

America's science legacy

In 1863, U.S. President Abraham Lincoln delivered his now famous Gettysburg Address on the open field of that bloody Civil War battle. Not many speeches by political leaders get remembered beyond the moment. Even fewer ever get cut into stone. In this case, of course, both are true. We know the words. We recite passages from it. And, in its entirety, the speech graces a wall of the Lincoln Memorial in Washington, DC.

The gravity of the Civil War, and its importance to what America would become as a nation, understandably eclipse the memories of other milestones in the Lincoln presidency. The year before the war, for example, Lincoln created the system of land grant colleges that would indelibly influence how Americans would be educated. Known also as the people's colleges, they were conceived with the idea that they would provide practical knowledge and science in a developing democratic republic.

In 2013, I was asked by the Abraham Lincoln Presidential Library Foundation to write a 272-word speech, inspired in any way—directly or peripherally, emotionally

or historically—by Lincoln's 272-word Gettysburg Address, which would see its 150th anniversary that November. I claim no particular expertise on the American Civil War, on Lincoln's presidency, or on American history in general, a point I made quite clear to the foundation. But this unique opportunity forced me to think more deeply about the power of a president to shape the country's mission statement. Then I remembered that in 1863, Lincoln also had something seminal to say about the future of science in America, a topic I think about often.

My "speech" now appears alongside dozens of others, solicited from selected Americans such as former U.S. presidents, social and political leaders, business leaders, and thinkers. The collection, published earlier this year, is titled *Gettysburg Replies: The World Responds to Abraham Lincoln's Gettysburg Address*.

Titled "The Seedbed,"* I offer the speech as a reminder of America's science legacy; and as an appeal to advance all that this legacy can do for the nation's future.

– Neil deGrasse Tyson



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VIDEO

Watch the video "Neil's Gettysburg Reply" <http://scim.ag/sciencelegacy>

The Seedbed

One and a half centuries ago, Civil War divided these United States of America. Yet in its wake, we would anneal as one nation, indivisible.

During the bloody year of his Gettysburg Address, President Lincoln chartered the National Academy of Sciences—comprised of fifty distinguished American researchers whose task was then, as now, to advise Congress and the Executive Branch of all ways the frontier of science may contribute to the health, wealth, and security of its residents.

As a young nation, just four score and seven years old, we had plucked the engineering fruits of the Industrial Revolution that transformed Europe, but Americans had yet to embrace the meaning of science to society.

Now with more than two thousand members, the National Academy encompasses dozens of fields undreamt of at the time of Lincoln's charter. Quantum Physics, discovered in the

1920s, now drives nearly one third of the world's wealth, forming the basis for our computer revolution in the creation, storage, and retrieval of information. And as we continue to warm our planet, Climatology may be our only hope to save us from ourselves.

During the centennial of its charter, President Kennedy addressed the Academy membership, noting, "The range and depth of scientific achievement in this room constitutes the seedbed of our nation's future."

In this, the twenty-first century, innovations in science and technology form the primary engines of economic growth. While most remember honest Abe for war and peace, and slavery and freedom, the time has come to remember him for setting our Nation on a course of scientifically enlightened governance, without which we all may perish from this Earth.

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