

**Testimony of David Zaslav**  
**President and CEO, Discovery Communications**  
**U. S. Senate Committee on Commerce, Science & Transportation**  
**May 6, 2010**

**I. Introduction**

Thank you Chairman Rockefeller, Ranking Member Hutchison, and distinguished members of the Committee for convening this important hearing. My name is David Zaslav and I am President and CEO of Discovery Communications, home to Discovery Channel, Science Channel, Animal Planet and Planet Green among other great brands. We are the world's number one nonfiction media company, with 13 television networks in the US and over 120 networks in more than 180 countries. In addition, Discovery Education, our education division, provides digital content to over half the schools in the nation, making it the leading provider of digital media to America's classrooms. Our mission, as set forth by our founder John Hendricks nearly 25 years ago to this very day, is to empower people to explore their world and satisfy their curiosity with high-quality nonfiction content that entertains, engages and enlightens.

When John first created our company, he named it the Cable Education Network. He soon decided Discovery Channel was a more descriptive way to communicate the ambition of what the channel could be. And Education has remained in the DNA of Discovery Communications ever since.

Our organization's very first viewer phone call was from an educator. It was 1985, the year our visionary Founder and Chairman John Hendricks launched the Discovery Channel, and we had just aired our first program, "Iceberg Alley." As soon as it was over, a teacher called to ask for permission to show it to her class the very next day. We agreed!

So we've had a long-standing commitment to education and it's that commitment I'm honored to discuss with you today.

As you know Mr. Chairman, America faces a serious challenge. In an age when innovation and knowledge are the drivers of economic growth, too few of our kids are passionate about – or versed in -- science, technology, engineering, and math (STEM).

I'm honored to be here today to talk about how Discovery can join with you, the Obama Administration and private industry to help inspire our children to love science!

If we don't ignite that passion, this country will simply not be able to meet our most pressing challenges – from energy security to the environment to urban development.

Mr. Chairman, just a little over a year ago, you visited the Mount View School in Welch, West Virginia to celebrate a phenomenal teacher, Ed Evans. Mr. Evans won the title of "America's Top Science Teacher" in our Discovery Education - 3M Young Scientist Challenge, which for 12 years has been encouraging the exploration of science among America's middle school students.

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You got to be a student in his class that day, even joining the kids to dissect owl pellets. The kids were so enthralled with the lesson - which Mr. Evans brought to life with our online science education service – that they barely seemed aware of the cameramen in the room. And, Mr. Chairman, however you feel about owl pellets, I would guess that you were moved by your experience.

## **II. Discovery's Mission**

Mr. Evans and his class embody the heart of our mission.

We believe that all girls and boys can fall in love with science. Kids' innate curiosity, limitless sense of possibility, and wide-eyed fascination with all creatures great and small make them natural explorers.

We believe that we have an obligation to capitalize on this sense of wonder, to encourage kids' desire to investigate the world, and to help them understand all they see.

We believe this is critical – because developing and honing their curiosity, critical thinking, and reasoning skills will serve them in whatever path they choose. And teaching children how to blend those tools with a healthy imagination will not only help them live rich and fulfilling lives – it will help our country stay on the cutting edge of exploration and innovation.

What if all science classes were as engaged as Mr. Evans' class?

What if every kid in America believed that geologists were the real rock stars?

What if kids obsessed about physics the way they do about Facebook?

What if every computer, iPod, and TV was transformed into an exciting new place to learn about science?

Could we unleash the next great generation of scientific advancement?

At Discovery, we believe we can. And we believe we must.

## **III. Global Competition**

In 1983, just two years before Discovery Channel's launch, the National Commission on Excellence in Education released the seminal report, "A Nation at Risk." It documented a decline in American educational achievement, warning that, "Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world."<sup>1</sup>

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<sup>1</sup> U.S. Department of Education. National Commission on Excellence in Education. [A Nation at Risk](http://www2.ed.gov/pubs/NatAtRisk/risk.html). April 1983. <http://www2.ed.gov/pubs/NatAtRisk/risk.html>

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Sadly, over two decades later, very little has changed. According to the National Center for Education Statistics, almost one-fifth of fourth-graders and almost one-third of eighth-graders scored below the basic level of achievement on national assessments (U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP) 2009). The United States ranks 21st of 30 OECD countries in scientific literacy, and U.S. students scored below the OECD average in math literacy (U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, *Highlights from PISA 2006: Performance of U.S. 15-Year-Old Students in Science and Mathematics Literacy in an International Context*).

Even as the promise of scientific innovation has exponentially increased, American students have lost interest in science, technology, engineering, and math. Between 1960 and 2001, the number of U.S. bachelor or graduate degrees awarded in engineering, math, or physical sciences had dropped by 50 percent, from one out of every six to one out of every ten of all degrees awarded in our country. (National Science Foundation, Science and Engineering Indicators, 2004.)

This is happening at a time when we badly need STEM professionals. Over the next decade, baby boomer retirements will cut the science and engineering workforce in half. Meanwhile, according to the National Science Foundation, jobs in science and engineering will increase three times faster than jobs in every other sector. (National Science Foundation, Science and Engineering Indicators, 2004.)

If the economic crisis has taught us anything, it's that innovation, technology, and entrepreneurship are the wave of the future.

But without a strong STEM workforce, future generations will be ill equipped to solve tomorrow's scientific challenges, threatening America's global competitiveness.

Countries like India, China, and South Korea relentlessly focus on math and science, and produce far more technical experts in these fields every year than we do. They understand that the key to the 21<sup>st</sup> Century economy lies in these critical areas. Whichever nation can build the next electric car or cure cancer or develop new renewable sources of energy will thrive in decades to come.

But right now, science and math aren't nearly cool enough for America's kids.

The 2005 National Academies of Science study, "Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future" detailed this challenge. It's telling that the report's first recommendation is to dramatically improve STEM education.

We commend Congress for responding to the study by enacting the 2007 America COMPETES Act, which contains crucial STEM provisions like scholarships to recruit and develop new STEM teachers. We look forward to its reauthorization.

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We also commend President Obama's call to action to raise student achievement in math and science. We are proud to be a partner in the Administration's "Educate to Innovate" initiative, which spurs partnerships across the private, public and non-profit sectors in an effort to restore America's place as a global leader of scientific achievement and innovation. We are encouraged by the President's strong commitment and by the federal government's serious investment in STEM education. And we're using our expertise and resources to innovate how we deliver STEM education, particularly science education, to our youngsters.

**IV. Fulfilling the Mission**

When the Discovery Channel first went on the air 25 years ago, few families owned personal computers, Microsoft had just released its inaugural Windows 1.0, and the American public was just introduced to the latest technology called the 'compact disc.'

You may be hard pressed to find a 13 year-old who owns a CD these days.

Today's students live in the digital world. They are astonishingly familiar with digital media and technology, and they can interact with information – and process it – at rapid speeds. They multitask, engage across different media, and communicate with each other and a diverse array of content instantly and constantly. They email, text, tweet, and chat. They carry video clips in their hands.

It's a whole new world. And it's a whole new student -- which means fulfilling the mission of delivering great STEM content that engages, excites, and educates today's kids looks very different from what it looked like in 1985.

That's why Discovery launched the "Be the Future" campaign, a multimedia, multi-year, nationwide initiative – aimed inside and outside the classroom -- that celebrates and teaches how science shapes the world.

We made a decision nearly five years ago to form Discovery Education. Today, Discovery Education is on the leading edge of harnessing technology to create innovative digital services that make science and math curricula more engaging. To make sure these new tools and resources are maximized to their highest potential, we are also providing effective professional development for teachers.

Today, 1 million educators, and more than half of U.S. schools, use Discovery Education's digital services. There are more than 125,000 members in our Discovery Educator Network, the global professional learning community supported by Discovery Education and offering educators free professional development and networking opportunities. As a result, our content reaches 35 million students.

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For example, Discovery Education *streaming*, offers teachers and students more than 150,000 digital learning objects, including videos, interactives, images, articles and more, that integrate seamlessly into any curriculum. Aligned to state standards and assessments and searchable by keyword, content area and grade level, the rich video content and other digital assets from Discovery Education engage today's students in learning.

And we've seen evidence that increased Discovery Education *streaming* use is associated with higher achievement scores in math and reading. It makes sense - today's kids are digital learners.

Today's science teacher can do more than just lecture about volcanoes. Through Discovery Education Science, our web-based digital curriculum service correlated to state science standards and organized around an inquiry-based framework, a science teacher can download a 3-minute video clip, as well as accompanying multimedia simulations, that take her students not only to a volcano, but around the world, so that students can witness the impact volcanoes have on our environment.

But we're ready to do more. We want to take what we've learned, strengthen our programming, and broaden our impact. That's where "Be the Future" comes in.

"Be the Future" includes more classroom-based initiatives like STEM Connect. A curriculum-based and career development resource launched in November 2009, STEM Connect is designed to fuel teacher and classroom engagement by helping students link science, technology, engineering and mathematics to the real world. Through a collection of rich media, educational content, career exploration tools, interactives, and hands-on activities, STEM Connect makes science concepts come alive.

Instead of just reading about what makes a car aerodynamic or why some cars are more fuel efficient than others, a 9<sup>th</sup> grade science class can go to our website and apply these concepts by building a virtual vehicle.

We're also using our resources to help teachers be even more effective with their students. We've partnered with the Siemens Foundation to create the Siemens STEM Academy, a national initiative offering free hands-on and web-based STEM professional development resources and opportunities for educators that boost science, technology, engineering and math learning in the classroom.

A major component of the Siemens STEM Academy is a week long, immersive Institute planned for this summer in Washington, D.C. During this Institute, educators from around the nation will learn from the top minds in the STEM field, take field trips to local institutions to see the real world applications of STEM subject matter, and network and collaborate with peers from across the U.S. We hope that the reauthorization of America COMPETES will enhance these sorts of practical professional development opportunities for teachers.

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In addition, Discovery will continue to host its popular science competitions, like the Discovery Education-3M Young Scientist Challenge, which allows excellent science students to demonstrate their talent in fun ways.

It's important to note that the past two winners of this contest have been young women. We know that girls often lose interest in science and math in the middle school years. So we're excited about the possibility of competitions like this to engage girls and minorities in the subject of science, giving them a new forum to shine in a discipline where they are vastly, and needlessly, underrepresented.

These are just a few examples of our classroom-based initiatives. And Discovery will continue to develop and deliver innovative solutions for the classroom.

But what about the hours when kids aren't in school?

The truth is that when they're not in class – and sometimes even when they are – they spend much of their time engaging in social media. According to a recent Kaiser Family Foundation survey of 2,000 people ages 8 to 18, today's kids spend more than 53 hours a week with digital media. This constant interaction with media equates to a full-time job of learning through “untraditional” means (Kaiser Family Foundation, GenerationM2: Media in the Lives of 8-18 Year Olds, 2010).

So outside of the classroom, “Be the Future” is using that media to connect kids with science even after the school bell rings.

We call this “Science 360” – reaching kids where they are, from every possible angle, with every imaginable tool.

That is why I am proud that Discovery Communications is the only media company with a 24-hour channel devoted entirely to all facets of the amazing world of Science, and Science Channel lives across many platforms. In addition to working with some of the foremost science minds in the world, we are working with the best award-winning storytellers and directors in Hollywood, like Steven Spielberg, James Cameron, Morgan Freeman and Will Smith. Even SIMS creator Will Wright is bringing his gaming genius to the network. They are igniting their love of science to inspire others to imagine what might be possible.

This commitment to bringing the wondrous world of science to our children is illustrated in the Science Channel's 6-day-a-week commercial-free kids block, called HEAD RUSH, which will launch in August. And because we want to ensure that this content is available to as many kids as possible, we're offering it to distributors at no additional cost.

We're thrilled that some distributors have already taken advantage of this opportunity for their subscribers. Direct TV has already agreed to make the Science Channel more widely available, and Cablevision – which has a strong interest in science literacy and other educational initiatives – has made the service available to the majority of their subscribers. Our hope is that as more of our affiliate partners follow suit, and as more kids get into HEAD RUSH, we'll be able to create

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even more new content, with some of the most prominent directors and storytellers in Hollywood and the music industry, to feed these hungry minds. If HEAD RUSH were accessible to a broader base of kids – and not simply those in the more affluent homes that have broad digital cable packages – we would be able to supercharge the block with even more exciting content.

HEAD RUSH will include one of our most popular programs, MythBusters, whose team tests hypotheses involving everything from whether it's possible to train a fish to whether a person can be sucked down by killer quicksand. Called “the best science show on television” by the New York Times, it's the #1 show on Discovery Channel for 12-17 year olds.

And because we know that girls often lose interest in math and science during their middle school years, we chose Kari Byron, a self-described “artist, science chick, and working mom,” and an integral part of the MythBusters team, as the host of HEAD RUSH. Kari is a great role model – and we hope she'll inspire more girls – and boys – to fall in love with math and science. We hear regularly from educators that they love MythBusters and how it helps demystify science and make it relevant and engaging to young people.

In addition to the MythBusters episodes, we are creating original shortform content to encourage and excite kids. In HEAD RUSH, Kari will be doing hands-on science projects and playing interactive games with kids across the country. It will take the form of fun and exciting question and answer segments challenging students to test their knowledge with STEM-based content. We will also feature high-profile Discovery Communications talent who serve to illustrate how the “coolest careers” use STEM every day: Architect Danny Forester from Science Channel's hit series “Build it Bigger” shows how math informs the engineering work on a construction site; the intrepid team on Discovery's “Storm Chasers” who rely on advanced technology to help them hunt down tornadoes present a question about the physics of the natural world. The idea is to create dynamic and entertaining scenarios that illustrate how STEM is an integral part of everyday life. In addition, we will cover kids creating their own science and feature them as they unfold the exciting and amazing world in their own experiments. And to round off our commitment, we will create an original STEM PSA that will run across all of our networks in the United States.

As part of “Be the Future,” John Hendricks, Discovery's visionary founder, is spearheading an exciting new series called “Curiosity: The Questions of Our Life.” In partnership with some of the leading universities across the country, it will tackle the fundamental questions and underlying mysteries of everything from space to medicine to archaeology to the human mind. It is a five-year, 60-episode endeavor that will begin airing on Discovery Channel and Science Channel next year.

We're also launching “Energy: Powering the Future,” a forward-looking series that explores what the world will look like in 2050 from a scientific perspective in a cool and engaging way. And we're linking the program to Facebook and Twitter, giving kids, parents and teachers a way to join the conversation and connect with real-life scientists and experts.

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Our vision is that the 9<sup>th</sup> graders who build their virtual car in class might come home to an episode of “Energy” about what cars will be like in the future. And then perhaps they’ll log onto their Twitter account and start following news about the latest science breakthroughs.

In addition, Discovery Education is working with cable operators outside the classroom to bring our rich, educational programming to as many families as possible. In partnership with Comcast of Indianapolis, families now have access to compelling educational VOD content through Discovery Education on Demand, by Comcast.

We think it’s possible. Take it from a recent wall posting on the Science Channel Facebook page: “The Science Channel rules and now I’m all excited about nanotechnology, Moore’s law, and futurism and time-space relativity!”

This is what Science 360 is all about.

## **V. Conclusion**

Mr. Chairman, if we’re serious about improving STEM education, then we have to acknowledge and accept that today’s students live in a different world than the one we have known. We need to begin moving beyond traditional educational materials like the static textbook and towards engaging classrooms and living rooms that are alive with compelling visuals and storytelling. Most of all, we have to respect that as children have evolved, their way of learning has evolved – and it’s up to us to make sure that our teaching evolves, too.

America needs a world-class STEM workforce to tackle the challenges of the next generation, from energy security to stemming infectious disease.

And America needs a generation of young people who are curious about the vast unknown universe, who are excited about discovering its wonders, who are inspired to push the limits of what’s possible.

Discovery believes that we have an obligation to help our youngsters cultivate that curiosity, that excitement, that sense of wonder. We’re ready, able, and eager to be a partner with the federal government in expanding and innovating how we teach science – and we are convinced the potential for what our children can achieve is limitless.

Thank you very much.