foundation needed for many great achievements.

In this way, Einstein not only influenced the scientific world, but our entire modern lifestyle. And that's as profound of an impact someone can have.

NOAH TECHNOLOGIES HONORS

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- Potassium Carbonate
- Potassium Chlorate
- Potassium Chloride
- Potassium Chromate
- Potassium Ferricyanide
- Potassium Ferrocyanide
- Potassium Fluoride
- Potassium Hydrogen Sulfate
- Potassium Hydroxide
- Potassium Iodate
- Potassium Iodide
- Potassium Nitrate
- Potassium Nitrite
- Potassium Oxalate
- Potassium Permanganate
- Potassium Persulfate
- Potassium Phosphate
- Potassium Sodium Tartrate
- Potassium Sulfate
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- Sodium Bicarbonate
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