

STEM Education is Essential

**Idaho STEM Summit
May 8-9, 2012**



75,000 Idaho children live in poverty



Center for Children in Poverty



- 91% Idaho students are graduating from high school
- Only 47% of Idaho high school graduates are going on to higher education
- 40% of Idaho students that start college, drop out before their 3rd year

Tom Luna, State Superintendent of Education

...give our students the knowledge and skills necessary to be career and college ready when they graduate from high school.

Prepare

and

Inspire

President's Council of Advisors on Science and Technology
2010 K-12 STEM education report

How do we inspire students so that they want to be scientists, engineers, nurses, business women, teachers, entrepreneurs and all of the other workers and professionals that Idaho needs to be strong and to make our nation great?



Teachers that inspire students have

- strong content knowledge
- rich life experiences
- passion for what they teach

Professional Development Programs that

- Pair up teachers with scientists and engineers
- Give teachers authentic, real-life STEM experiences

• **Research Experiences for Teachers**

National Science Foundation

• **Polar Trek**

National Science Foundation

• **Teacher at Sea**

National Oceanic and Atmospheric Administration

• **Teaming Teachers with INL**

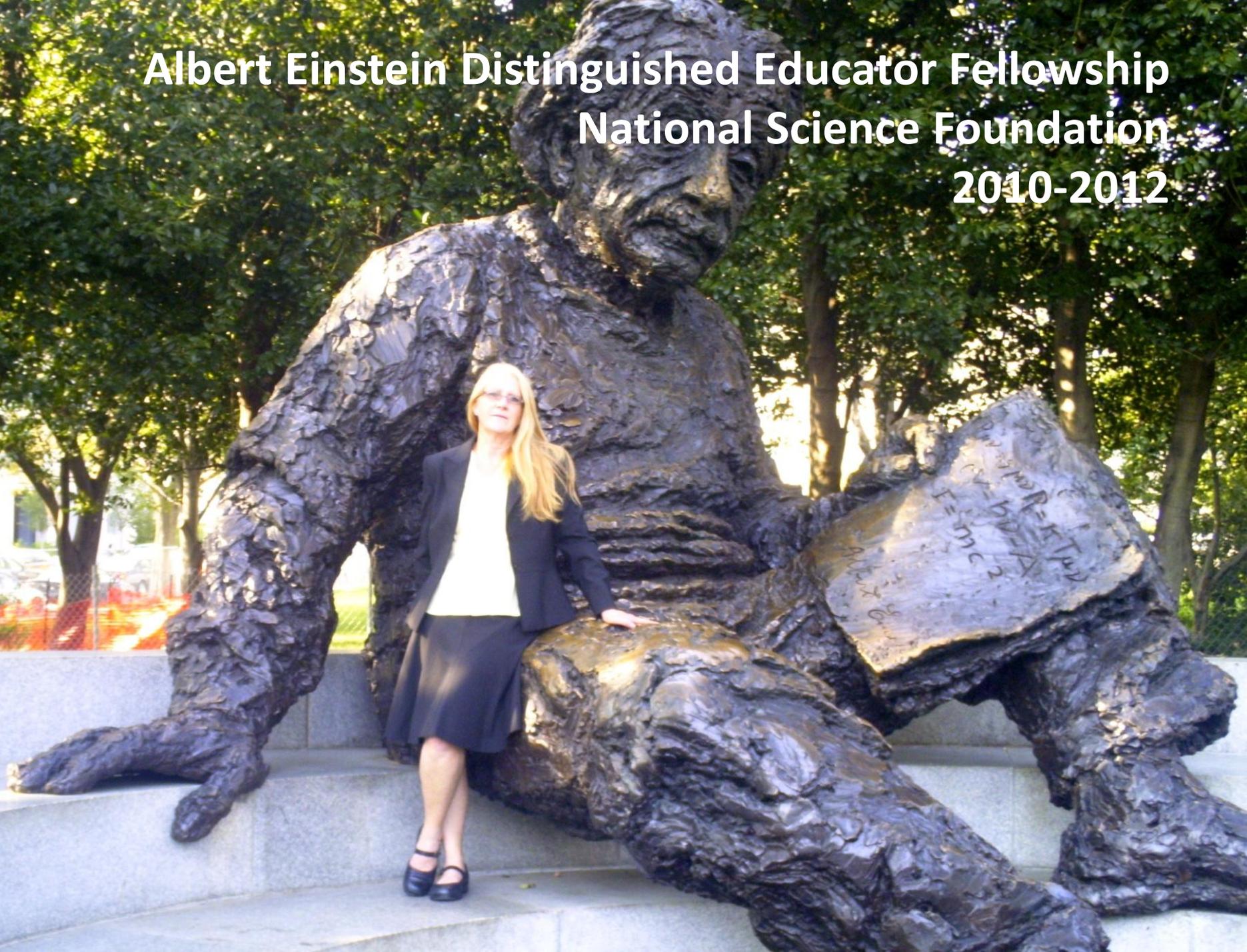
Idaho National Laboratory

• **Educate to Innovate**

NASA

- Strong STEM education can break the cycle of poverty
- STEM Education opens doors of opportunity

Albert Einstein Distinguished Educator Fellowship
National Science Foundation
2010-2012



Einstein Fellowship activities:

Research Experience for Teachers grants

Research Experiences for Undergraduates grants

Increasing women and underrepresented groups in STEM fields

Recognizing and increasing the number of master STEM K-12 teachers





ICME-12

The 12th International Congress on Mathematical Education

July 8~15, 2012, COEX, Seoul, Korea

Working Theme Group, “Professional Development”

What is happening in mathematics education worldwide, in terms of research as well as teaching practices

Post Congress Workshop, “Structuring Classrooms for Learning”

How research is linked to practice in Korea and U.S.

A strong STEM education for all students prepares and inspires the next generation



Brenda Gardunia

Albert Einstein Distinguished Educator Fellow 2010-2012

National Science Foundation

brendagardunia@gmail.com