



Summary Report  
2018-2019 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, now in its 29th year with 319 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; 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 2018-2019 Participants, Federal Agencies, and Congressional Offices**

Fourteen educators were selected for the 2018-2019 Cohort of AEF Fellows:

Number of high school teachers: 10

Number of upper elementary and middle school teachers: 4

Number of states represented by the Fellows: 11

Number of Fellows who have been teaching more than 10 years: 11

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

U.S. Department of Energy: 1

National Aeronautics and Space Administration: 1

National Science Foundation: 6

U.S. Library of Congress: 1

Representative Marcia L. Fudge, OH: 1\*

Representative Katherine Clark, MA: 1\*

Representative Raúl M. Grijalva, AZ: 1\*

U.S. House Committee on Education and the Workforce: 1\*

U.S. House Committee on Science, Space, & Technology Committee: 1\*

\*DOE sponsored the five Congressional placements.

## **Program Scope**

### *Fellowship Support*

All Fellows receive a monthly stipend of \$7,500, 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: <https://science.osti.gov/wdts/einstein/>.

### *Application*

The on-line application is located on the DOE website at:

<https://science.osti.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: <https://science.osti.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.

**Albert Einstein Distinguished Educator Fellowship Program  
2018-2019 Fellows**

<b>Einstein Fellow Name</b>	<b>Home State Subjects taught Grade(s) level</b>	<b>Sponsor/ Host Office Accomplishments</b>
Brenda Carpenter	Virginia  Physical Science  Middle School	National Science Foundation (NSF), Directorate for Education and Human Resources (EHR), Division of Research on Learning in Formal and Informal Settings (DRL)  Brenda served as a K-12 educator representative for the Innovative Technology Experiences for Students and Teachers (ITEST) and Discovery Research PreK-12 (DRK12) programs. She conducted portfolio analyses and assisted with the panel review process for both ITEST and DRK12. Brenda also served on planning committees for the 2018 the NSF EAGER Maker Summit as well as the 2019 ITEST PI and Evaluator Summit. She also led multiple follow-up webinars regarding the outcomes of the EAGER Maker Summit.
Stephanie Harry	Virginia  Chemistry  High School	National Science Foundation (NSF), Directorate for Education and Human Resources (EHR), Division of Human Resource Development (HRD)  Stephanie supported the Excellence Awards in Science and Engineering (EASE) team in the administration of the Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST) and Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring (PAESMEM)

		<p>on behalf of the White House Office of Science and Technology Policy (OSTP). She created instructional documents for PAEMST State Coordinator (SC) and PAEMST mentors. Stephanie was instrumental in training exercise for the State Coordinators Meeting. She assisted in the development of EASE logic model, explored 8(a) business for PAEMST evaluation, and participated in outreach recruitment events for PAEMST and PAESMEM. Stephanie assisted with the development of EASE Recognition Event and the completion of the PAEMST compendium.</p>
Cheryl Manning	<p>Colorado</p> <p>Earth and Space Sciences, Chemistry, Physics</p> <p>High School</p>	<p>National Science Foundation (NSF), Directorate for Geosciences (GEO), Office of the Assistant Director (OAD)</p> <p>Cheryl served as a K-12 educator representative for the Geoscience Opportunities for Leadership in Diversity (GOLD), Improving Undergraduate STEM Education: Pathways into Geoscience (IUSE:GEOPATHS), and the Global Learning and Observations to Benefit the Environment (GLOBE) programs. She helped to organize and lead the Principal Investigator meeting for the GEOPATHS program in which 65 PIs participated. Cheryl compiled an extensive report on the findings of the GEOPATHS program. She assisted with the analysis of an evaluation of the Geoscience Education and Diversity programming so that the GEO-ED Working Group could create a plan to optimize resources for broader</p>

		impacts in education and diversity efforts. Cheryl participated in numerous NSF-GEO sessions at conferences. The culmination of her work has been to assist in the rewriting of GEO-ED's grant solicitations.
Kate McCann	Vermont Mathematics High School	Department of Energy Office of Science (sponsor), Representative Marcia L. Fudge, OH-11 (host office)  Kate worked to support several pieces of legislation including the Women's Health Protection Act WHPA (H.R. 2975), Report & Educate About Campus Hazing – REACH Act (H.R. 662), End All Hazing (H.R. 3267), Go To High School, Go to College (H.R. 3268), Farm to School Act of 2019, and the Low-Income Water Customer Assistance Program. With the exception of WHPA, these were all bipartisan bills. Kate ran letters on Title 1 requesting at least \$17 billion to support K12 education, Farm to School to increase use of and improve access to local foods in schools, HOME which is the only federal block grant exclusively focused on affordable housing needs for low-income households, and a letter to supporting investment in public transportation. Within the office, she worked with the Education & Labor, Health, Science/Technology, and the Transportation & Infrastructure portfolios.
Sharon McPherson	Virginia Computer Science	National Science Foundation (NSF), Directorate for Computer & Information Science & Engineering (CISE), Division of Computer & Network Systems

	High School	Sharon served as a K-12 educator representative in the Education and Workforce Task Group. She conducted portfolio analysis and assisted with the panel review process for CS4All, BPC and CUE panels. McPherson was responsible the redevelopment of the online publication for STEM educators, Bits & Bytes ,and served as Content Editor for the publication. Sharon organized future workshops both on data science curriculum and teacher diversity in CS education. Sharon also developed an introductory course curriculum for Cyber Security and may present this curriculum at NICE 2019 in the fall.
Cammie Newmyer	Colorado Mathematics High School	National Science Foundation (NSF), Directorate of Education and Human Resources (EHR), Division of Undergraduate Education (DUE), Robert Noyce Teacher Scholarship Program  Cammie served as an educator representative for the Noyce program. She acted as one of the facilitators at the NSF Grant Writing workshop for Hispanic Serving Institutions in Puerto Rico and observed several NSF program proposal review panels. Cammie brought 20 National STEM Education organizations together with 150 pre-service and new STEM teachers to promote mentorship, networking, retention, and persistence in STEM teaching at the annual 2019 Noyce National Summit.
Pascale Creek Pinner	Hawaii	Department of Energy (DOE), Office of Science (SC), Workforce

	<p>Earth/Space Science</p> <p>Middle School</p>	<p>Development for Teachers &amp; Scientists (WDTs)</p> <p>Pascale developed resources for the National Science Bowl®, visited National Labs, and worked with their STEM Education personnel to develop K-12 curricula. Pascale facilitated the Los Alamos National Lab’s (LANL) two-week Young Women’s Physics Summer Camp for high school girls. Pascale developed several websites to enhance science experiences for students, her colleagues, future Fellows and the WDTs STEM resources web page.</p>
<p>Shawn Sheehan</p>	<p>Texas Algebra I 9<sup>th</sup> Grade</p>	<p>Department of Energy Office of Science (sponsor); Congressman Raúl M. Grijalva, AZ-3 (host office)</p> <p>Shawn performed the tasks of a legislative assistant in the office of Congressman Grijalva and led the Congressman’s efforts to reintroduce the Success in the Middle Act. Shawn worked closely with legislative counsel, organizations, and constituents to update the bill text, share the bill with educators, and speak on the bill in a briefing on Capitol Hill. Congressman Grijalva was awarded the <i>2019 Legislative Champion Award</i> by the National Forum to Accelerate Middle-Grades Reform as a result of his reintroduction of the Success in the Middle Act and advocacy for the middle grades. Shawn regularly staffed Congressman Grijalva during House Education and Labor Committee meetings and created talking points and memos in preparation for the meetings. Shawn also developed</p>

		and led the office’s first-ever all-staff retreat in Tucson, Arizona in February 2019. Shawn led both Arizona and D.C. Congressional staff in professional training to review goals and objectives and build camaraderie. Shawn’s legislative portfolio consisted of K-12 education, science and technology, financial services, housing, gun violence, pensions, telecommunications, and the arts. He met regularly with constituents and organizations, researched policy, created one-pagers for bills, updated co-sponsorship reports, wrote Dear Colleague letters, and performed administrative tasks as needed.
Bryan Silver	Hawai’i  Engineering, Robotics  High School	National Science Foundation (NSF), Directorate for Engineering (ENG) , Division of Education and Engineering Centers (EEC)  Bryan served as a K-12 educator representative for the Research Experience for Teachers (RET), TeachEngineering.org and Engineering for Us all (E4USA) programs. He conducted portfolio analysis and assisted with the panel review process for ERC, REU, and RET. Silver also served on the planning committee for curriculum development in the pilot E4USA program. A Participant in the, 2018 RET and Evaluator Summit (UNC), 2018 E4USA Summit (UM), 2019 ASEE E4USA planning Summit, and 2019 TeachEngineering.org planning team continuation grant.
Rachel Stagner	Oregon	National Aeronautics and Space Administration (NASA), Aeronautics

	<p>Forensic Science</p> <p>High School</p>	<p>Research Mission Directorate (ARMD)</p> <p>Rachel worked to support the public outreach efforts of ARMD at several events throughout the year, including at the EAA AirVenture airshow, AwesomeCon, and the Apollo 50<sup>th</sup> on the Mall celebration. At these events, she helped coordinate and run educational STEM activities for young visitors. Additionally, she attended several educator professional development conferences, including the Space Exploration Education Conference (SEEC), the National Science Teaching Association’s annual conference (NSTA), and the International Society for Technology in Education’s annual conference (ISTE) and ran sessions on NASA STEM activities. Rachel developed an interactive presentation about NASA’s newest X-plane, the X-59 QueSST, for use at large outreach events along with a corresponding website and STEM learning module. Stagner collaborated with NASA’s office of STEM Engagement (OSTEM) in several capacities, including their development of additional STEM activities related to the X-59 aircraft and by serving as a representative of ARMD on the agency-wide STEM Engagement Council.</p>
<p>Michelle Steever</p>	<p>California</p> <p>Physics</p> <p>High School</p>	<p>Department of Energy Office of Science (sponsor), Representative Katherine Clark, MA-05 (host office)</p> <p>Michelle worked with constituents of Representative Clark, listening to their concerns and summarizing</p>

		<p>them for the congresswoman and legislative staff. Because of the Congresswoman’s committee assignments in appropriations, Steever was able to participate fully in the entire process from authorization of bills through budget appropriations and funding. She was assigned a portfolio including topics in STEM fields such as offshore wind and renewable energies, higher education, workforce pipeline, and natural resources. As an educator assigned to a congressional office, Steever had opportunities to have her voice heard in a variety of platforms, from briefings to meetings, bringing the experiences of an educational practitioner.</p>
Kellie Taylor	<p>Idaho Engineering Elementary</p>	<p>Library of Congress, Center for Literacy and Learning Engagement (CLLE), Learning and Information Office (LIO)</p> <p>Kellie served as a K-5 Engineering educator for the Learning and Innovation Office providing input on connections to the elementary classroom. She developed STEM activities connected to primary sources for formal and informal experiences in the classroom and the Young Readers Center. She developed and piloted a History of Printing: From Clay Seals to 3D Printing Family Workshop. Kellie also coordinated the collaborative 50<sup>th</sup> Anniversary Event for the National Park Service Historic American Engineering Records housed at the Library of Congress. The event featured speakers from the National Park Service Heritage</p>

		<p>Documentation Programs. She also published blog posts for the Library of Congress Teachers Blog and articles for the National Science Teachers Association High School Journal. In addition, Kellie presented at conferences in collaboration with the Library of Congress to share about the connection between STEM and primary source analysis. During her time in at the Library of Congress, she worked to identify useful knowledge and problems within primary sources to support students in identifying and developing solutions.</p>
Cynthia Wirth	<p>Indiana Environmental Science, Biology High School</p>	<p>Department of Energy Office of Science (sponsor), Representative Jared Polis, Colorado 2nd District &amp; Congresswoman Eddie Bernice Johnson, Texas 30<sup>th</sup> District; Chairwoman of Science, Space, &amp; Technology Committee (host offices)</p> <p>As Representative Polis transitioned to Governor Polis, Cinde had the opportunity to be part of two legislative offices, supporting each office in their science, energy, technology, environmental, STEM education, and air and water quality legislative portfolios. For the 115th Congress, she authored two pieces of legislation and re-packaged her original legislation for the new Colorado Congressman. In the 116<sup>th</sup> Congress, Cinde worked analyzing and proposing two more original bills on eliminating barriers to the STEM education pipeline from Pre-K through PhD. She covered portfolios</p>

		dealing with Environmental, Science, Research, and Applied Science Issues; attended a National Energy Summit, traveled to two of our National Labs, represented the office for two spacecraft launches, and collaborated on a study tour of Massachusetts and Rhode Island on the topics of new technologies in wind-energy and the marine sciences.
Andi Webb	North Carolina  All subject areas  Elementary	<p>Department of Energy Office of Science (Sponsor) Congressional Fellow in the Education and Labor Committee Office of Robert C. “Bobby” Scott (Virginia-3<sup>rd</sup> District) (Host Office)</p> <p>Andi conducted significant research on the compliance of state report cards with the Every Student Succeeds Act (ESSA), the results of which were shared during an education hearing. She staffed Chairman Scott during a meeting with Ivanka Trump on college affordability. She also attended the release of the White House’s 5-year Strategic STEM Plan hosted at the Eisenhower Bldg. Andi researched TEACH and SMART Grants, focused on supporting the STEM workforce, as well as researched Title II, Part A to support professional development for educators. She also worked to vet hearing witnesses, compile hearing questions, attend numerous STEM and international education briefings/meetings and report findings the office, as well as create memos, fact sheets, and other documents used within the committee. Andi met with advocacy</p>

		groups, Think Tank representatives, and constituent groups.
--	--	---