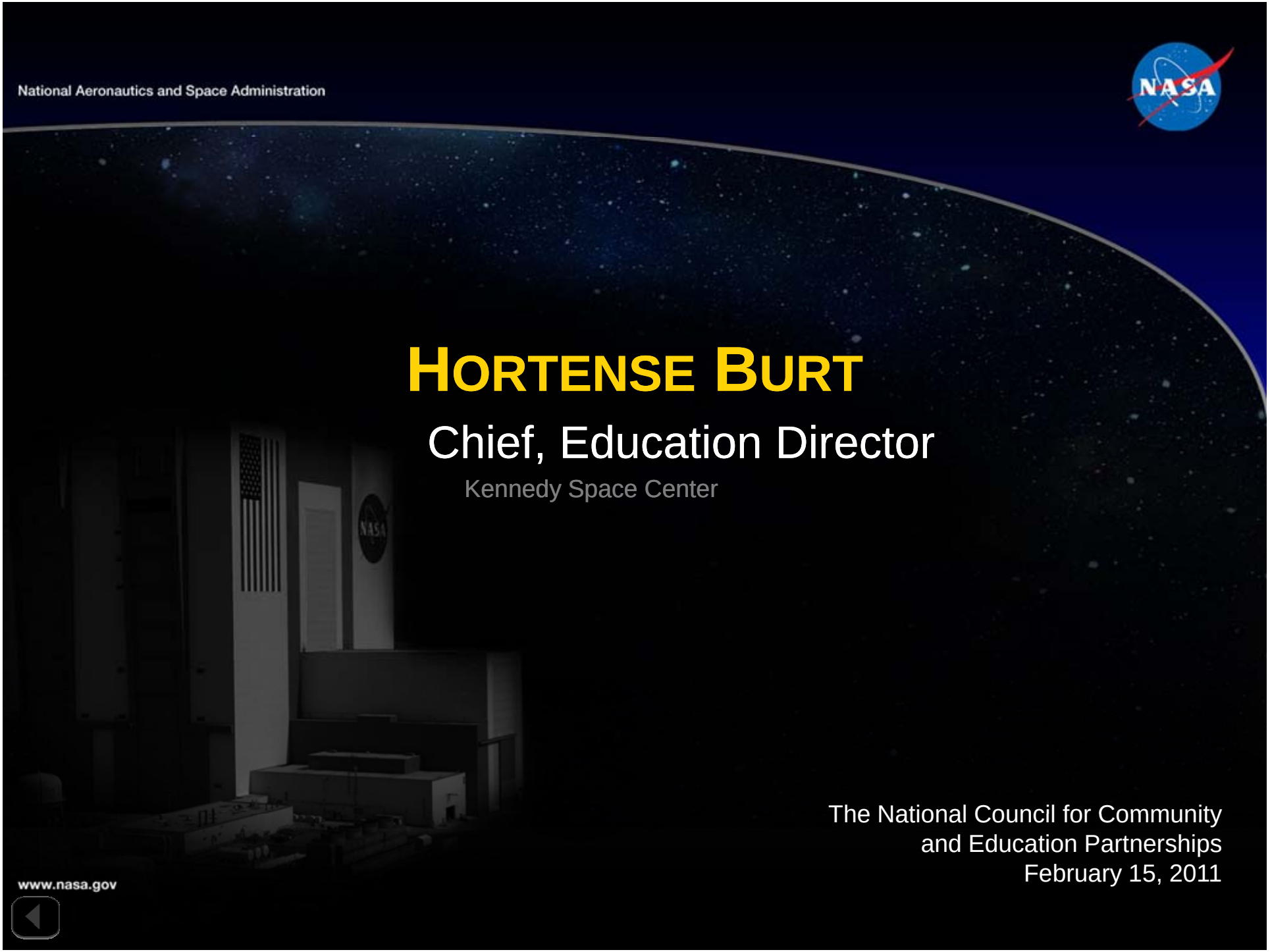
National Aeronautics and Space Administration



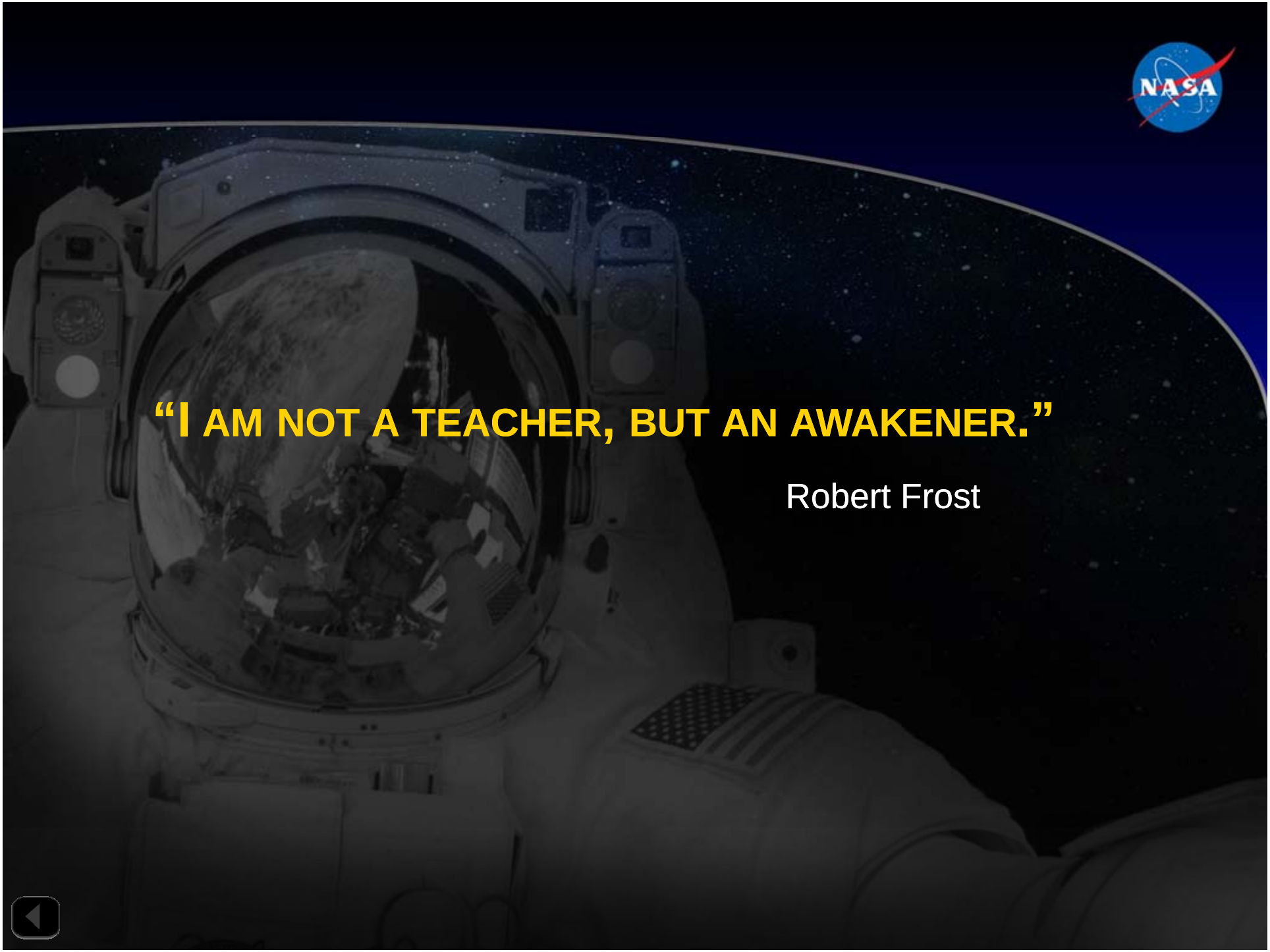
HORTENSE BURT

Chief, Education Director

Kennedy Space Center

The National Council for Community
and Education Partnerships
February 15, 2011

www.nasa.gov


“I AM NOT A TEACHER, BUT AN AWAKENER.”
Robert Frost

NEED FOR STEM

In the U.S., we are seeing an increase in Science and Engineering jobs, at the same time we are seeing a decrease in the number of workers equipped to fill those positions.

National Science Board

As of 2004 more than half of science and engineering degreed workers are age 40 or older

NATION'S REPORT CARD

Less than one-half of students are demonstrating solid academic performance in science.

2009 National Assessment of Educational Progress

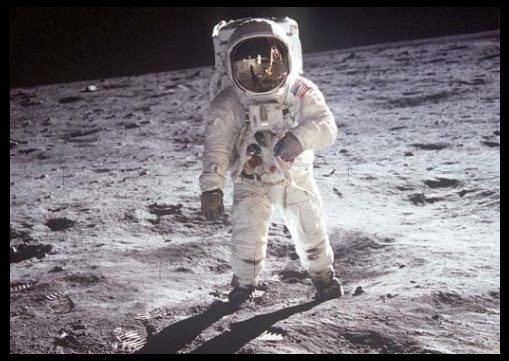
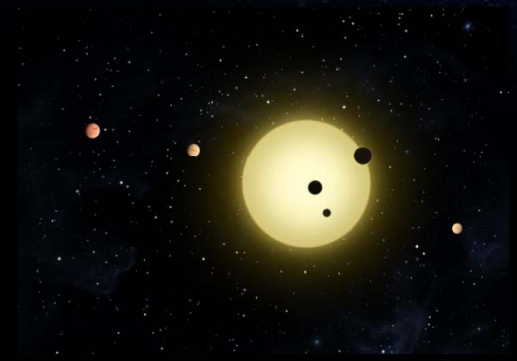
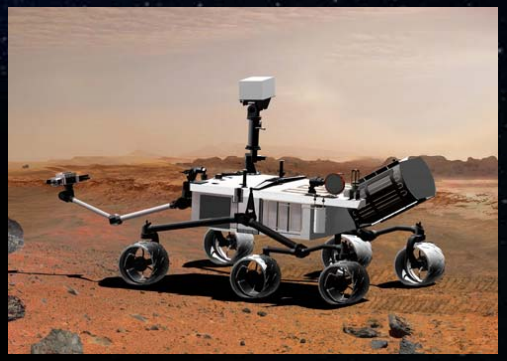
State of the Union

“Nations like China and India realized that with some changes of their own, they could compete in this new world. And so they started educating their children earlier and longer, with greater emphasis on math and science. They're investing in research and new technologies. Just recently, China became the home to the world's largest private solar research facility, and the world's fastest computer.”

President Obama

Did the Space Race fuel innovation?

STEM = INNOVATION

We understand that without a strong workforce educated in science, technology, engineering and math our future options will be limited, potentially limiting and restricting discovery and innovation.

DIVERSITY IS CRITICAL

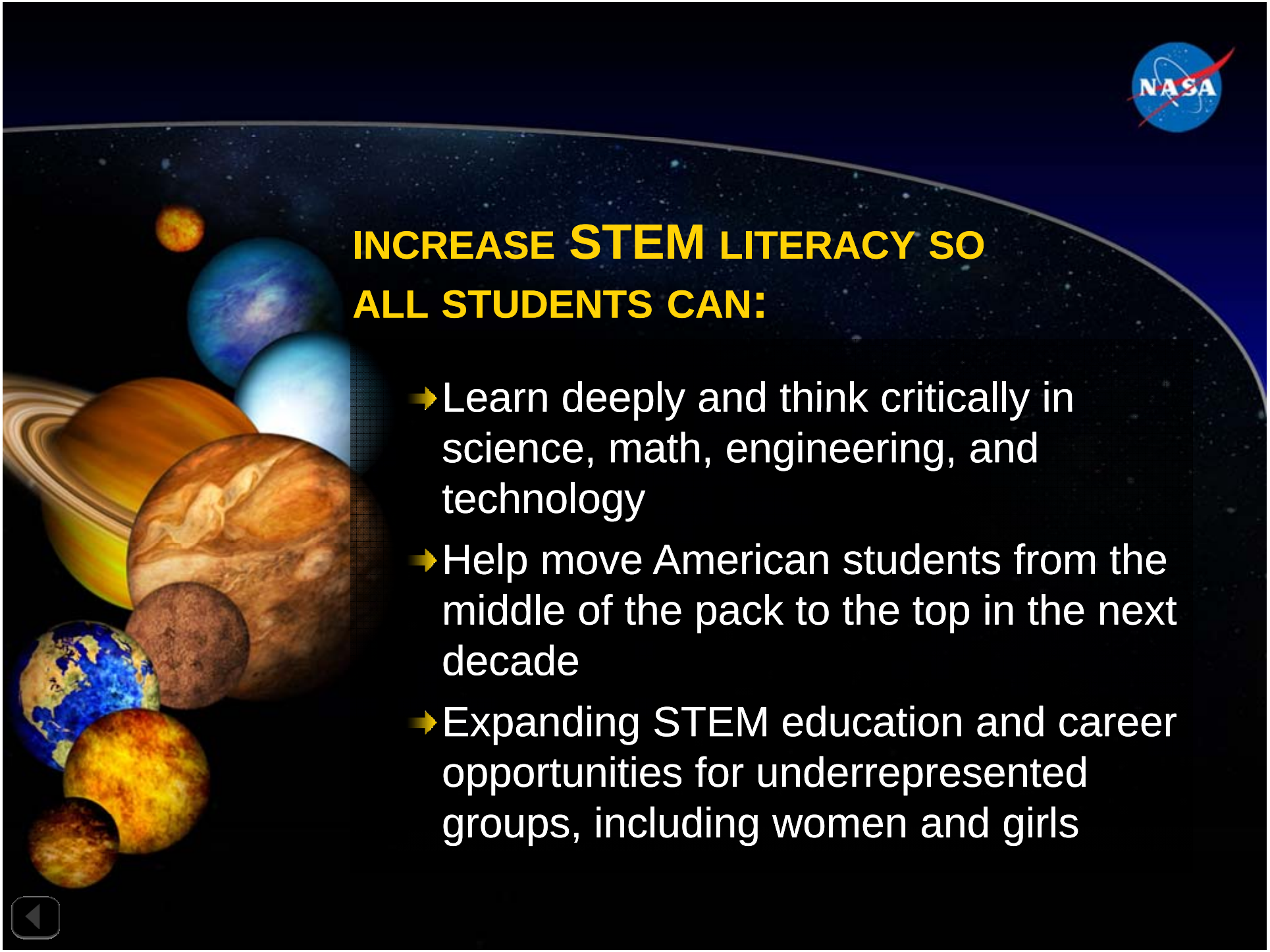
Diversity is the most powerful, but least understood force for innovation.

The Center for American Progress

Astronaut Nicole Scott

Many young women enter the engineering field, not because of women they know or because of a barrier they wanted to break, it was because the men in the field encouraged them to do so.

The European Journal of Engineering Education



INCREASE STEM LITERACY SO ALL STUDENTS CAN:

- Learn deeply and think critically in science, math, engineering, and technology
- Help move American students from the middle of the pack to the top in the next decade
- Expanding STEM education and career opportunities for underrepresented groups, including women and girls

To strengthen NASA and the Nation's future workforce

To attract and retain students in science, technology, engineering and mathematics

To engage Americans in NASA's mission


We will only succeed if we have a strong, educated workforce.
A workforce driven to solve the big riddles, people who are inspired by current and past rocket scientists, engineers and of course astronauts, to achieve greatness


NASA

BACKUP SLIDES

In science, white students scored:

- 32 points higher on average than Hispanic students at grade 4
- 30 points higher on average than Hispanic students at grade 8
- 25 points higher on average than Hispanic students at grade 12

On average male students scored higher than female students

NASA Education Goals:

- To strengthen NASA and the Nation's future workforce
- To attract and retain students in science, technology, engineering and mathematics
- To engage Americans in NASA's mission