DEPARTMENT OF EDUCATION

Applications for New Awards; Educational Technology, Media, and Materials for Individuals with Disabilities--Center on Science, Technology, Engineering, and Mathematics for Young Children with Disabilities

AGENCY: Office of Special Education and Rehabilitative Services, Department of Education.

ACTION: Notice.

SUMMARY: The Department of Education (Department) is issuing a notice inviting applications for a new award for fiscal year (FY) 2023 for Educational Technology, Media, and Materials for Individuals with Disabilities--Center on Science, Technology, Engineering, and Mathematics for Young Children with Disabilities, Assistance Listing Number 84.327G. This notice relates to the approved information collection under OMB control number 1820-0028.

DATES:

Deadline for Transmittal of Applications: [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

Deadline for Intergovernmental Review: [INSERT DATE 120 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER.]

Pre-Application Webinar Information: No later than [INSERT DATE 5 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER], the Office of Special Education Programs (OSEP) will post pre-recorded informational webinars designed to

provide technical assistance (TA) to interested applicants. The webinars may be found at https://www2.ed.gov/fund/grant/apply/osep/new-osep-grants.html.

ADDRESSES: For the addresses for obtaining and submitting an application, please refer to our Common Instructions for Applicants to Department of Education Discretionary Grant Programs, published in the *Federal Register* on December 7, 2022 (87 FR 75045) and available at www.federalregister.gov/documents/2022/12/07/2022-26554/common-instructions-for-applicants-to-department-of-education-discretionary-grant-programs. Please note that these Common Instructions supersede the version published on December 27, 2021.

FOR FURTHER INFORMATION CONTACT: Tracie Dickson, U.S. Department of Education, 400 Maryland Avenue, SW, Room 5013, Potomac Center Plaza, Washington, DC 20202-5108. Telephone: (202) 245-7844. Email: Tracie.Dickson@ed.gov.

If you are deaf, hard of hearing, or have a speech disability and wish to access telecommunications relay services, please dial 7-1-1.

SUPPLEMENTARY INFORMATION:

Full Text of Announcement

I. Funding Opportunity Description

Purpose of Program: The purpose of the Educational Technology, Media, and Materials for Individuals with

Disabilities Program (ETechM2 Program) is to improve results for students with disabilities by: (1) promoting the development, demonstration, and use of technology; (2) supporting educational media activities designed to be of educational value in the classroom for students with disabilities; (3) providing support for captioning and video description that is appropriate for use in the classroom; and (4) providing accessible educational materials to students with disabilities in a timely manner.

Priority: This competition includes one absolute priority. In accordance with 34 CFR 75.105(b)(2)(v), this priority is from allowable activities specified in the statute (see sections 674(b)(2) and 681(d) of the Individuals with Disabilities Education Act (IDEA); 20 U.S.C. 1474(b)(2) and 1481(d)).

Absolute Priority: For FY 2023 and any subsequent year in which we make awards from the list of unfunded applications from this competition, this priority is an absolute priority. Under 34 CFR 75.105(c)(3), we consider only applications that meet this priority.

This priority is:

Center on Science, Technology, Engineering, and Mathematics for Young Children with Disabilities.

Background:

One of the greatest joys of early learning is the amazing curiosity of infants, toddlers, and preschool

children (young children). All young children are "little scientists" who make observations and conduct experiments to see what will happen as they play and engage with their environment and with each other. In fact, more than half of young children's natural playtime is spent on a science or mathematics-related activity (Head Start Early Childhood Learning and Knowledge Center, 2021a). For example, infants explore objects with their hands and mouth, learning about similarities and differences; during outdoor free play, preschoolers like to explore and naturally learn math concepts such as counting or sorting leaves and rocks. This sets the earliest foundation for school readiness (National Center on Early Childhood Development, Teaching, and Learning, 2021a), and allows young children to engage and communicate with others as they develop skills and learn new concepts.

Every child deserves equitable access to a culturally informed, inclusive, and high-quality education that integrates science, technology, engineering, and mathematics (STEM) throughout the daily curriculum to prepare them for school and potential future STEM career paths. STEM education that focuses on integrating arts into a STEM framework creates a multi-disciplinary, creative, and dynamic approach to learning STEM (Dell'Erba, 2019). Integrating art in STEM can include visual arts (concepts such as color, shape, line/angle, texture, and

space), movement, dance, and music (Head Start Early Childhood Learning and Knowledge Center, 2021b). Integrating art within STEM is about using creativity and imagination to increase the development of STEM skills and concepts. An early introduction to STEM that integrates art builds foundational skills needed for later learning, including problem solving, creativity, inquiry skills, analytic skills, math and science skills, design thinking for engineering, critical thinking, and collaboration (National Center on Early Childhood Development, Teaching, and Learning, 2021b). Early STEM experiences that integrate art can promote future academic success as children who learn STEM concepts earlier are better prepared to meet increasingly technology-focused instruction later in their education (Linder & Eckhoff, 2020). In addition, the importance of early STEM experiences is supported by research studies (Purpura et al., 2017) that show early mathematics skills are the most consistently predictive measure of future academic success.

While STEM learning opportunities in the early years have been shown to be important for later learning, there are still many misconceptions about the importance of STEM learning for children with disabilities (Yang et al., 2022), including those who are multilingual and racially ethnically, and culturally diverse. As a result, such young children may lack access or adequate support to

engage in STEM learning opportunities. Studies show that all young children can benefit from participating in early childhood settings that integrates art into teaching STEM concepts (Bucher & Pindra, 2020). Young children with disabilities may require specialized supports to engage in STEM learning to help them achieve developmental and educational outcomes under Parts C and B of the IDEA. Many STEM activities require children to use fine and gross motor skills to physically engage with objects, have the mobility to participate in experiments, or use different senses to explore how something works. STEM activities also typically require children to ask questions, focus their attention and solve problems. Delays in achieving these developmental skills may pose challenges for some young children with disabilities to fully engage in STEM learning opportunities. Yet the hands-on approach and active engagement needed for STEM learning can be an ideal way for young children with disabilities to develop skills and achieve goals specified in their individualized family service plans (IFSPs) or individualized education programs (IEPs). Identifying best practices in providing STEM learning to young children with disabilities, including the supports needed to integrate these practices into daily routines and in inclusive settings, would help maximize their opportunities to achieve developmental and educational outcomes.

Young children who are multilingual and racially, ethnically, and culturally diverse also have less exposure to STEM learning opportunities (Science, Technology, Engineering and Math: Innovation for Inclusion in Early Education, 2023). Therefore, young children with disabilities who are multilingual and racially, ethnically, and culturally diverse are particularly at risk for not receiving the supports they need to fully engage in STEM learning opportunities. Culture influences the learning process, and the environment created should foster all young children's sense of belonging, purpose, and agency. Best practices in providing STEM learning opportunities, including using technology and art, need to be culturally and linguistically responsive. Additionally, supports need to be in place to help early childhood personnel understand, communicate with, and effectively interact with multilingual and racially, ethnically, and culturally diverse young children with disabilities and their families to successfully support developmental and learning outcomes in STEM.

Providing STEM opportunities for learning, including using technology and art, requires more than an awareness of individual STEM concepts. Early childhood personnel require an understanding of how best to create developmentally appropriate STEM learning opportunities using learning trajectories (Clements & Sarama, 2017/2019).

Learning trajectories are based on the notion that young children follow natural developmental progressions in learning. Learning trajectories help early childhood providers understand how young children develop mathematics understanding, for example, so they are more effective in questioning, analyzing, and providing activities that further children's development than early childhood providers who are unaware of the development process. Consequently, children have a much richer and more successful learning experience. Understanding where children's skills are within a developmental progression can be a particular challenge when addressing the needs of young children with disabilities, including those who are multilingual and racially, ethnically, and culturally diverse. However, most early childhood providers do not receive coursework within their preparation programs that include STEM concepts such as learning trajectories and developmental progressions to support young children's STEM learning. Furthermore, competencies that support early childhood STEM instructional methods, such as integrating technology and art; inclusive practices; culturally and linguistically informed pedagogy; and providing modifications and accessible materials for all children with disabilities (Moon et al., 2012), should be embedded in coursework to ensure that personnel are prepared to support STEM learning. Additionally, there is limited

professional development (PD) for early childhood personnel on STEM, including using technology and art within STEM learning to support their development of this knowledge base (Jamil et al., 2017).

Families who are aware of the benefits of a STEM curriculum are more likely to be supportive of STEM education and encourage activities in the home that develop STEM concepts (National Center on Early Childhood Development, Teaching, and Learning, 2021b). While multiple tools used to teach STEM concepts to young children are increasingly available to families, including mobile technology, many families do not have exposure to and knowledge of STEM development and receive little support from early childhood providers on how best to integrate these tools into daily routines, art and play to help young children explore STEM concepts. This is particularly true for young children with disabilities, where families may need to make modifications for their young child to participate in STEM opportunities (Waters et al., 2022).

This absolute priority will advance the Secretary's Supplemental Priorities related to promoting equity in student access to educational resources and opportunities, and meeting students' social, emotional, and academic needs. See Secretary's Final Priorities and Definitions

for Discretionary Grants Programs, 86 FR 70612 (Dec. 10, 2021).

Priority:

The purpose of this priority is to fund a cooperative agreement to establish and operate a national Center on Science, Technology, Engineering, and Mathematics (STEM) for Young Children with Disabilities to achieve, at a minimum, the following expected outcomes:

(a) Expanded body of knowledge on implementing evidence-based[1] practices (EBPs) for early STEM learning that integrates STEM learning trajectories[2] and inclusive and culturally and linguistically informed evidence-based STEM instructional methods and practices, including through the use of technology and art, within learning opportunities to support all young children with disabilities and their families, including those who are multilingual and racially, ethnically, and culturally diverse in developing STEM concepts.

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[1] For the purposes of this priority, "evidence-based" means, at a minimum, evidence demonstrating a rationale (as defined in 34 CFR 77.1) based on high-quality research findings or positive evaluation that such activity, strategy, or intervention is likely to improve student outcomes or other relevant outcomes.

[2] Research-based learning trajectories include three parts: (1) a goal; (2) a developmental progression; and (3) teaching. Learning trajectories are grounded in content knowledge of the topic (for example science, technology, engineering, or math). To reach the goal, children learn each successive level of thinking in the developmental progression. Children move through the progression via teaching designed to build understanding and skill that enables thinking at each higher level. Teaching includes the environment, interactions, and activities. At the core of learning trajectories is children's thinking and learning so that educational experiences developmentally appropriate (Clements & Sarama, 2017/2019).

(b) Increased capacity of faculty in institutions of higher education (IHEs), including Historically Black Colleges and Universities (HBCUs), Tribally Controlled Colleges and Universities (TCCUs), and other Minority Serving Institutions (MSIs),[3] to integrate STEM learning trajectories and inclusive and culturally and linguistically informed evidence-based STEM instructional methods and practices, including through the use of technology and art, within programs of study to prepare an early childhood workforce with the necessary knowledge, skills, and competencies to support STEM learning for all young children with disabilities and their families, including those who are multilingual and racially, ethnically, and culturally diverse.

(c) Increased capacity of early childhood PD providers in State and local early childhood systems to integrate STEM learning trajectories and inclusive and culturally and linguistically informed evidence-based STEM instructional methods and practices, including through the use of technology and art, into their PD to build competence in the early childhood workforce to support STEM learning for all young children with disabilities and their families,

[3] For purposes of this priority, "Historically Black Colleges and Universities" means colleges and universities that meet the criteria set out in 34 CFR 608.2; "Tribally Controlled Colleges and Universities" has the meaning ascribed to it in section 316(b)(3) of the Higher Education Act of 1965 (HEA); and "Minority-Serving Institutions" means institutions that are eligible to receive assistance under sections 316 through 320 of part A of title III, under part B of title III, or under title V of the HEA.

including those who are multilingual and racially, ethnically, and culturally diverse.

(d) Increased capacity of early childhood personnel to integrate STEM learning trajectories and inclusive and culturally and linguistically informed STEM instructional methods and practices, including through the use of technology and art, into supports and services provided to all young children with disabilities and their families, including those who are multilingual and racially, ethnically, and culturally diverse.

(e) Increased capacity of families, including those who are multilingual and racially, ethnically, and culturally diverse, to integrate developmentally appropriate STEM learning opportunities into everyday routines, including through the use of technology and art.

In addition to these programmatic requirements, to be considered for funding under this priority, applicants must meet the application and administrative requirements in this priority, which are:

(a) Demonstrate, in the narrative section of the application under "Significance," how the proposed project will--

(1) Address the need in the field for increased knowledge about STEM learning, including through the use of technology and art, for young children with disabilities and their families, including those who are multilingual

and racially, ethnically, or culturally diverse. To meet this requirement the applicant must--

(i) Demonstrate knowledge of the current and emerging EBPs in STEM learning for all young children; and inclusive and culturally and linguistically informed evidence-based STEM instructional methods and practices, including the use of technology, art, and other accommodations to improve access to STEM learning for young children with disabilities, including those who are multilingual and racially, ethnically, and culturally diverse;

(ii) Demonstrate knowledge of equity issues within STEM learning for young children with disabilities and their families, including those who are multilingual and racially, ethnically, and culturally diverse, and the role of faculty, including faculty at HBCUs, TCCUs, and other MSIs, and PD providers in addressing these issues; and

(iii) Demonstrate knowledge of current educational and policy issues and national initiatives relating STEM learning, including through the use of technology and art, for all young children and their families; and specifically for young children with disabilities and their families, including those who are multilingual and racially, ethnically, and culturally diverse;

(2) Address current and emerging capacity needs of faculty, including faculty at HBCUs, TCCUs, and other MSIs, to integrate STEM learning trajectories and inclusive and

culturally and linguistically informed evidence-based STEM instructional methods and practices, including through the use of technology and art, into early childhood preparation programs of study that will prepare high-quality providers that serve young children with disabilities and their families, including those who are multilingual and racially, ethnically, and culturally diverse. To meet this requirement, the applicant must--

(i) Present information and data on the current capacity of IHE faculty, including faculty in HBCUs, TCCUs, and other MSIs, to effectively prepare early childhood preservice personnel to integrate STEM learning trajectories and inclusive and culturally and linguistically informed evidence-based STEM instructional methods and practices, including through the use of technology and art, within early childhood curriculum and learning opportunities to serve young children with disabilities, including those who are multilingual and racially, ethnically, and culturally diverse; and

(ii) Present information and data on how STEM learning, including through the use of technology and art, is currently included within early childhood personnel preparation programs, including programs in HBCUs, TCCUs, and other MSIs;

(3) Address current and emerging needs of PD providers to provide PD to early childhood personnel to

integrate STEM learning trajectories and inclusive and culturally and linguistically informed evidence-based STEM instructional methods and practices, including through the use of technology and art, into early childhood learning opportunities that will improve early STEM learning for young children with disabilities, including those who are multilingual and racially, ethnically, and culturally diverse. To meet this requirement, the applicant must--

(i) Present information and data on the current capacity of PD providers to effectively provide PD to early childhood personnel to integrate STEM learning trajectories and inclusive and culturally and linguistically informed evidence-based STEM instructional methods and practices, including through the use of technology and art, into early learning curriculum and learning opportunities;

(ii) Demonstrate knowledge of the implementation supports necessary for early childhood personnel to implement new practices;

(iii) Demonstrate knowledge of the current capacity of early childhood personnel to integrate STEM learning trajectories and inclusive and culturally and linguistically informed evidence-based STEM instructional methods and practices, including through the use of technology and art, into early childhood curriculum and early learning opportunities; and

(iv) Demonstrate knowledge of the current capacity of early childhood personnel to educate, engage, and support families of young children with disabilities, including those who are multilingual and racially, ethnically, and culturally diverse, to implement early STEM learning activities, including through the use of technology and art, into everyday routines;

(4) Address current and emerging needs of all families, including those who are multilingual and racially, ethnically, and culturally diverse, to integrate developmentally appropriate STEM learning opportunities, into everyday routines, including through the use of technology and art; and

(5) Improve the potential for early STEM outcomes for young children with disabilities, including those who are multilingual and racially, ethnically, and culturally diverse; and indicate the likely magnitude or importance of these outcomes.

(b) Demonstrate, in the narrative section of the application under "Quality of project services," how the proposed project will--

(1) Ensure equal access and treatment for members of groups that have traditionally been underrepresented based on race, color, national origin, gender, age, or disability. To meet this requirement, the applicant must describe how it will--

(i) Identify the needs of the intended recipients for technical assistance (TA) and information;

(ii) Ensure that services and products meet the needs of the intended recipients of the grant; and

(iii) Address the needs of young children with disabilities and their families who are multilingual and racially, ethnically, and culturally diverse, to access early childhood programs that integrate STEM learning trajectories and inclusive and culturally and linguistically informed evidence-based STEM instructional methods and practices, including through the use of technology and art;

(2) Achieve its goals, objectives, and intended outcomes. To meet this requirement, the applicant must provide--

(i) Measurable intended project outcomes; and

(ii) In Appendix A, the logic model (as defined in 34 CFR 77.1) by which the proposed project will achieve its intended outcomes that depicts, at a minimum, the goals, activities, outputs, and intended outcomes of the proposed project;

(3) Use a conceptual framework (and provide a copy in Appendix A) to develop project plans and activities, describing any underlying concepts, assumptions, expectations, beliefs, or theories, as well as the presumed

relationships or linkages among these variables, and any empirical support for this framework;

Note: The following websites provide more information on logic models and conceptual frameworks: https://osepideasthatwork.org/sites/default/files/2021-12/ConceptualFramework_Updated.pdf and www.osepideasthatwork.org/resources-grantees/program-areas/ta-ta/tad-project-logic-model-and-conceptual-framework.

(4) Be based on current research and make use of EBPs in STEM learning, including through the use of technology and art. To meet this requirement, the applicant must describe--

(i) The current research on practices to support STEM learning, including through the use of technology and art, for young children with disabilities, including those who are multilingual and racially, ethnically, and culturally diverse;

(ii) The current research about adult learning principles and implementation science or improvement science that will inform the proposed products and services; and

(iii) How the proposed project will incorporate current STEM research and EBPs that promote inclusive and culturally and linguistically informed early STEM learning,

including through the use of technology and art, in the development and dissemination of its products and services;

(5) Develop products and provide services that are of high quality and sufficient intensity and duration to achieve the intended outcomes of the proposed project. To address this requirement, the applicant must describe--

(i) How it proposes to expand the knowledge base on:

(A) EBPs on early STEM learning and inclusive and culturally and linguistically informed evidence-based STEM instructional methods and practices, including through the use of technology and art, for young children with disabilities, including those who are multilingual and racially, ethnically, and culturally diverse;

(B) The use of technology and art to improve access to early STEM learning for young children with disabilities, including those who are multilingual and racially, ethnically, and culturally diverse;

(C) What young children should learn in early STEM at different ages, taking into consideration linguistics and racial, ethnic, and cultural diversity;

(D) The use of mobile technology to support STEM learning for young children with disabilities, including those who are multilingual and racially, ethnically, and culturally diverse;

(E) Integration of early STEM learning, including through the use of technology and art, into IFSPs under Part C of the IDEA and IEPs under Part B of the IDEA;

(F) Implementation supports for early childhood programs and providers to apply inclusive and culturally and linguistically informed evidence-based STEM instructional methods and practices, including through the use of technology and art in early learning settings; and

(G) Implementation supports for early childhood programs and providers to educate, engage, and support families of young children with disabilities, including those who are multilingual and racially, ethnically, and culturally diverse to effectively integrate STEM learning opportunities in daily routines.

(ii) Its proposed approach to universal, general TA,[4] which must identify the intended recipients of the products and services under this approach and should include, at minimum, activities focused on--

(A) Developing and disseminating resources, materials, and tools to support faculty, including faculty at HBCUs, TCCUs, and other MSIs, and PD providers to embed current STEM learning trajectories and inclusive and

[4] "Universal, general TA" means TA and information provided to independent users through their own initiative, resulting in minimal interaction with TA center staff and including one-time, invited or offered conference presentations by TA center staff. This category of TA also includes information or products, such as newsletters, guidebooks, or research syntheses, downloaded from the TA center's website by independent users. Brief communications by TA center staff with recipients, either by telephone or email, are also considered universal, general TA.

culturally and linguistically informed evidence-based STEM instructional methods and practices, including through the use of technology and art, for young children with disabilities, including those who are multilingual and racially, ethnically, and culturally diverse, within personnel preparation programs and PD opportunities;

(B) Developing and disseminating resources, materials, and tools for early childhood programs and providers on current EBPs on early STEM learning for young children with disabilities, including those who are multilingual and racially, ethnically, and culturally diverse, such as: how to incorporate early STEM learning into IFSPs and IEPs to achieve child outcomes; how to use technology, including mobile technology, and art to increase opportunities for early STEM learning; how to deliver inclusive and culturally and linguistically informed instruction or interventions that promote early STEM learning; and how to work with families, including those who are multilingual and racially, ethnically, and culturally diverse, to help promote early STEM learning, including through the use of technology and art, with their child; and

(C) Partnering with national professional organizations, foundations, industry and research organizations and TA centers to disseminate information on how young children with disabilities, including those who

are multilingual and racially, ethnically, and culturally diverse, can be included in broader early STEM learning research, policies, and practices, including within new curricula and learning materials.

(iii) Its proposed approach to targeted, specialized TA,[5] which must identify the intended recipients, including the type and number of recipients that will receive the products and services under this approach, including recipients that are multilingual and racially, ethnically, and culturally diverse; and

(6) Develop products and implement services that maximize efficiency and consider linguistic, racial, ethnic, and cultural diversity. To address this requirement, the applicant must describe--

(i) How the proposed project will use technology to achieve the intended project outcomes;

(ii) With whom the proposed project will collaborate and the intended outcomes of this collaboration; and

(iii) How the proposed project will use non-project resources to achieve the intended project outcomes.

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[5] "Targeted, specialized TA" means TA services based on needs common to multiple recipients and not extensively individualized. A relationship is established between the TA recipient and one or more TA center staff. This category of TA includes one-time, labor-intensive events, such as facilitating strategic planning or hosting regional or national conferences. It can also include episodic, less labor-intensive events that extend over a period of time, such as facilitating a series of conference calls on single or multiple topics that are designed around the needs of the recipients. Facilitating communities of practice can also be considered targeted, specialized TA.

(7) Develop a dissemination plan that describes how the applicant will systematically distribute information, products, and services to varied intended audiences, using a variety of dissemination strategies, to promote awareness and use of the Center's products and services.

(c) In the narrative section of the application under "Quality of the project evaluation," include an evaluation plan for the project developed in consultation with and implemented by a third-party evaluator.[6] The evaluation plan must--

(1) Articulate formative and summative evaluation questions, including important process and outcome evaluation questions. These questions should be related to the project's proposed logic model required in paragraph (b)(2)(ii) of this notice;

(2) Describe how progress in and fidelity of implementation, as well as project outcomes will be measured to answer the evaluation questions. Specify the measures and associated instruments or sources for data appropriate to the evaluation questions. Include information regarding reliability and validity of measures where appropriate;

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[6] A "third-party evaluator" is an independent and impartial program evaluator who is contracted by the grantee to conduct an objective evaluation of the project. This evaluator must not have participated in the development or implementation of any project activities, except for the evaluation activities, or have any financial interest in the outcome of the evaluation.

(3) Describe strategies for analyzing data and how data collected as part of this plan will be used to inform and improve service delivery over the course of the project and to refine the proposed logic model and evaluation plan, including subsequent data collection;

(4) Provide a timeline for conducting the evaluation, and include staff assignments for completing the plan. The timeline must indicate that the data will be available annually for the annual performance report (APR);

(5) Dedicate sufficient funds in each budget year to cover the costs of developing or refining the evaluation plan in consultation with the third-party evaluator, as well as the costs associated with the implementation of the evaluation plan by the third-party evaluator.

(d) Demonstrate, in the narrative section of the application under "Adequacy of resources and quality of project personnel," how--

(1) The proposed project will encourage applications for employment from persons who are members of groups that have traditionally been underrepresented based on race, color, national origin, gender, age, or disability, as appropriate;

(2) The proposed key project providers, consultants, and subcontractors have the qualifications and experience to carry out the proposed activities and achieve the project's intended outcomes;

(3) The applicant and any key partners have adequate resources to carry out the proposed activities; and

(4) The proposed costs are reasonable in relation to the anticipated results and benefits.

(e) Demonstrate, in the narrative section of the application under "Quality of the management plan," how--

(1) The proposed management plan will ensure that the project's intended outcomes will be achieved on time and within budget. To address this requirement, the applicant must describe--

(i) Clearly defined responsibilities for key project providers, consultants, and subcontractors, as applicable; and

(ii) Timelines and milestones for accomplishing the project tasks;

(2) Responsibilities are allocated among key project personnel and any consultants and subcontractors, and how these allocations are appropriate and adequate to achieve the project's intended outcomes;

(3) The proposed management plan will ensure that the products and services provided are of high quality, relevant, and useful to recipients; and

(4) The proposed project will benefit from a diversity of perspectives, including those who are multilingual and racially, ethnically, and culturally diverse; those with disabilities; researchers; faculty,

including those at HBCUs, TCCUs and other MSIs; early childhood administrators; providers across different types of early childhood programs; families; and policy makers; among others, in its development and operation.

(f) Address the following application requirements. The applicant must--

(1) Include, in Appendix A, personnel-loading charts and timelines, as applicable, to illustrate the management plan described in the narrative;

(2) Include, in the budget, attendance at the following:

(i) A one and one-half day kick-off meeting in Washington, DC, after receipt of the award, and an annual planning meeting in Washington, DC with the OSEP project officer and other relevant staff during each subsequent year of the project period.

Note: Within 30 days of receipt of the award, a post-award teleconference must be held between the OSEP project officer and the grantee's project director or other authorized representative;

(ii) A two- and one-half day project directors' conference in Washington, DC, during each year of the project period;

(iii) Two annual two-day trips to attend Department briefings, Department-sponsored conferences, and other meetings, as requested by OSEP; and

(iv) A one-day intensive 3+2 review meeting in Washington, DC, during the last half of the second year of the project period;

(3) Include, in the budget, a line item for an annual set-aside of five percent of the grant amount to support emerging needs that are consistent with the proposed project's intended outcomes, as those needs are identified in consultation with, and approved by, the OSEP project officer. With approval from the OSEP project officer, the project must reallocate any remaining funds from this annual set-aside no later than the end of the third quarter of each budget period;

(4) Describe how doctoral students or post-doctoral fellows, including those who are multilingual and racially, ethnically and culturally diverse, will be engaged in the project to increase the number of future leaders, especially those who are multilingual and racially, ethnically, and culturally diverse, in the field who are knowledgeable about STEM learning for young children with disabilities, including the use of technology and art, to increase access to STEM learning;

(5) Maintain a high-quality website, with an easy-to-navigate design, that meets government or industry-recognized standards for accessibility;

(6) Ensure that annual project progress toward meeting project goals is posted on the project website; and

(7) Include, in Appendix A, an assurance that the project will assist OSEP with the transfer of pertinent resources and products and will maintain the continuity of services during the transition at the end of this award period, as appropriate.

Fourth and Fifth Years of the Project:

In deciding whether to continue funding the project for the fourth and fifth years, the Secretary will consider the requirements of 34 CFR 75.253(a), as well as--

(a) The recommendations of a 3+2 review team consisting of experts who have experience and knowledge in STEM for young children with disabilities, including those who are multilingual and racially, ethnically, and culturally diverse. This review will be conducted during a one-day intensive meeting that will be held during the last half of the second year of the project period;

(b) The timeliness with which, and how well, the requirements of the negotiated cooperative agreement have been or are being met by the project; and

(c) The quality, relevance, and usefulness of the project's products and services and the extent to which the project's products and services are aligned with the project's objectives and likely to result in the project achieving its intended outcomes.

References:

Bucher, E., & Pindra, S. (2020, May). Infant and toddler STEAM: Supporting interdisciplinary experiences with our youngest learners. *Young Children*, *75*(2). www.naeyc.org/resources/pubs/yc/may2020/infant-and-toddler-steam-supporting-interdisciplinary-experiences.

Dell'Erba, M. (2019, March). *Policy considerations for STEAM education* [Policy brief]. Education Commission of the States, Arts Education Partnership. www.ecs.org/policy-considerations-for-steam-education/.

Clements, D. H., & Sarama, J. (2017/2019). *Learning and teaching with learning trajectories [LT]2*. Marsico Institute, Morgridge College of Education, University of Denver. www.LearningTrajectories.org.

Head Start Early Childhood Learning and Knowledge Center. (2021a). *Little scientists: Building early STEAM skills*. https://eclkc.ohs.acf.hhs.gov/publication/little-scientists-building-early-steam-skills.

Head Start Early Childhood Learning and Knowledge Center. (2021b). *Supporting the A in STEAM with infants and toddlers*. https://eclkc.ohs.acf.hhs.gov/publication/supporting-steam-infants-toddlers.

Jamil, F. M., Linder, S. M., & Stegelin, D. A. (2017). Early childhood teacher beliefs about STEAM education after a professional development conference. *Early Childhood Education Journal*, *46*, 409-417 (2018). https://doi.org/10.1007/s10643-017-0875-5.

Kricorian, K., Seu, M., Lopez, D., Ureta, E., & Equils O. (2020). Factors influencing participation of underrepresented students in STEM fields: Matched mentors and mindsets. *International Journal of STEM Education*, 7:16. https://doi.org/10.1186/s40594-020-00219-2.

Linder, S. M., & Eckhoff, A. (2020, March). Breaking down STEAM for young children. *Teaching Young Children*, *13*(3). National Association for the Education of Young Children www.naeyc.org/resources/pubs/tyc/feb2020/breaking-down-steam.

Moon, N. W., Todd, R. L., Morton, D. L., & Ivey, E. (2012). *Accommodating students with disabilities in science, technology, engineering, and mathematics (STEM)*. Center for Assistive Technology and Environmental Access, Georgia Institute of Technology. https://advance.cc.lehigh.edu/sites/advance.cc.lehigh.edu/files/accommodating.pdf.

National Center on Early Childhood Development, Teaching, and Learning. (2021a). *STEAM: Thinking STEAM.* U.S.

Department of Health and Human Services, Administration for Children and Families, Office of Head Start, Office of Child Care. https://childcareta.acf.hhs.gov/sites/default/files/public/dtl-steam-box-booklet-5.pdf.

National Center on Early Childhood Development, Teaching, and Learning. (2021b). *STEAM: Exploring STEAM at home*. U.S. Department of Health and Human Services, Administration for Children and Families, Office of Head Start, Office of Child Care. https://childcareta.acf.hhs.gov/sites/default/files/public/dtl-steam-box-booklet-4.pdf.

Purpura D. J., Logan, J. A. R., Hassinger-Das, B., & Napoli, A. R. (2017). Why do early mathematics skills predict later reading? The role of mathematical language. *Developmental Psychology*, *53*(9), 1633-1642. https://doi.org/10.1037/dev0000375.

Science, Technology, Engineering and Math: Innovation for Inclusion in Early Education. (2023). *Five things to know about STEM Learning in Young Children*. https://stemie.fpg.unc.edu/five-things-know-about-stem-learning-young-children.

Waters, V., West, T., Lim, C., & Vinh, M. (2022). *A Guide to Adaptations*. National Center on Science, Technology, Engineering, and Math: Innovation for

Inclusion in Early Childhood. https://stemie.fpg.unc.edu/guide-adaptations.

Yang, H., Waters, V., Lim, C., Pedonti, S., & Harradine, C. (2022). *A guide to addressing STEM myths*. Center on Science, Technology, Engineering, and Mathematics Innovation for Inclusion in Early Education. https://stemie.fpg.unc.edu/guide-addressing-stem-myths.

Waiver of Proposed Rulemaking: Under the Administrative Procedure Act (APA) (5 U.S.C. 553) the Department generally offers interested parties the opportunity to comment on proposed priorities. Section 681(d) of IDEA, however, makes the public comment requirements of the APA inapplicable to the priority in this notice.

Program Authority: 20 U.S.C. 1474 and 1481.

Note: Projects will be awarded and must be operated in a manner consistent with the nondiscrimination requirements contained in Federal civil rights laws.

Applicable Regulations: (a) The Education Department General Administrative Regulations in 34 CFR parts 75, 77, 79, 81, 82, 84, 86, 97, 98, and 99. (b) The Office of Management and Budget Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement) in 2 CFR part 180, as adopted and amended as regulations of the Department in 2 CFR part 3485. (c) The Uniform Administrative Requirements, Cost Principles, and Audit

Requirements for Federal Awards in 2 CFR part 200, as adopted and amended as regulations of the Department in 2 CFR part 3474.

Note: The regulations in 34 CFR part 79 apply to all applicants except federally recognized Indian Tribes.

Note: The regulations in 34 CFR part 86 apply to IHEs only.

II. Award Information

Type of Award: Cooperative agreement.

Estimated Available Funds: $1,450,000.

Contingent upon the availability of funds and the quality of applications, we may make additional awards in FY 2024 from the list of unfunded applications from this competition.

Maximum Award: We will not make an award exceeding $1,450,000 for a single budget period of 12 months.

Estimated Number of Awards: 1.

Note: The Department is not bound by any estimates in this notice.

Project Period: Up to 60 months.

III. Eligibility Information

1. Eligible Applicants: State educational agencies; State lead agencies under Part C of the IDEA; local educational agencies (LEAs), including charter schools that operate as LEAs under State law; IHEs; other public agencies; private nonprofit organizations; freely

associated States and outlying areas; Indian Tribes or Tribal organizations; and for-profit organizations.

2. a. Cost Sharing or Matching: This competition does not require cost sharing or matching.

b. Indirect Cost Rate Information: This program uses an unrestricted indirect cost rate. For more information regarding indirect costs, or to obtain a negotiated indirect cost rate, please see https://www2.ed.gov/about/offices/list/ocfo/intro.html.

c. Administrative Cost Limitation: This program does not include any program-specific limitation on administrative expenses. All administrative expenses must be reasonable and necessary and conform to Cost Principles described in 2 CFR part 200 subpart E of the Uniform Guidance.

3. Subgrantees: Under 34 CFR 75.708(b) and (c) a grantee under this competition may award subgrants--to directly carry out project activities described in its application--to the following types of entities: IHEs, nonprofit organizations suitable to carry out the activities proposed in the application, and other public agencies. The grantee may award subgrants to entities it has identified in an approved application or that it selects through a competition under procedures established by the grantee.

4. Other General Requirements:

(a) Recipients of funding under this competition must make positive efforts to employ and advance in employment qualified individuals with disabilities (see section 606 of IDEA).

(b) Applicants for, and recipients of, funding must, with respect to the aspects of their proposed project relating to the absolute priority, involve individuals with disabilities, or parents of individuals with disabilities ages birth through 26, in planning, implementing, and evaluating the project (see section 682(a)(1)(A) of IDEA).

IV. Application and Submission Information

1. Application Submission Instructions: Applicants are required to follow the Common Instructions for Applicants to Department of Education Discretionary Grant Programs, published in the *Federal Register* on December 7, 2022 (87 FR 75045) and available at www.federalregister.gov/documents/2022/12/07/2022-26554/common-instructions-for-applicants-to-department-of-education-discretionary-grant-programs, which contain requirements and information on how to submit an application. Please note that these Common Instructions supersede the version published on December 27, 2021.

2. Intergovernmental Review: This competition is subject to Executive Order 12372 and the regulations in 34 CFR part 79. Information about Intergovernmental Review of

Federal Programs under Executive Order 12372 is in the application package for this competition.

3. Funding Restrictions: We reference regulations outlining funding restrictions in the Applicable Regulations section of this notice.

4. Recommended Page Limit: The application narrative is where you, the applicant, address the selection criteria that reviewers use to evaluate your application. We recommend that you (1) limit the application narrative to no more than 70 pages and (2) use the following standards:

• A "page" is 8.5" x 11", on one side only, with 1" margins at the top, bottom, and both sides.

• Double-space (no more than three lines per vertical inch) all text in the application narrative, including titles, headings, footnotes, quotations, reference citations, and captions, as well as all text in charts, tables, figures, graphs, and screen shots.

• Use a font that is 12 point or larger.

• Use one of the following fonts: Times New Roman, Courier, Courier New, or Arial.

The recommended page limit does not apply to the cover sheet; the budget section, including the narrative budget justification; the assurances and certifications; or the abstract (follow the guidance provided in the application package for completing the abstract), the table of contents, the list of priority requirements, the resumes,

the reference list, the letters of support, or the appendices. However, the recommended page limit does apply to all of the application narrative, including all text in charts, tables, figures, graphs, and screen shots.

V. Application Review Information

1. Selection Criteria: The selection criteria for this competition are from 34 CFR 75.210 and are as follows:

(a) Significance (10 points).

(1) The Secretary considers the significance of the proposed project.

(2) In determining the significance of the proposed project, the Secretary considers the following factors:

(i) The extent to which specific gaps or weaknesses in services, infrastructure, or opportunities have been identified and will be addressed by the proposed project, including the nature and magnitude of those gaps or weaknesses;

(ii) The potential contribution of the proposed project to the development and advancement of theory, knowledge, and practices in the field of study; and

(iii) The importance or magnitude of the results or outcomes likely to be attained by the proposed project.

(b) Quality of project services (35 points).

(1) The Secretary considers the quality of the services to be provided by the proposed project.

(2) In determining the quality of the services to be provided by the proposed project, the Secretary considers the quality and sufficiency of strategies for ensuring equal access and treatment for eligible project participants who are members of groups that have traditionally been underrepresented based on race, color, national origin, gender, age, or disability.

(3) In addition, the Secretary considers the following factors:

(i) The extent to which the goals, objectives, and outcomes to be achieved by the proposed project are clearly specified and measurable;

(ii) The extent to which there is a conceptual framework underlying the proposed research or demonstration activities and the quality of that framework;

(iii) The extent to which the services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice;

(iv) The extent to which the training or professional development services to be provided by the proposed project are of sufficient quality, intensity, and duration to lead to improvements in practice among the recipients of those services; and

(v) The extent to which the services to be provided by the proposed project involve the collaboration of

appropriate partners for maximizing the effectiveness of project services.

(c) Quality of the project evaluation (20 points).

(1) The Secretary considers the quality of the evaluation to be conducted of the proposed project.

(2) In determining the quality of the evaluation, the Secretary considers the following factors:

(i) The extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project;

(ii) The extent to which the methods of evaluation provide for examining the effectiveness of project implementation strategies;

(iii) The extent to which the methods of evaluation will provide performance feedback and permit periodic assessment of progress toward achieving intended outcomes; and

(iv) The qualifications, including relevant training, experience, and independence, of the evaluator.

(d) Adequacy of resources and quality of project personnel (15 points).

(1) The Secretary considers the adequacy of resources for the proposed project and the quality of project personnel.

(2) In determining the quality of project personnel, the Secretary considers the extent to which the applicant

encourages applications for employment from persons who are members of groups that have traditionally been underrepresented based on race, color, national origin, gender, age, or disability.

(3) In determining the adequacy of resources and quality of project personnel for the proposed project, the Secretary considers the following factors:

(i) The qualifications, including relevant training and experience, of key project personnel;

(ii) The qualifications, including relevant training and experience, of project consultants or subcontractors;

(iii) The adequacy of support, including facilities, equipment, supplies, and other resources, from the applicant organization or the lead applicant organization;

(iv) The relevance and demonstrated commitment of each partner in the proposed project to the implementation and success of the project; and

(v) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

(e) Quality of the management plan (20 points).

(1) The Secretary considers the quality of the management plan for the proposed project.

(2) In determining the quality of the management plan for the proposed project, the Secretary considers the following factors:

(i) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks;

(ii) The extent to which the time commitments of the project director and principal investigator and other key project personnel are appropriate and adequate to meet the objectives of the proposed project;

(iii) The adequacy of mechanisms for ensuring high-quality products and services from the proposed project; and

(iv) How the applicant will ensure that a diversity of perspectives is brought to bear in the operation of the proposed project, including those of parents, teachers, the business community, a variety of disciplinary and professional fields, recipients or beneficiaries of services, or others, as appropriate.

2. Review and Selection Process: We remind potential applicants that in reviewing applications in any discretionary grant competition, the Secretary may consider, under 34 CFR 75.217(d)(3), the past performance of the applicant in carrying out a previous award, such as the applicant's use of funds, achievement of project objectives, and compliance with grant conditions. The Secretary may also consider whether the applicant failed to

submit a timely performance report or submitted a report of unacceptable quality.

In addition, in making a competitive grant award, the Secretary requires various assurances, including those applicable to Federal civil rights laws that prohibit discrimination in programs or activities receiving Federal financial assistance from the Department (34 CFR 100.4, 104.5, 106.4, 108.8, and 110.23).

3. Additional Review and Selection Process Factors: In the past, the Department has had difficulty finding peer reviewers for certain competitions because so many individuals who are eligible to serve as peer reviewers have conflicts of interest. The standing panel requirements under section 682(b) of IDEA also have placed additional constraints on the availability of reviewers. Therefore, the Department has determined that for some discretionary grant competitions, applications may be separated into two or more groups and ranked and selected for funding within specific groups. This procedure will make it easier for the Department to find peer reviewers by ensuring that greater numbers of individuals who are eligible to serve as reviewers for any particular group of applicants will not have conflicts of interest. It also will increase the quality, independence, and fairness of the review process, while permitting panel members to

review applications under discretionary grant competitions for which they also have submitted applications.

4. Risk Assessment and Specific Conditions: Consistent with 2 CFR 200.206, before awarding grants under this competition the Department conducts a review of the risks posed by applicants. Under 2 CFR 200.208, the Secretary may impose specific conditions, and under 2 CFR 3474.10, in appropriate circumstances, high-risk conditions on a grant if the applicant or grantee is not financially stable; has a history of unsatisfactory performance; has a financial or other management system that does not meet the standards in 2 CFR part 200, subpart D; has not fulfilled the conditions of a prior grant; or is otherwise not responsible.

5. Integrity and Performance System: If you are selected under this competition to receive an award that over the course of the project period may exceed the simplified acquisition threshold (currently $250,000), under 2 CFR 200.206(a)(2) we must make a judgment about your integrity, business ethics, and record of performance under Federal awards--that is, the risk posed by you as an applicant--before we make an award. In doing so, we must consider any information about you that is in the integrity and performance system (currently referred to as the Federal Awardee Performance and Integrity Information System (FAPIIS)), accessible through the System for Award

Management. You may review and comment on any information about yourself that a Federal agency previously entered and that is currently in FAPIIS.

Please note that, if the total value of your currently active grants, cooperative agreements, and procurement contracts from the Federal Government exceeds $10,000,000, the reporting requirements in 2 CFR part 200, Appendix XII, require you to report certain integrity information to FAPIIS semiannually. Please review the requirements in 2 CFR part 200, Appendix XII, if this grant plus all the other Federal funds you receive exceed $10,000,000.

6. In General: In accordance with the Office of Management and Budget's guidance located at 2 CFR part 200, all applicable Federal laws, and relevant Executive guidance, the Department will review and consider applications for funding pursuant to this notice inviting applications in accordance with:

(a) Selecting recipients most likely to be successful in delivering results based on the program objectives through an objective process of evaluating Federal award applications (2 CFR 200.205);

(b) Prohibiting the purchase of certain telecommunication and video surveillance services or equipment in alignment with section 889 of the National Defense Authorization Act of 2019 (Pub. L. No. 115—232) (2 CFR 200.216);

(c) Providing a preference, to the extent permitted by law, to maximize use of goods, products, and materials produced in the United States (2 CFR 200.322); and

(d) Terminating agreements in whole or in part to the greatest extent authorized by law if an award no longer effectuates the program goals or agency priorities (2 CFR 200.340).

VI. Award Administration Information

1. Award Notices: If your application is successful, we notify your U.S. Representative and U.S. Senators and send you a Grant Award Notification (GAN); or we may send you an email containing a link to access an electronic version of your GAN. We may notify you informally, also.

If your application is not evaluated or not selected for funding, we notify you.

2. Administrative and National Policy Requirements: We identify administrative and national policy requirements in the application package and reference these and other requirements in the Applicable Regulations section of this notice.

We reference the regulations outlining the terms and conditions of an award in the Applicable Regulations section of this notice and include these and other specific conditions in the GAN. The GAN also incorporates your

approved application as part of your binding commitments under the grant.

3. Open Licensing Requirements: Unless an exception applies, if you are awarded a grant under this competition, you will be required to openly license to the public grant deliverables created in whole, or in part, with Department grant funds. When the deliverable consists of modifications to pre-existing works, the license extends only to those modifications that can be separately identified and only to the extent that open licensing is permitted under the terms of any licenses or other legal restrictions on the use of pre-existing works. Additionally, a grantee that is awarded competitive grant funds must have a plan to disseminate these public grant deliverables. This dissemination plan can be developed and submitted after your application has been reviewed and selected for funding. For additional information on the open licensing requirements please refer to 2 CFR 3474.20.

4. Reporting: (a) If you apply for a grant under this competition, you must ensure that you have in place the necessary processes and systems to comply with the reporting requirements in 2 CFR part 170 should you receive funding under the competition. This does not apply if you have an exception under 2 CFR 170.110(b).

(b) At the end of your project period, you must submit a final performance report, including financial

information, as directed by the Secretary. If you receive a multiyear award, you must submit an annual performance report that provides the most current performance and financial expenditure information as directed by the Secretary under 34 CFR 75.118. The Secretary may also require more frequent performance reports under 34 CFR 75.720(c). For specific requirements on reporting, please go to www.ed.gov/fund/grant/apply/appforms/appforms.html.

5. Performance Measures: For purposes of Department reporting under 34 CFR 75.110, the Department has established a set of performance measures, including long-term measures, that are designed to yield information on various aspects of the effectiveness and quality of the ETechM2 Program. These measures are:

- Program Performance Measure 1: The percentage of ETechM2 Program products and services judged to be of high quality by an independent review panel of experts qualified to review the substantial content of the products and services.

- Program Performance Measure 2: The percentage of ETechM2 Program products and services judged to be of high relevance to improving outcomes for infants, toddlers, children, and youth with disabilities.

- Program Performance Measure 3: The percentage of ETechM2 Program products and services judged to be useful

in improving results for infants, toddlers, children, and youth with disabilities.

• Program Performance Measure 4.1: The Federal cost per unit of accessible educational materials funded by the ETechM2 Program.

• Program Performance Measure 4.2: The Federal cost per unit of accessible educational materials from the National Instructional Materials Accessibility Center funded by the ETechM2 Program.

• Program Performance Measure 4.3: The Federal cost per unit of video description funded by the ETechM2 Program.

The measures apply to projects funded under this competition, and grantees are required to submit data on these measures as directed by OSEP.

Grantees will be required to report information on their project's performance in annual and final performance reports to the Department (34 CFR 75.590).

The Department will also closely monitor the extent to which the products and services provided by the project meet needs identified by stakeholders and may require the project to report on such alignment in its annual and final performance reports.

6. Continuation Awards: In making a continuation award under 34 CFR 75.253, the Secretary considers, among other things: whether a grantee has made substantial

progress in achieving the goals and objectives of the project; whether the grantee has expended funds in a manner that is consistent with its approved application and budget; and, if the Secretary has established performance measurement requirements, whether the grantee has made substantial progress in achieving the performance targets in the grantee's approved application.

In making a continuation award, the Secretary also considers whether the grantee is operating in compliance with the assurances in its approved application, including those applicable to Federal civil rights laws that prohibit discrimination in programs or activities receiving Federal financial assistance from the Department (34 CFR 100.4, 104.5, 106.4, 108.8, and 110.23).

VII. Other Information

Accessible Format: On request to the program contact person listed under FOR FURTHER INFORMATION CONTACT, individuals with disabilities can obtain this document and a copy of the application package in an accessible format. The Department will provide the requestor with an accessible format that may include Rich Text Format (RTF) or text format (txt), a thumb drive, an MP3 file, braille, large print, audiotape, or compact disc, or other accessible format.

Electronic Access to This Document: The official version of this document is the document published in the *Federal*

Register. You may access the official edition of the *Federal Register* and the Code of Federal Regulations at www.govinfo.gov. At this site you can view this document, as well as all other documents of this Department published in the *Federal Register*, in text or Portable Document Format (PDF). To use PDF you must have Adobe Acrobat Reader, which is available free at the site.

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Katherine Neas,
Deputy Assistant Secretary. Delegated the authority to perform the functions and duties of the Assistant Secretary for the Office of Special Education and Rehabilitative Services.

[FR Doc. 2023-03596 Filed: 2/21/2023 8:45 am; Publication Date: 2/22/2023]