



Summary Report
2014-2015 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 Federal agencies or in U.S. Congressional offices, bringing their extensive knowledge and classroom experience to education program and/or education policy efforts.

The AEF Program 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; and 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 goals to support STEM education to help ensure a future workforce is 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, sponsored by DOE, have either a strong STEM portfolio or want to increase their portfolios within their offices.

Overview of the 2014-2015 Participants, Federal Agencies, and Congressional Offices

Nineteen educators were selected for the 2014-2015 Cohort of AEF Fellows:

Number of high school teachers: 11[#]

Number of upper elementary and middle school teachers: 10[#]

Number of states represented by the Fellows: 16

[#]Two Fellows teach at both the middle and high school levels.

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

U.S. Department of Energy: 3

National Aeronautics and Space Administration: 2

National Oceanic and Atmospheric Administration: 1

National Science Foundation: 10

Senator Bill Nelson, FL: 1*

Senator Kirsten Gillibrand, NY: 1*

Congressman Mike Honda, CA: 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 \$3,500 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, a one-page position description that details 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 May 2017

**Albert Einstein Distinguished Educator Fellowship Program
2014-2015 Fellows**

Einstein Fellow Name	Home State Grade Level(s)	Sponsor/ Host Office Accomplishments
Deborah Cornelison	Oklahoma Middle and High School Science	NSF, Education and Human Resources Directorate, Division of Undergraduate Education (DUE) Cornelison She worked with programs concerned with STEM teacher preparation and STEM teacher leadership such as the Robert Noyce Teacher Scholarship Program and Math Science Partnership (MSP) programs. Cornelison contributed to a portfolio analysis by compiling a comprehensive list of research articles based on Noyce projects, authorized by Noyce awardees, and published in peer-reviewed journals. With this information, she developed a Noyce publications resources guide.
Kaye Ebelt	Montana Elementary School	NSF, Directorate for Engineering, Division of Civil, Mechanical and Manufacturing Innovation Ebelt worked with her sponsor to develop a guide on engineering education outreach. She also developed a 3D printing and engineering activities and lesson plan book for K-8 and high school teachers. Ebelt also assisted with the first Capitol Hill Maker Faire by contacting local Makers, Tech Shops and other government agencies to help create an information flyer to distribute to the attendees.
Natalie Harr ²	Ohio Elementary School	NSF, Division of Research on Learning in Formal and Informal Settings Harr supported the peer review panel process by working alongside program offices to locate potential panelists, observing and documenting panel discussion, and providing expert feedback on likely funded proposals. Harr's

		background in early STEM learning was valuable as she provided insight for a newly developed Discovery Research K-12 program solicitation. Harr also worked with two other Einstein Fellows at the request of the National Science Board to compile data and identify requirements of each state for initial teacher certification for K-12 Math and Science Teachers.
Katie Hendrickson	Ohio Middle School Science	NSF, Directorate for Computer & Information Science & Engineering, Division of Information and Intelligent Systems Hendrickson was heavily involved in the planning a conference for 100 computer science teachers involved in an NSF-funded project. The conference was organized in conjunction with the National Center for Women and Information Technology. In her role, Hendrickson worked directly with the teachers to help coordinate attendance and logistics. She also planned and emceed one of the conference sessions at the event. Hendrickson also played a significant role in organizing a 2-day event for the CE21 Principal Investigator and Community by developing a 75-page booklet featuring reports from each of the PIs on major projects.
Kathryn Hoppe ²	New York High School Science	NSF, Engineering Directorate, Division of Engineering Education & Centers Hoppe's contributions include updating the Research Experiences for Teachers (RET) and Research Experiences for Undergraduates (REU) setting up and monitoring the RET and REU listservs, and observing panels and learning about the award process. Hoppe also worked with 2 other Einstein Fellows at the request of the National Science Board to compile data and identify requirements of each state for initial teacher certification for K-12 Math and Science Teachers.
Pamela Krauss	Florida	DOE, Office of Science (sponsor)

	High School Science	<p>Senator Nelson (host office)</p> <p>Krauss supported her office with introduction of legislation with a “train the trainer” concept that matched newly retired STEM professionals with in-service teachers to enhance their knowledge and application of subject matter with real world application. By the end of her fellowship, Senator Nelson introduced the concept as a part of ESEA/NCLB reauthorization. The Commerce Committee has also committed to fully developing this concept as a part of America Competes.</p>
Jennie Lyons ²	New York High School Computer Science	<p>NSF, Computer and Information Science and Engineering Directorate, Division of Information and Intelligent Systems</p> <p>Lyons produced issues of Bits & Bytes, an online publication developed by NSF to make computer science more accessible to educators and learners. Lyons also assisted with the review panels for the Education Workforce group by performing the compliance and conflict of interest checks and participating in the review analysis of the panels. Lyons also worked with 2 other Einstein Fellows at the request of the National Science Board to compile data and identify requirements of each state for initial teacher certification for K-12 Math and Science Teachers.</p>
Jeffrey Milbourne	North Carolina High School Science	<p>DOE, Office of Science (sponsor) Congressman Mike Honda (host office)</p> <p>Milbourne supported his office by introducing legislation that included language for the STEM Master Teacher Corps, teacher professional development and training, data disaggregation and Civics education. Milbourne worked closely with Congressman Honda to craft his education message by writing opinion pieces for the Huffington Post, Roll Call and The Hill. He also worked with the Congressman on</p>

		speeches for educational events such as the Social Innovation Summit, Extended Learning Summing and the American Education Research Association annual conference.
Daniel Newmyer	Colorado Middle and High School Science	NASA, Office of Education and the Goddard Space Flight Center Newmyer worked with a documentary film producer to develop a digital learning tool to engage underserved and underrepresented students with NASA resources. Newmyer ensured that high quality NASA STEM content was included in the work as well as facilitated connections with appropriate staff at NASA. Newmyer also worked to develop and implement Educator Professional Development for the Maryland State Schools/NASA STEM Master Teacher program as well as elementary teachers from Pennsylvania.
Mary Patterson	Texas Middle School Science	NSF, Computer Information Science and Engineering Directorate, Advanced Cyberinfrastructure Program Patterson organized the Distinguished Lecture Series and was the point of contact for all those involved in the cross-directorate program. Patterson also conducted a portfolio review analysis of awards in Cyberlearning. This information was used later to inform the community at the Center for Innovative Research in Cyberlearning 2015 meeting as well as other cross-directorate meetings.
Kara Pezzi	Wisconsin High School Science	DOE, Office of Science Pezzi volunteered at three regional competitions in order to become familiar with the NSB competitions process. Pezzi worked with another Fellow, Ann Reimers, to develop a process to diversify the questions as well as improve categorization of the questions. Pezzi also assisted with the Division Team Challenges by editing the procedures and procuring the materials

		needed for these events. On the day of the National competition, she assisted with registration, enhancement activities and Division Team Challenges and scorekeeping.
Ann Reimers	Virginia High School Science	DOE, Office of Science Reimers served as a team member working to implement the 2015 National Science Bowl (NSB). One of her greatest accomplishments was that she and another Fellow, Kara Pezzi, established and implemented a way to improve the quality of all questions used during the competition. They revised the process for how questions are submitted and labeled to facilitate greater automation in the sorting and distribution of questions. In addition to her work with the NSB, she also wrote three “Stay-All-Day” activities which were featured on the NSB website for regional coordinators to use during their competitions.
John (Trey) Smith	Pennsylvania High School Science	DOE, Office of Science (sponsor) Senator Gillibrand (host office) Smith was involved in identifying and securing a bipartisan cosponsor for an engineering education amendment (which was created by an Einstein Fellow four years ago) to the Senate’s bill to reauthorize ESEA. Smith negotiated with a staffer in a Republican office to secure co-sponsorship of the amendment. The amendment was accepted by the HELP committee and was integrated in the bill that eventually was passed by the Senate.
Joshua Sneideman ²	California Middle School Science	DOE, Office of Energy Efficiency and Renewable Energy In collaboration with the American Geoscience Institute (AGI), Sneideman created a video series to help spread energy literacy to a larger audience. These videos were later announced as part of the White House Climate Education Initiative. Sneideman was also often called on to assist

		<p>other DOE offices with their energy education outreach efforts. He assisted the Bioenergy Technologies Office with their #BioEnergizeMe project, an infographic challenge for high school students. He also assisted the Office of Economic Impact and Diversity by providing feedback and guidance on the STEM Education pillar of their 3-year implementation plan for the Minorities in Energy Initiative.</p>
Beverly Stambaugh	<p>Ohio</p> <p>Middle School Science and Mathematics</p>	<p>NSF, Directorate for Geosciences</p> <p>Stambaugh actively participated in the organization, planning and execution of the Engaging Networks of Geoscientists and Geoscience Educators (ENGAGE) workshop. She also participated in the US GLOBE Partner Forum and was able to draw on her previous training as a GLOBE teacher and her experiences in the classroom to contribute.</p>
Anna Sumner	<p>Nebraska</p> <p>Middle School Engineering and Technology</p>	<p>NSF, Directorate for Education and Human Resources, Human Resources Development Division</p> <p>Sumner worked with the Presidential Awards for Excellence in Mathematics and science Teaching (PAEMST) program. Sumner’s major responsibility was to be an in-house specialist bringing the engineering and technology perspective as well as her teaching experience to the team. She provided research, ideas, cross-referencing skills, and design support to the team. She screened documents and applications requiring confidentiality, and participated, presented and answered questions in program webinars and panels.</p>
June Teisan	<p>Michigan</p> <p>Middle School Science</p>	<p>NOAA, Office of Education</p> <p>Teisan was responsible for researching across the NOAA education and scientific resources, planning and presenting several break-out sessions at the National Science Teachers Association (NSTA) regional and annual conference. Teisan also served as</p>

		Chair of the Global Learning and Observations to Benefit the Environment (GLOBE) Education Working Group and lead the team to preparing a GLOBE Collaborative Video Festival in 2016.
Rebecca Vieyra	Illinois High School Science	NASA, Aeronautics Research Mission Directorate (ARMD) Vieyra completed a 5-year Space Act Agreement between NASA Aeronautics and the American Association of Physics Teachers (AAPT). The agreement formulated the relationship between the two organizations, including the development and outreach of a large aeronautics education resource titled <i>Aeronautics for Introductory Physics</i> . As a part of her duties, Vieyra also served as the NASA Point of Contact and Leader for the International Forum for Aviation Research (IFAR). Her responsibilities included organizing virtual conferences, preparing Young Researcher Conference Pre-Summit Activities and helping to re-design and manage the IFARlink social and professional networking platform.
Erica Wallstrom	Vermont High School Mathematics	NSF, Directorate for Geosciences, Division of Polar Programs Wallstrom’s primary responsibility was supporting the implementation of the Joint Science Education Project (JSEP). Her responsibilities included assisting in the recruitment, identification, and selection of the student participants, facilitating connections between the Greenlandic team leader and new grantee, and supporting curriculum development. With the goal of identifying underserved students to participate in the JSEP program, she helped modify the student application and write a new rubric. Wallstrom joined the group in Greenland during both the 2014 and 2015 seasons where she worked closely with teachers, researchers and students.

¹ First of two years

²Second of two years