



Albert Einstein

Distinguished Educator Fellowship Program

Summary Report
2019-2020 Fellowship Year



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

<https://science.osti.gov/wdts/einstein>

Albert Einstein Distinguished Educator Fellowship Program

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.

Overview of the 2019-2020 AEF Fellows

2019-2020 AEF Participants	
Number of total AEF Fellows	9
Number of high school teachers	4
Number of upper elementary and middle school teachers	5
Number of states represented by the Fellows	8
Number of Fellows who have been teaching more than 10 years	7

Table 1. Summary of the 2019-2020 AEF Fellows

Hosting Federal Agencies and Congressional Offices for the 2019-2020 AEF Fellows

Federal Agency Placements
U.S. Department of Energy (1 Fellow)
National Aeronautics and Space Administration (1 Fellow)
U.S. Library of Congress (1 Fellow)
U.S. Department of Defense (1 Fellow)
Congressional Office Placements
Representative Deb Halaand (NM-1)
Representative Raul Grijalva (AZ-7)
Representative Jahana Hayes (CT-5) then replaced to Rep. Ruben Gallego (AZ-3)
Senator Jacky Rosen (NV)
Representative Susan Davis (CA-53)

Table 2. Hosting Federal Agencies and Congressional Offices

*AEF Congressional Office placements are sponsored by U.S. Department of Energy

Program History

The AEF Program, now in its 30th year with 333 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.

AEF 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 \$5,000 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/Benefits>

Application

Interested educators can access the application from mid-August through mid-November. The on-line application is located on the DOE website at: <https://science.osti.gov/wdts/einstein/How-to-Apply>

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 workload 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 Accomplishments of the 2019-2020 Fellows

AEF Fellow	Background	Placement and Accomplishments
Amara Alexander	Tennessee K-5 STEM Teacher	<p>Library of Congress, Learning and Innovation Office</p> <p>Amara explored the digitized collections, and identified primary sources teachers could use in their STEM classrooms. Lessons were developed and posted on Teachers blog sponsored by the host office. Primary source sets were curated and made accessible through the Teaching with Primary Sources(TPS) Network. The TPS network features albums that pair STEM picture books to primary sources. Teachers in the network can access and use album resources for their own instruction. Amara also hosted webinars featuring STEM primary sources along with Online Office Hours to promote resources teachers can use through the Library of Congress. She published 2 NSTA articles for the Science Teacher journal and published multiple blog posts on LOC Teacher page. Amara participated in multiple workshops and conferences hosted by the Learning and Innovation Office.</p>
Linda Antinone	Texas, High School Mathematics, Physics Teacher	<p>Office of Congresswoman Deb Haaland, New Mexico</p> <p>Linda served as a policy fellow with responsibility for the following areas: Education, Science and Technology, Women’s Issues including the Democratic Women’s Caucus, Poverty including the Majority Leader’s Task Force on Poverty and Opportunity, Children and Families and Community Service. In this role, she monitored legislation and wrote speeches and talking points on various issues. She also developed questions that were used in an Oversight Committee Hearing. Linda worked on legislative bills including the HEAL Act for Immigrant Women and Children to provide healthcare access to immigrants and the Universal Childcare and Early Learning Act.</p> <p>Linda staffed the Democratic Women’s Caucus for Rep. Haaland developing 13 DWC newsletters sent to staff of Democratic women’s offices and planned dinners and briefings on topics important to women and families. She also staffed the Minority Leader’s Task Force on Poverty and Opportunity for Rep. Haaland. Linda met with constituents both in DC and in New Mexico where she and the Congresswoman held an education roundtable in February.</p>
Matthew Bryant	Kentucky High School Physics and Astronomy Teacher	<p>Office of Congressman Raúl M. Grijalva, Arizona</p> <p>Matt served as a legislative assistant for issue areas including: education, science and technology, small business, gun control, civil rights and liberties, arts and humanities, telecommunications, seniors, and pensions. He attended relevant briefings and took meetings with interested groups in those issue areas. Matt also prepared Rep. Grijalva for hearings in his role on the House Education and Labor Committee by drafting remarks for the congressman to deliver, questions for him to ask, and briefing him on the nature of the event and witnesses. Matt worked to reintroduce two bills, one to support bilingual education and another that supports families learning English with their children, by soliciting feedback from interest groups, updating bill language, securing group endorsements, and convincing other members of Congress to cosponsor the bills. He also drafted a third bill to elevate and promote the importance of school librarians and school libraries. During the initial phases of the coronavirus pandemic Matt assisted with research to help constituents’ access federal programs with a</p>

		particular focus on small businesses. He also worked to plan a roundtable listening session for Mr. Grijalva with local education professionals to discuss the challenges of safely & equitably reopening K-12 schools.
Emilie Hill	California Engineering, Chemistry, Physics Grades 7 - 12	Office of Congresswoman Susan A. Davis, California Emilie served as a Capitol Hill fellow, providing legislative support for the Davis office covering education, child care, and workforce issues. Emilie prepared opening statements and witness questions for Higher Education and Workforce Investment Subcommittee Chairperson Davis for multiple briefings and hearings, in addition to staffing whole House Education and Labor Committee meetings. One of Emilie’s highlights was working with both committee staff and Congresswoman Davis to prepare her line of questioning for Secretary of Education Betsy DeVos for the Ed & Labor oversight hearing addressing the Department of Education’s refusal to implement the Borrower’s Defense Rule. Emilie had the opportunity to meet with education agency representatives and then advise Congresswoman Davis on actions she could take that would benefit students and teachers. On two separate occasions, Emilie worked out of the Congresswoman’s San Diego District Office, meeting with local education representatives and providing constituents with support navigating federal agency issues. Emilie has spent the duration of the stay-at-home orders advocating for strong Congressional support in addressing the digital divide heightened by the current global pandemic, including writing Congresswoman Davis’ House Floor speeches addressing education issues during the coronavirus era.
Stephen Kirsche	Florida Comprehensive Science Middle School Teacher	National Aeronautics and Space Administration - Aeronautics Research Mission Directorate (ARMD) Stephen worked as a member of ARMD’s strategic communications team. His focus was developing K-12 STEM activities and missions to support ARMD’s missions. He also took part in numerous STEM engagement events with both students and teachers, worked with other directorates in NASA, and updated existing ARMD educational content. Much of his work was around Advanced Air Mobility (AAM), a new system to control drones, flying taxis, and other small aircraft in urban and rural areas. He developed an AAM STEM module which includes math, science, engineering, literacy, and coding lessons and activities for teachers to use. Another project he worked on was creating an Aeronautics @ Home page that has hands-on STEM activities designed for parents and kids to do at home. He helped share ARMD’s missions by helping start a Facebook group for aeronautics educators and conducting many Skype sessions with students from around the country and world.
Alexandra Laing	Florida K-12 STEM Instructional Specialist - Palm Beach County District- wide Support	U.S. Congress - Senator Jacky Rosen, Nevada Alexandra handled the Senator’s education and STEM portfolio in the office. She successfully found legislation, letters, and resolutions for the Senator to co-lead. She developed original legislation that the Senator introduced including the Teach CS Act, the CYBER LEAP Act, and the 1619 Act. She prepared questions for Health, Education, Labor, and Pensions hearings that the Senator was able to share with key witnesses. The feedback from witnesses at one of those hearings resulted in a letter regarding CARES funding for student Veterans that the Senator will be sending to Secretary DeVos in the upcoming weeks. The Senator is also planning to introduce two more original pieces of legislation that Alexandra authored in the next several weeks of session - the RESTART Act, a piece of legislation aimed to support mid-career STEM professionals to return to the workforce and a large piece of legislation, modeled after the Senator’s Never Again Education Act, to address anti-racism and anti-marginalization educational programming.

		As a result of Alexandra’s work with the Senator, she was invited to speak on panels for the Center for Undergraduate Research regarding advocacy for education, for the Black Engineers of the Year Awards conference regarding opportunities for research at institutes of higher education, and at the annual Women in STEM Forum at the University of the District of Columbia.
<u>Kenneth Mims</u>	Arizona Computer Science Grades 6 - 12	U.S. House of Representatives Office of Congressman Ruben Gallego, Arizona Kenneth served as a Capitol Hill fellow, providing legislative support for Rep Gallego’s office covering education, STEM workforce development, and affordable housing. One of Kenneth’s highlights was successfully introducing legislation that the Congressman introduced, including the Relief and Investment for Student Entrepreneurs (RISE) Act. The bill will make it easier for millennials to launch new STEM business ventures. Kenneth also organized a webinar for parents on the topic of transitioning back to school during COVID with local Phoenix School Superintendents, State Department of Education staff, and community-based leaders. Kenneth had the opportunity to meet with many constituents, including education representatives and youth-based community leaders, providing them support with navigating policy issues with a focus on students with disabilities.
<u>Mary Lou O'Donnell</u>	New York Biology, Chemistry, AP Seminar AP Research Research 9-12 High School	Department of Energy (DOE), Office of Science – Workforce Development for Teachers and Scientists (WDTS) Mary Lou served to assist in preparation and implementation of the National Science Bowl (NSB) both in person and virtually. This involved question review, lesson design for MS students and HS/MS teachers. She also reviewed and tested all DTC activities. As the event turned virtual, she assisted as score keeper and recognizer in coach/fellow trainings and most virtual matches. Mary Lou also updated and monitored the NSB Facebook page. Mary Lou also prepared documents summarizing the K-12 teacher and student education offerings at the 17 DOE national labs. She produced a national lab binder, documents summarizing teacher and student K-12 lab offerings, and a summary spreadsheet. She reviewed and updated all K-12 activities on the WDTS K-12 website. Mary Lou participated in numerous DOE conferences including the LED yearly meeting, monthly LED meetings, an RTIC Stem workshop, and Congressional Briefings by DOE representatives. She also participated in two Virtual Career Fairs, WDTS and SCGSR. Mary Lou was also asked to participate in the Interagency Working Group of Transdisciplinary/ Convergent learning with Dr. Ping Ge. In this IWG, she helped organize a roundtable discussion of HS STEM educators and created an infographic which defines transdisciplinary learning and contained two lessons she created. Mary Lou also volunteered to collaborate with a group of national lab education professionals on the writing of a resource manual describing best practices in virtual mentoring. The culmination of her DOE work has been to (1) assist in the successful implementation of a virtual National Science Bowl, (2) co-authoring the DOE Virtual Remote Mentoring Guide and (3) overall design and lesson crafting of Transdisciplinary info-graphic to be used by the Interagency Working Group on Convergence/Transdisciplinary learning.
<u>Deborah Reynolds</u>	Pennsylvania STEM	Department of Defense, Naval SeaSystems, Naval Surface Warfare Center-Carderock Division - STEM and Outreach

	<p>Specialist, Science, Math Middle School</p>	<p>Debbie worked with the STEM and Outreach office at Carderock, where she provided the team with an educator’s perspective on updating their current content while also creating new, Naval-relevant content aligned to NGSS. Debbie traveled to most of the surface and undersea warfare centers and shipyards to meet with their STEM teams. As a result, she created a collaborative site that is being used among all of the commands. The STEM team presented at the Space Educators Conference in Houston with the new SeaPlane content, and she also developed Pre-Service and Educator workshops and trainings to introduce new and current educators in the region to the STEM offerings at Carderock. Debbie was involved in the Interagency Working Group on Convergence and helped draft the new convergence document.</p> <p>Debbie wrote a 10-series set of articles called Teaching from Home that was sent to all of the NAVSEA command each week. She also became a contributing writer to STEM.org which is a Newsweek publication.</p>
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Table 3. 2019-2020 AEF Fellowship Accomplishments