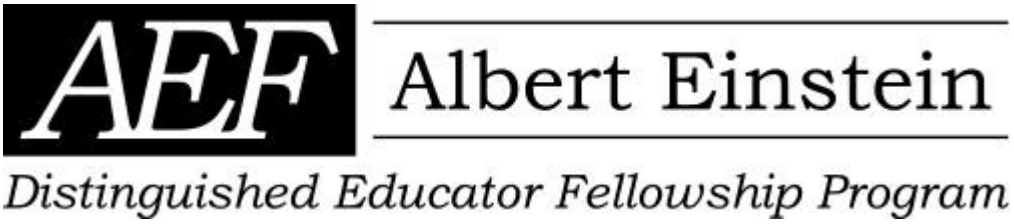

Summary Report
2011-2012 Fellowship Year

Prepared by the U.S. Department of Energy, Office of Science
Office of Workforce Development for Teachers and Scientists

Program Overview

The Albert Einstein Distinguished Educator Fellowship (AEF) Program provides a unique opportunity for accomplished K-12 educators in the fields of science, technology, engineering, and mathematics (STEM) to serve in the national education arena. Fellows spend eleven months, beginning in September of each year, working in a Federal agency or in a U.S. Congressional office, bringing their extensive knowledge and experience in the classroom to education program and/or education policy efforts.

The AEF Program, now in its 22nd year with 207 alumni, operates under the Albert Einstein Distinguished Educator Fellowship Act of 1994 (Pub. L 103-382). The legislation states that the Department of Energy (DOE) administers the AEF Program including recruitment, application and selection, and overall management.

The AEF Program is designed to meet the following objectives identified in the legislation: 1) to provide outstanding elementary and secondary STEM education teachers the opportunity to bring to Congress and appropriate branches of the federal government the insights, extensive knowledge, and practical experience of classroom teachers; 2) to increase the understanding, communication, and cooperation between Congress and Federal agencies; 3) to increase the understanding, communication and cooperation between the federal government and the STEM education community.

The Federal science agencies that host Fellows have as part of their goal the support of STEM education to help ensure a future workforce sufficiently prepared to contribute to the emerging science and technology fields. Fellows are placed in education offices where they provide insights during project conceptualization and assistance with established programs. The Congressional offices that host Fellows, supported by DOE, have either a strong STEM portfolio or want to increase that as a priority issue within their offices.

Overview of the 2011-2012 Participants, Federal Agencies, and Congressional Offices

Thirty educators were selected for the 2011-2012 Cohort of AEF Fellows:

- Number of high school teachers: 19
- Number of upper elementary and middle school teachers: 11
- Number of states represented by the Fellows: 17
- Number of Fellows who have been teaching more than 10 years: 23
- Number of Fellows who were teaching at public schools when selected: 28

The Fellows were selected by the following Agencies and Congressional Offices:

- U.S. Department of Energy: 3
- National Aeronautics and Space Administration: 3
- National Oceanic and Atmospheric Administration: 1
- National Science Foundation: 19
- Senator Kirsten Gillibrand, NY: 1*
- Senator Michael Bennet, CO: 1*

Congressman Mike Honda, CA: 1*
Senator Al Franken, MN: 1*

*DOE sponsored the four Congressional placements.

Program Scope

*Fellowship Support***

All Fellows receive a monthly stipend of $7,000, which is paid by the sponsor offices. Additionally, Fellows can request to receive up to $3,000 for travel and fees associated with their professional development during the Fellowship. All current benefits for are available on the program website: http://science.energy.gov/wdts/einstein/.

*Application***

The on-line application is located on the DOE website at: http://science.energy.gov/wdts/einstein/. Interested educators can access the application from mid-August through mid-November.

The application consists of three sections:

- Questions highlighting educational background, professional experience, professional activities, awards and publications;
- Five essay questions; and
- Three letters of recommendation, one being from a school district official.

The responses to the questions on the application are used to assess the eligibility of the application. While most of this information is fact-specific, it provides a way to make both a quick and qualitative evaluation when compared with the responses in the essays.

*Application Review and Selection***

The application review, selection, and placement process is communicated in detail and posted on the AEF web page: http://science.energy.gov/wdts/einstein/how-to-apply/application-review-and-selection-process/.

Positions Descriptions

Host offices interviewing selected candidates, the semi-finalists, must have, in advance of the interviews, one-page position descriptions that detail the work load requirements and planned responsibilities within the office. The semi-finalists can then gauge their interests and capabilities in the positions and determine the best fit for their individual needs.

Contributions to the Host Offices

Fellows are regularly recognized for making significant contributions to their host offices. Most of this is managed and guided by position descriptions under the guidance of host office supervisors.

The Fellows in each cohort are usually a collaborative group and are encouraged to share ideas and work together to expand upon tasks and inevitably deliver projects beyond expectation.

Position accomplishments are observed by program management during the four required "reports and presentations" due throughout the Fellowship.

Fellows' Professional Development
Fellows are required to establish individual professional development plans designed around high-level goals that combine to advance the knowledge and skills of the Fellows. These plans help the Fellows identify goals and objectives and establish "actions" that will contribute to the achievement of the high level goals.

The professional development resources available to Fellows from science agencies, STEM policy experts, advocacy organizations, and other STEM education stakeholders may not exist at this level at any other time in their career. The establishment of a plan with milestones will help ensure a valuable experience both within and outside their host offices and into the future.

Outcomes
Fellows complete the AEF Program with a portfolio of opportunities to share with colleagues and students. The portfolios include information on: undergraduate and graduate internships, scholarships, the national research infrastructure supported by the Federal government, how to compete for grants, the latest research on advancing STEM education, and opportunities that inspire students towards STEM careers.

The experiences gained are personally and professionally valuable, and subsequently shared with colleagues. By gaining a clearer understanding of educational issues at the national and local level, Fellows become recognized leaders for the ability to convey substantive information and influence the future of STEM education.

**Current descriptions as of September 2016

Albert Einstein Distinguished Educator Fellowship Program
2011-2012 Fellows

Einstein Fellow Name	Home State Subjects Taught Grade Level(s)	Sponsor/ Host Office Accomplishments
Rhonda Brown	Florida Forensic Science and Zoology High School	NSF, Directorate for Biological Sciences, Division of Molecular & Cellular Biosciences Served as an outreach specialist to underrepresented groups in the biological science community specifically women, minorities, rural populations and persons with disabilities.
Peg Cagle	California Mathematics Grades 7- 9	DOE, Office of Science (sponsor) Senator Kirsten Gillibrand (host office) Served as the lead contributor on the full spectrum of education and STEM workforce issues, including retooling the education section of the office Website. Created talking points delivered in the Senate Chamber, and coordinated to two highly successful New York City symposia on Economic Empowerment for Women and Job Opportunities and Entrepreneurship. Represented the office to constituents and national stakeholders on education issues and advanced STEM education by presenting to nationally and international stakeholders on best practices and methods for science education.
Kisha Davis-Caldwell [2]	Maryland Mathematics Grades 4-5	NSF, Directorate for Education & Human Resources, Division of Research on Learning in Formal and Informal Settings Assisted in outreach, recruitment, panel review of applications, award announcements, and the full range of project administration for the

		Presidential Awards for Excellence in Mathematics and Science Teaching Program.
Remy Dou [1]	Florida Biology, Chemistry, and Physics Grades 7-12	NSF, Directorate for Education & Human Resources, Division of Research on Learning in Formal and Informal Settings Worked on projects related to both engagement programs and diversity in STEM education, and wrote an ancillary children's book for an NSF film, *Flight of the Butterflies.* With an AAAS Fellow, and under the direction from Office of Science and Technology Policy, contributed to the design of an evaluation framework for federal STEM intervention programs.
Ann Drobnis [1]	Virginia Mathematics and Computer Science Grades 9-10	NSF, Directorate for Computer & Information Science & Engineering, Division of Computer and Network Systems Served as a team lead on *CS Bites and Byte* a newsletter for learners highlighting innovative computer science research, and the program's primary outreach vehicle to educators to provide them with knowledge and resources about equity in computer science classrooms.
Brenda Gardunia [2]	Idaho Algebra and Pre-Calculus Grades 9-12	NSF, Directorate for Computer & Information Science & Engineering, Division of Computing and Communication Foundations Read grant proposals, facilitated peer review panels, reviewed and edit panel summaries for three separate grant programs, and contributed to *CSEd Week,* an electronic publication dedicated to inspiring K-12 students to develop and pursue interest in computer science.

Melissa George [1]	Indiana Science Grades 6-8	NSF, Directorate for Biological Sciences, Division of Environmental Biology Served as a researcher and the representative "educator voice" on educational issues for program staff and the agency research community. Also, served as an outreach specialist to underrepresented groups in the K-12 communities using researchers to engage students in the STEM fields and help them "see themselves" in those careers.
Jonathan Gerlach	Florida Mathematics and science Elementary	DOE, Office of Science (sponsor) Senator Michael Bennet (host office) Provided review, analysis, and recommendations to the office on issues with an education policy focus, specifically in Child Care Development Block Grants, STEM Education with a focus on connecting workforce, and Native American Tuition Waivers.
Marie Gleason-Tada	Massachusetts Technology Integration Specialist Grades K-8	NASA Headquarters, Office of Education Served as the experienced resource for STEM education outreach for the agency collaborating with domestic and international partners on planning events and curriculum development. Helped focus a number of the agency's education efforts by incorporating the educator perspective and aligning those resources with the need and usefulness of the K-12 community.
Cindy Hasselbring [1]	Michigan Mathematics Grades 9-12	NSF, Education and Human Resources Directorate, Office of the Assistant Director Served as an advisor to the Assistant Director tracking cross-cutting issues on a number of different working groups, and brought a working

		knowledge of other agencies' STEM programs as a potential influence or collaborator for NSF's efforts.
Sharon Hessney	Massachusetts Geometry, Mathematics, and Statistics Grades 9-12	DOE, Office of Science (sponsor) Senator Al Franken (host office) Worked on a number of major legislative education initiatives including The Elementary and Secondary Education Act of 2011, in addition to four high profile amendments introduced by the Senator. Initiated a series of workshops to help staffers better understand the use and power of statistics.
DaNel Hogan [1]	Idaho Physics Grades 6-12	DOE, Office of Energy Efficiency and Renewable Energy Created greater utility for the Energy Efficiency's Program *Energy Literacy* guide among K-12 schools by coupling widely used existing resources from The Need Project and The Climate Literacy & Energy Awareness Network to supplement and put into learning practice the "Essential Principals and Fundamental Concepts" contained within the Guide.
Lynn Lahti Hommeyer [1]	District of Columbia Science Grades 4-7	DOE, Office of Science (sponsor) Congressman Mike Honda (host office) Served in a Congressional office where education, and STEM in particular, is a priority and contributed to efforts to draft, edit, and prepare 10 education bills (4 in the 112th Congress and 6 in the 113th Congress) introduced by the Congressman.
Shelly Hynes	Louisiana Physics and Chemistry Grades 10-12	NSF, Directorate for Geosciences, Office of Polar Programs Coordinated and participated in the continuation of a Greenland-based research program that fostered

		international cooperation and inspired STEM as a college major and polar science as a career.
Matthew Inman [2]	Washington Integrated Science and Physics Grades 9-12	DOE, Office Energy Efficiency and Renewable Energy Worked with various stakeholder groups including the Office of Scientific and Technology Policy, 13 federal agencies, and non-government organizations to collaboratively endorse 7 Essential Principles and 6 to 8 Fundamental Concepts that provide a framework for energy education and a platform from which to develop instructional material and link the energy interdisciplinary topics.
Lindsay Knippenberg[2]	Michigan Biology and Environmental Science Grades 9-12	NOAA, Office of Education Increased the accessibility of NOAA resources to educators nationally by enhancing the educational component of the NOAA website. Helped NOAA develop a local presence in the DC Public Schools by connecting NOAA's education resources with students and teachers.
Zeke Kossover	California Mathematics and Science Grades 9-12	NSF, Office of Legislative and Public Affairs Lead efforts between NSF and *NBC Learn* to develop and produce four science education videos with a duel role of highlighting NSF research and bringing STEM-relevant content to the general audience, particularly to middle and high school students.
April Lanotte [1]	Colorado Physics, Chemistry, Biology, and Physical Science	NASA, Aeronautics Research Mission Directorate Developed curriculum for the NASA Aeronautics "Museum in a Box" and expanded the utility of these resources by creating additional STEM

	Grades 9-12	instructional materials specifically for pre-service teachers and K-12 students.
Carmelina Livingston	South Carolina Integrated Science Grades K- 5	NSF, Directorate for Geosciences**,** Division of Earth Sciences Contributed to the NSF merit review process by reading and summarizing a selective number of proposals. Participated in a cross-directorate working groups under the "One NSF" model to plan and implement a climate change proposal and award system.
Dave Oberbillig [2]	Montana Biological Sciences Grades 9-12	DOE, Office of Science, Workforce Development for Teachers and Scientists Served as a program coordinator for a summer faculty research fellowship at DOE laboratories which included recruitment, application review, evaluation, and managing the participation of a partner agency. Served as the technical coordinator for research challenge competitions for the National Science Bowl.
Bob Pauley	Florida Technology and Robotics Grades 7-8	NSF, Directorate for Engineering, Division of Industrial Innovation & Partnerships Provided program support primarily in two functions: 1) assisting with research panel reviews and monitoring grantee progress through on-site visits and interviews; and 2) extending the outreach of the program by developing promotional material such as videos, brochures, presentations, as well as coordination of workshops.
Jean Pennycook [2]	California Environmental Education Grades 7-8	NSF, Directorate for Education & Human Resources**,** Division of Research on Learning in Formal and Informal Settings Worked with the Presidential Award for

		Excellence in Science and Mathematics Teaching team to prepare for awardees' events, and researched and prepared reports on grant trends.
Allan Phipps	Florida Environmental Science and Alternative Energies Grades 9 -12	NSF, Directorate for Education & Human Resources , Division of Undergraduate Education Contributed to a variety of efforts by serving as an available researcher and project observer for the Noyce scholarship program and reviewed cross-cutting programs that support pre-service teachers.
Michael Piccione	Virginia Technology and Engineering Grades 9-12	NSF, Directorate for Computer & Information Science & Engineering, Division of Computer and Network Systems Supported the Industry/University Cooperative Research Center Program and developed an evaluation process that compared data sets from multiple corporative research centers over the past five years to identify business trends, common success elements, opportunities for program growth, and from that provided options for more efficient program management.
Geraldine Robbins [2]	Florida Mathematics Grades 7-12	NASA - Goddard Space Flight Center, Office of Education Brought an independent view to the education elements developed by the agency and developed a framework and model for informal education evaluation at Goddard. Produced a number of evaluation reports for various informal education projects and activities.

Erik Russell [2]	Colorado Mathematics and Science Grades 4- 6	NSF, Directorate for Computer & Information Science & Engineering, Division of Computing and Communication Foundations Oversaw a National Lab Network project, with White House support, that was aimed at building a connection between military STEM professionals and the their local K-12 STEM educators in an effort to leverage resources, build ties, and share the excitement and diversity of STEM careers.
Tim Spuck [2]	Pennsylvania Earth, Space, Computer, and General Science Grades 8-12	NSF, Directorate for Education & Human Resources , Division of Graduate Education Assisted the GK-12 program manager by conducting in-depth reviews of grants, including site visits, to evaluate and improve the STEM classroom teaching component which is a required element of graduate student award. Served as a working group member of the NSF Teacher Learning for the Future and the STEM Master Teachers Corp programs formed to research best practices for STEM teacher training and professional development.
Mark Supal	Michigan Physics, Technology, and Computer Programming Grades 9-12	NSF, Directorate for Engineering, Division of Industrial Innovation & Partnerships Contributed to the development of a technical job skills “apprenticeship” program that assists displaced workers and veterans by incentivizing their involvement as part of a small business research award.
Pamela Truesdell [1]	Ohio Mathematics, Computer Science,	NSF, Directorate for Engineering, Division of Engineering Education & Centers

	and Engineering Grades 9 - 12	Contributed to the management of the RET program by improving communication and grantee progress by developing a ListServ, facilitating online conferences, and conducting site visits all with a goal of guiding grant accomplishments to a predictable outcome.
Sarah Young	Utah Physical Science and Ocean Science Grades 6-8	NSF, Office of International Science and Engineering (OISE) Served as a coordinator on the Americas program supported by the OISE mission to engage US institutions and scientists in international collaborations. Developed briefing documents on various counties to benchmark the science and technology funding structure, culture, and relationship with the United States.

[1] First of two years
[2] Second of two years