

Oregon Department of Education

Expanding Access to Well-Rounded Courses Grant Proposal

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Introduction

A. Significance

1. The extent to which the proposed project is likely to build local capacity to provide, improve, or expand services that address the needs of the target population.

Extending the promise of a well-rounded education is one of the commitments that serve as a pillar of [Oregon's Consolidated State Plan under the Every Student Succeeds Act](#). Well-rounded education is, appropriately, broad, and the Oregon Department of Education (ODE) has chosen to focus its proposal on building capacity in the areas of Science, Technology, Engineering, Arts, and Mathematics education, also known as STEAM education. This focus recognizes the essential role that STEAM education plays in building cross-cutting knowledge and skills and bolstering student engagement. Oregon's Governor Kate Brown recognizes its importance, calling out a commitment to STEAM in Oregon's education system through a [2018 proclamation](#).

The project described in this grant proposal will expand Oregon's capacity at both the state and local levels to provide students with the key cross-cutting knowledge and skills that apply to all subject areas central to a well-rounded education, create access to well-rounded educational opportunities and resources with a focus on STEAM education, and build capacity for educator learning through technology. This grant will provide support for ODE to invest in building local capacity in several ways.

First, the grant will enable ODE to expand its ongoing collaboration with Oregon's regional [STEM Hubs](#), a network of collective impact partnerships that bring together local leaders and programs from K-12, higher education, out-of-school programs, the business community, workforce, economic development, civic leaders, community-based organizations, STEM-rich institutions and families. With the STEM Hubs, ODE will also expand its collaboration with school districts and higher education partnerships to build and expand local capacity in offering STEAM courses (See [Section B.2](#) for a full description). This work is underway, and specific examples of the type of coursework that are offered include:

- High School Science for All, a science sequence that was developed as an Open Education Resource (OER) by the Portland Metro STEM Partnership and provides all students with physics, chemistry, and biology;
- Exploring Computer Science, a nationally recognized equity-based computer science curriculum developed at the University of Oregon; and
- Geometry in Construction and Algebra in Manufacturing.

This grant will also enable ODE to support both statewide and local capacity building around arts instruction. While Oregon already has some infrastructure at the state and regional levels dedicated to STEM education with some pockets implementing full STEAM education, the current infrastructure and capacity does not fully incorporate the arts. This grant will support dedicated staff at the state level focused on increasing access to arts education. As part of this work, ODE staff will engage arts educators and organizations in Oregon to develop arts course content and increase district capacity to provide students with access to arts education. Given the limited infrastructure and capacity currently dedicated to the arts, the planning year will be particularly important to understand the best way to incorporate

arts education. One critical element, however, will likely be expanding Oregon’s current investments in STEAM to include a greater emphasis on the arts and by increasing access to the arts coursework through Oregon Digital Learning (ODL), as described in further detail in [Section B.2](#) below.

Across the course offerings supported by the grant, ODE anticipates developing and implementing both in-person and online courses. Oregon has existing infrastructure for online learning that has recently been bolstered as part of the effort to support distance learning during the COVID-19 pandemic. Statewide, this grant will enable ODE to expand course offerings available to students across the state through existing ODE programs, such as Oregon Digital Learning, an online learning platform that provides students with access to a wide array of well-rounded online courses; and [Oregon Open Learning](#) (OOL), a platform to share open education resources created, curated, and reviewed by educators and partners (See [Section B.2](#) for a full description of both Oregon Digital Learning and Oregon Open Learning). It will also enable ODE to expand the services offered through the Oregon Open Learning platform to provide course offerings available for educators to use in building and delivering well-rounded course curricula. ODE anticipates that, as Oregon Open Learning expands, it will build local capacity for well-rounded education by providing Oregon educators and students in districts across the state with increased access to high-quality learning resources and empower Oregon educators to engage in virtual collaboration to grow a “by teachers, for teachers” culture across the state.

While the work called out in this grant proposal focuses on STEAM education, ODE plans to engage in a robust stakeholder and community engagement process during the Year 1 planning phase that will likely elevate additional opportunities to expand access to well-rounded courses for the grant’s target population of students living in rural communities, disadvantaged students (to use federal terminology), and students with disabilities. Among other topics, engagement efforts will address which courses stakeholders and community partners would like ODE to prioritize. ODE will use this information—paired with research into feasibility of course development and implementation—to select specific investment opportunities. While ODE cannot currently know the full scope of what will be shared by community members during the anticipated stakeholder engagement process, ODE is committed to incorporating that input into the final grant project design for the duration of the grant period, which may expand the scope of ODE’s proposed grant project beyond the current focus on STEAM education.

2. The potential replicability of the proposed project or strategies, including, as appropriate, the potential for implementation in a variety of settings.

ODE’s proposed model includes a blend of in-person, online, and distance learning formats, so the resulting course offerings will have the potential for implementation in a variety of settings and contexts. This is particularly important given the number of Oregon’s rural communities: Of the 197 school districts in Oregon, 110 have fewer than 1000 students, and 27 have fewer than 100 students.

Replicability

ODE will ensure the replicability of the proposed project in several ways:

- First, ODE will share the course content developed and curated through this grant on the Oregon Open Learning platform. As such, the content will be immediately available to other

states, including those who have an open education resources platform. By leveraging that resource hub, ODE will ensure that the content is widely available for uptake.

- Second, ODE anticipates working initially with specific regional [STEM Hubs](#) to develop and deliver high-priority courses. The existing infrastructure of and ongoing communication between the regional STEM Hubs will help support the replicability of the courses across all the STEM Hubs. Moreover, other states also have STEM Hubs or similar structures, and ODE anticipates being able to share the courses with other states by using that existing community.
- Third, by planning to use Oregon Digital Learning as one method to deliver courses under this grant, ODE will be able to make these courses available at schools across the state, not to just one group of students in one school.
- Finally, ODE will document the results and learnings from the grant program and disseminate results through both state and national networks and organizations. Oregon has a strong track record of sharing experience and resources more broadly. ODE staff actively participate in STEMX (<https://stemx.us/>), a multi-state consortium that focuses on STEM policy, and STEM Teaching Tools, part of the Advancing Coherent and Equitable Systems of Science Education ([ACESSE](#)). In addition, ODE is currently working with [STEM Ecosystems](#), an organization which focuses on problems of practice related to STEM education, to plan a national virtual convening focused on STEM in rural communities.

Dissemination

ODE plans to disseminate the outcomes of the grant by posting reports, data, and other documentation of ODE's implementation of the grant and its outcomes on ODE's website and disseminating results through a combination of state and national professional networks. All data published regarding grant activities and their outcomes will strictly adhere to student data privacy requirements, including FERPA. In addition, ODE plans to make course content developed under this grant available both within Oregon and with other states through online platforms such as Open Educational Resources (OER) Commons. Through these means, ODE will contribute to the evidence base for course-access programs while protecting student privacy.

B. Quality of the Project Design

1. The extent to which the proposed project is part of a comprehensive effort to improve teaching and learning and support rigorous academic standards for students.

Extending the promise of a well-rounded education is one of the commitments that serve as a pillar of [Oregon's Consolidated State Plan under the Every Student Succeeds Act](#). Oregon's State Plan describes its commitment to expanding well-rounded education in Oregon as follows:

“While ESSA defines a well-rounded education to include a wide variety of subjects and areas of study, Oregon believes a well-rounded education moves beyond the courses students take, and into the essential knowledge and skills students are learning in those courses. We know that a well-rounded education provides the knowledge and skills to live, learn, work, create, and contribute. It also ensures that each and every student is known, heard, and supported. The goal is to establish and actualize a definition of well-

rounded education that focuses on the whole student and their community, the learning experiences they are given, the knowledge and skills they learn, and the beliefs and attributes they develop.” (p. 11)

The project described in this grant proposal aligns with the strategies and values called out in Oregon’s State Plan, particularly as it pertains to providing students with the key cross-cutting knowledge and skills that apply to all subject areas, creating access to well-rounded educational opportunities and resources, and building capacity for educator learning through technology.

Building on its ESSA state plan, the Oregon State Legislature approved a new investment in the state’s education system through the Student Success Act in 2019. The act focuses on students of color; students with disabilities; emerging bilingual students; and students navigating poverty, homelessness, and foster care. One key program in the Student Success Act is the Student Investment Account, a non-competitive grant program directly to Oregon school districts and eligible charter schools, with the purpose of meeting students’ mental and behavioral health needs and increasing academic achievement, including reducing academic disparities for student groups that have historically experienced academic disparities. In their grant applications, districts must outline how they plan to spend their funds. Based on an analysis of district applications, the second most popular use was well-rounded education, which includes broadening curricular options all grade levels. The State of Oregon has also invested in a High School Success program which, by statute, brings attention to equitable course offerings and the expansion of course offerings for students in grades 9-12 and can be leveraged in the project this application outlines.

Well-rounded education is, appropriately, broad, and ODE has chosen to focus its proposal on STEAM in recognition of the essential role that STEAM plays in building cross-cutting knowledge and skills and bolstering student engagement. Oregon’s Governor Kate Brown has also called out a commitment to STEAM in Oregon’s education system through a [2018 proclamation](#).

2. The quality of the proposed demonstration design and procedures for documenting project activities and results.

Project Design

ODE proposes to focus its approach to developing, expanding, and implementing, a course-access program on expanding access to STEAM-related courses. Specifically, ODE proposes to expand Oregon’s existing STEM program in continued partnership with the Oregon STEM Council, regional STEM Hubs, and higher education partners and build capacity to develop and maintain an arts program to support districts across the state in providing students with access to high quality courses in the arts and more fully realize STEAM education in Oregon. Course options developed through the proposed grant will be accessible to students through a combination of in-person, online, and distance learning formats to meet the diverse and evolving needs of Oregon’s students and communities.

ODE’s proposal relies on the following strategies:

- **Strategy One:** Utilizing Oregon’s statewide system of regional STEM Hubs and higher education partners to both expand development of STEAM-related course content and provide

professional learning opportunities for educators at the local and regional levels to support high-quality instructional practices in delivering STEAM-related courses;

- **Strategy Two:** Increasing ODE’s internal staffing capacity to coordinate engagement of Oregon art educators in developing and identifying existing high-quality creative commons licensed arts-related course content;
- **Strategy Three:** Utilizing existing state programs to provide educators with access to STEAM-related course content; and
- **Strategy Four:** Engaging in a competitive procurement process to identify additional partners to help ODE meet the needs of Oregon students in accessing well-rounded courses.

Throughout this process, ODE will engage with stakeholders, partners, and professional organizations to inform specific areas of investment and development and to receive iterative feedback to ensure that investments made using grant funds successfully expand access participation to students in rural areas, disadvantaged students, and students with disabilities.

ODE proposes to devote the first year of the grant period as an intensive planning phase to engage stakeholder groups, partners, and professional organizations to identify specific strategies to expand access to well-rounded courses for Oregon’s diverse student population (see [Section D.3](#)). During this planning phase, ODE anticipates the possible need to engage in a competitive procurement process to bolster capacity to meet the needs of students. In particular, ODE anticipates the need for support in arts course content development, as well as potentially providing additional platforms beyond those currently supported by ODE for educators and students to access course content. ODE also anticipates that the planning phase may elevate additional aspects of well-rounded education beyond STEAM that ODE may incorporate into the final grant project design based on stakeholder input.

Project Components

While ODE plans to use the first year of the grant period as an intensive planning phase to gather stakeholder input that will inform the full design and identification of strategies under this grant, ODE anticipates that the four strategies identified under Project Design above will be central elements of the grant project design.

Strategy One: Utilizing Oregon’s statewide system of regional STEM Hubs and higher education partners to both expand development of STEAM-related course content and provide professional learning opportunities for educators at the local and regional levels to support high quality instructional practices in delivering STEAM-related courses

In 2013, the Oregon State Legislature adopted [House Bill 2636](#) (2013), which established the [STEM Investment Council](#) for the purpose of developing and overseeing a long-term strategy to meet the state’s educational goals related to science, technology, engineering, and mathematics. In addition, HB 2636 (2013) established the STEM Investment Grant Program to provide state funding to school districts, community colleges, and public universities to advance the STEM education goals, and [HB 3232 \(2013\)](#) created a state funding stream for STEM Investments in the form of Regional STEM Hubs, STEM Lab Schools, and STEM Programs. Today, there are thirteen STEM Hubs in Oregon, the majority of which

serve rural communities across the state. Oregon's thirteen STEM Hubs serve almost all schools in the state, including Oregon's Title I schools. In addition, three of Oregon's STEM Hubs serve schools with large populations of students from historically underserved communities.

STEM Hubs provide backbone organizations that connect community organizations, businesses, educators, and service providers around STEM Education K-12, and in some cases, higher education at regional levels. Many of Oregon's STEM Hubs are housed at Education Service Districts (ESDs) and connect many other programs within the ESDs. They all work from a collective impact partnership model. Although ODE provides funds for their operational budgets and relies on them to move innovation projects forward, they amplify state funds significantly by also leveraging other local and regional funding streams and resources. While most of Oregon's STEM Hubs currently focus on science, math, engineering, and technology (STEM) with less emphasis on the arts, two of Oregon's thirteen STEM Hubs have more fully integrated the arts into their models and identify themselves as STEAM Hubs.

STEM Hubs have worked with ODE to create, identify, and expand access to innovative practices in STEM that include a range of services, including development and support around individual courses, out-of-school programs, and systemic change processes to name a few. One example of the type of opportunities ODE will explore during the planning phase is High School Science for All out of the Portland Metro STEM Partnership (PMSP), which emphasizes the use of mathematical and phenomenological patterns to predict the future and understand the past. The curriculum is a combination of teacher-generated and curated open-content materials; the teacher-generated materials are shared freely under an [Attribution-NonCommercial-Sharealike Creative Commons License](#) and will be available through the [Oregon Open Learning](#) platform. The three-course curriculum now reaches 45 known districts across the state, and ongoing curriculum iteration and professional development is a collaborative effort among multiple districts and the Portland Metro STEM Hub.

In addition to initiatives coordinated through Oregon's STEM Hubs, ODE also plans to pursue partnerships with institutions of higher education. Portland State University, University of Oregon, Oregon State University, and Eastern Oregon University have all served in various capacities as research and practice partnerships, ranging from developing and disseminating nationally recognized Computer Science Curriculum at University of Oregon to providing regional professional development for teachers at Eastern Oregon University and developing new mathematical instructional practices at Oregon State University. Some examples of the opportunities ODE will explore during the planning phase, include:

- During the 2020-21 school year, ODE, in collaboration with schools in Lane County and Hermiston, will pilot the Introduction to Data Science (IDS) Project, a course implementation project involving nine high schools, with initial professional development scheduled to take place in July 2020.
- University of Oregon has developed a high school equity-based curriculum development project called Exploring Computer Science using funding from the National Science Foundation. In partnership with STEM Hubs, University of Oregon is now working to expand student access to this curriculum using STEM Hub funding available through June 2021.

- ODE in collaboration with Central Oregon STEM Hub will pilot a computer science curriculum developed by Code Fellows in Seattle starting in the 2020-21 school year. The curriculum is industry recognized and used in supporting adults who are transitioning to technical careers. The project is to adapt this curriculum for use in high schools and move to support online delivery for rural schools.
- ODE in collaboration with High Desert ESD has supported professional development to implement Geometry in Construction and Algebra in Mathematics. These are high school curricula that are free to educators after participating in required professional development.

Should ODE receive funding under this grant proposal, ODE could potentially partner with these institutions of higher education and Oregon’s STEM Hubs to build on current investments and expand access to the course content and structures developed through projects such as those described above. ODE anticipates the identification and selection of specific partnership opportunities to occur as part of the planning phase, informed by robust community and stakeholder engagement to ensure selected projects will maximize outcomes for students in rural communities, students from underserved populations, and students with disabilities.

Strategy Two: Increasing ODE’s internal staffing capacity to coordinate engagement of Oregon educators in developing and identifying existing high-quality creative commons licensed arts-related course content

Recognizing the current gaps in how ODE supports arts education in Oregon, ODE proposes to use part of the planning year to identify the specific details of the project—including mapping existing offerings, hiring internal staff, developing partnerships with the STEM hubs or other intermediaries. ODE anticipates using grant funds to increase its internal staffing and capacity to support districts around the state in providing high-quality courses in the arts. ODE anticipates that positions funded through this grant will focus on building and strengthening relationships with Oregon’s arts community and professional organizations around the state to build both statewide and local capacity.

In addition, ODE anticipates that positions funded through this grant will work with educators from around the state, possibly in coordination with providers identified through a competitive procurement process (Strategy Four), to build local capacity in developing arts course content and providing students with access to arts courses using high quality instructional practices. In addition to supporting an in-person learning format, ODE anticipates that course content developed under this strategy could also be deployed for statewide use in online or distance-learning formats in conjunction with ODE’s third strategy.

Strategy Three: Utilizing existing state programs to provide educators with access to STEAM-related course content

In order to focus grant funding on the development of course content, ODE proposes to leverage existing state programs to the extent practicable to provide educators across the state with access to course content and support student access to courses through online and distance learning formats. This section describes some of the existing state programs that ODE plans to explore further during the planning phase of the grant. As described in Strategy Four below, ODE also will use the planning phase to explore where ODE may need to supplement these existing state programs by seeking additional providers through a competitive procurement process.

Oregon Open Learning

ODE created [Oregon Open Learning](#) (OOL), part of the OER Commons network, in spring 2020. The primary purpose of OOL is to set up an open education resources (OER) Commons¹ hub that contains curated, created, and reviewed OERs from educators and partners aligned to Oregon standards. OER are teaching, learning, and research resources that reside in the public domain or that have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge.

The Theory of Action driving OOL posits that if ODE creates a culture and practice that values open resources, then more Oregon students will have increased access to high-quality learning resources; and if districts invest in Oregon educators, then educators will create and iterate high-quality and localized learning resources, and educational funding stays invested in Oregon. This theory of action promotes the values of equity, professional learning and collaboration, and sustainability. When ODE launched the OOL platform this past spring, ODE named as expected results that Oregon educators and students will gain increased access to high-quality learning resources, OOL will represent significant groups of Oregon educators, Oregon educators will be able to engage in virtual collaboration, and Oregon educators will utilize openly licensed resources to grow a “by teachers, for teachers” culture across the state. In implementing OOL, ODE has been guided by three touchstones: equity, empowerment, and efficacy.

The COVID-19 pandemic has underscored the tremendous inequities and various levels of access to learning resources across Oregon and the nation. While this event has created significant disequilibrium in the state’s educational systems, ODE recognizes the responsibility and opportunity to rethink and rebuild the collective approach to instructional materials and educational resources. The Oregon Open Learning Hub and Open Education Resources enable a shift in the power structures that have historically driven the development of educational materials by broadening access to authorship, and supporting the diverse voices that the education system has historically marginalized.

OER empowers educators to make changes to materials and to improve upon them, by adapting them to the local context, adding scaffolding to better support their students’ needs, or even to add graphics or other creative works. This empowerment also means that educators are encouraged to share the revisions they’ve made with other educators who can benefit from their work, both locally and across the state.

An investment in OER is an investment in building the capacity of the people in Oregon’s education community and developing their sense of efficacy. All students can benefit from the collective expertise of dedicated educators who are learning from each other, working collaboratively, and sharing their best ideas. As a result, OER elevates the teaching profession and improve its ability to meet the needs of all learners by providing access to resources that are relevant, up to date and openly sharable.

Should ODE receive funding under this grant proposal, ODE anticipates leveraging the OOL platform to share resources and course content developed using grant funds with educators across the state. Because the OOL is part of a larger OER Commons platform, ODE could also potentially utilize the OOL to make content developed under this grant available to other states.

¹ Working with OER emphasizes the 5 Rs. The first is Retain: this means you make and own copies of the original OER. Next is Reuse, which means you can use the OER in a variety of ways. Then, there’s Revise. This means you can adapt, modify, and even improve upon the original OER. There’s Remix, which means you can combine two or more resources, and finally, there’s Redistribute, which allows you to share your OER creation with others.

Oregon Digital Learning

The Oregon Digital Learning program (formerly Oregon Virtual School District) was established in 2005, at a time when online learning in Oregon was in its early years. Digital learning was primarily in schools that had received grants, and devices were in labs where students had access to once every 6-8 weeks and for testing. Today, many of Oregon's schools are providing nearly 1:1 access to devices, and students are using digital tools as an integral part of their learning. Blended (online and face-to-face) learning is happening frequently in the state's schools and online learning is happening in a variety of programs.

The Oregon Digital Learning program offers online course access that provides students in Oregon's small and rural districts flexibility and personalization to meet each student's desired pathway for career and college readiness. Each course has a licensed educator to facilitate the coursework and keep students on track for completion, at a cost of only \$100 per enrollment to the school district. ODE anticipates that a similar model will be used with any additional providers that may be identified during the planning year.

In recent years, Oregon Digital Learning has transitioned from providing only professional development to a program that now provides high-quality online learning opportunities for small and rural schools across the state. In each of the past five years, ODE has provided availability to 1,000- 1,100 enrollments with over 50 course options for rural school students—access to courses and licensed teachers that are otherwise not available in their districts. Many of Oregon's small and rural districts do not have the capacity to develop their own online programs and often lose students to other districts that sponsor charter schools, losing their per-pupil funding along with each student. Unlike many of the online course provider options otherwise available for school districts, Oregon Digital Learning students do not transfer to another school to take these courses; students remain enrolled in their home school district.

Historically, district eligibility to participate in the Oregon Digital Learning program was determined based on NCES locale codes that are used for the federal Rural Education Initiative, with the exception of rural districts sponsoring their own online charter schools. A local Online Learning Coach (usually a school counselor) is required for each district enrolling students in Oregon Digital Learning courses. The Coach ensures that online learning is a good fit for the student, and that it will support keeping them on track for graduation. Online course access through Oregon Digital Learning provides students in Oregon's small and rural districts with increased curricular options, flexibility and personalization to meet their desired pathway for career and college. However, in light of the increased need for districts to be offering online options for students in response to the COVID-19 pandemic, Oregon plans to expand Oregon Digital Learning by forming a cooperative with other online programs operated by larger districts and ESDs. The cooperative will enable Oregon Digital Learning to increase the types of courses available and increase their capacity to serve students in every district across the state; with this expansion, Oregon Digital Learning will be able to provide students access to courses that were developed as a result of this grant.

Strategy Four: Engaging in a competitive procurement process to identify additional partners to help ODE meet the needs of Oregon students in accessing well-rounded courses related to STEAM

While ODE plans to leverage existing structures, partnerships, and programs to implement this grant proposal, it is likely that the planning phase will yield additional strategies and gaps in the delivery model that will require ODE to identify additional providers to support these efforts. ODE will use a competitive procurement process to identify additional providers during the first year of the grant period. The requirements outlined below apply equally to internal providers, such as ODL, as well as additional external providers selected in a contracting process. While the specific nature and scope of any resulting procurements will be informed by the program's planning phase and stakeholder engagement process, ODE plans to incorporate the following criteria to any contract executed under this grant.

First, consistent with the terms of the grant notice that grant deliverables created in whole or in part with grant funds must be openly licensed to the public, ODE will require that all course content developed under this grant will be openly licensed using a creative commons license. In addition, ODE will give preference to proposals that include sustained open access beyond the grant period to any delivery platforms procured under this grant.

Second, ODE will ensure other foundational protections are maintained through written agreement, including student data privacy consistent with FERPA and the [Oregon Student Information Protection Act](#) (ORS 336.184) as well as a nondiscrimination clause that requires the provider to abide by all applicable non-discrimination laws with regard to students to be served, e.g., on the basis of race, color, national origin, sex, or disability.

Third, ODE will use a detailed evaluation rubric to assess the quality, rigor, and relevance of the courses previously developed by prospective providers. For any selected providers, these quality measures will be embedded in the terms of the written agreement along with the use of funds, including compliance with generally accepted accounting procedures and Federal cost principles. ODE will monitor regularly for compliance to these terms. In addition, the written agreement will include a provision for the termination of the agreement if the provider is unable to meet the terms of the agreement.

Project Timeframe

To support understanding of this program, ODE developed a year-by-year timeline organized by the following categories: stakeholder engagement and outreach; planning and hiring; course development and implementation; evaluation and dissemination. This timeline represents a likely course for how the project will run. At the same time, ODE has chosen to use the first twelve months as a planning year, as allowed by the notice. As a result of that initial research and stakeholder engagement, there will likely be some changes to this plan.

Year 1 (Planning Year)

Stakeholder and Community Engagement and Outreach

- Use a variety of communications methods to engage community partners and stakeholders as described in [Section D.3](#) below, especially students and families, to deeply understand the needs

and opportunities related to well-rounded education, including STEAM and other areas identified by stakeholders.

- Engage in communications efforts to highlight the value of a full approach STEAM education as part of well-rounded education.

Planning and Hiring

- Address outstanding design questions to finalize project design. In addition to exploring the needs elevated through stakeholder engagement processes, especially those of students and families representing the grant's target population, this will include addressing questions such as:
 - What are the needs, opportunities, and barriers to successful implementation related to STEAM education in the state? How do these needs, opportunities, and barriers differ across the state? How is the existing infrastructure working to provide access, especially to students in rural communities, disadvantaged students, and students with disabilities?
 - How can ODE leverage Oregon's partnerships in Career and Technical Education to build capacity in STEAM education?
 - What additional opportunities exist to expand access to well-rounded education beyond STEAM? Examples may include social sciences content such as Oregon's Ethnic Studies program and Tribal History, Shared History curriculum
 - What additional funding streams are available that ODE could consider in coordination with this grant project and associated funding? Examples may include:
 - Federal Funding Sources
 - Title IIA
 - Title IVA
 - Perkins
 - State Funding Sources
 - Anticipated legislative funding for Oregon Open Learning
 - CTE Revitalization Grant funding
 - Student Investment Account funding
 - High School Success funding
 - Philanthropic Funding Sources
 - Oregon Community Foundation grant funding
 - Other philanthropic organizations
- Hire ODE staff to lead arts instruction and coordinate grant activities
- Work with STEM Hubs to identify specific projects that ODE could help build to scale
- Work with arts organizations to identify specific opportunities to develop and disseminate arts course content
- Convene STEM Hubs and arts educators to explore the intersection between these sectors and how ODE can support them
- Competitive procurement process to secure partners to support course content development and hosting platforms, as needed

- Develop and finalize project design and plan for this program based on research and stakeholder and partner engagement

Course Development and Implementation

- Expand access to existing STEAM course content; anticipate leveraging Oregon Digital Learning to provide access
- Engage educators to identify specific needs in instruction in Oregon and begin developing content aligned with STEAM and any other well-rounded areas identified through stakeholder engagement process

Evaluation and Dissemination

- Identify evaluation partner to analyze the impact of the program as well as lessons learned

Year 2

Stakeholder and Community Engagement and Outreach

- Continue outreach and communication efforts with arts educators and organizations.
- Continue outreach to districts, parents, and students—especially those in the target population—to improve awareness and participation in course offerings developed under this grant project

Planning and Hiring

- Work with STEM hubs to identify how to incorporate support for the arts to shift toward fuller realization of STEAM in Oregon
- Expand eligibility for districts accessing courses through Oregon Digital Learning

Course Development and Implementation

- Expand courses available through Oregon Digital Learning course catalog.
- Facilitate educators in identifying and developing high-quality course content, including the arts courses
- Engage educators to increase use of the OOL to access and share content
- Work with additional providers secured through Year 1 competitive procurement process to implement deliverables

Evaluation and Dissemination

- In collaboration with an evaluation partner, evaluate the impact of the program and what can be improved for the coming year.
- Survey teachers, parents, and students about their experience with courses developed and offered under this grant project

Year 3

Stakeholder and Community Engagement and Outreach

- Continue outreach and communication efforts with arts educators and organizations.
- Continue outreach to districts, parents, and students—especially those in the target population—to improve awareness and participation in course offerings developed under this grant project

Planning and Hiring

- Continue working with STEM hubs to incorporate support for the arts to shift toward fuller realization of STEAM in Oregon

- Continue expanding eligibility for districts accessing courses through Oregon Digital Learning

Course Development and Implementation

- Expand courses available through Oregon Digital Learning course catalog.
- Facilitate educators in identifying and developing high-quality course content, including the arts courses
- Engage educators to increase use of the OOL to access and share content
- Work with additional providers secured through Year 1 competitive procurement process to implement deliverables

Evaluation and Dissemination

- Incorporate lessons learned from previous year's evaluation.
- In collaboration with an evaluation partner, evaluate the impact of the program and what can be improved for the coming year.
- Survey teachers, parents, and students about their experience with courses developed and offered under this grant project

Year 4

Stakeholder and Community Engagement and Outreach

- Continue outreach and communication efforts with arts educators and organizations.
- Continue outreach to districts, parents, and students—especially those in the target population—to improve awareness and participation in course offerings developed under this grant project

Planning and Hiring

- Continue working with STEM hubs to incorporate support for the arts to shift toward fuller realization of STEAM in Oregon
- Continue expanding eligibility for districts accessing courses through Oregon Digital Learning, as needed

Course Development and Implementation

- Expand courses available through Oregon Digital Learning course catalog.
- Facilitate educators in identifying and developing high-quality course content, including the arts courses
- Engage educators to increase use of the OOL to access and share content
- Work with additional providers secured through Year 1 competitive procurement process to implement deliverables

Evaluation and Dissemination

- Incorporate lessons learned from previous year's evaluation.
- In collaboration with an evaluation partner, evaluate the impact of the program and what can be improved for the coming year.
- Survey teachers, parents, and students about their experience with courses developed and offered under this grant project

Year 5

Stakeholder and Community Engagement and Outreach

- Continue outreach and communication efforts with arts educators and organizations.

- Continue outreach to districts, parents, and students—especially those in the target population—to improve awareness and participation in course offerings developed under this grant project

Planning and Hiring

- Continue working with STEM hubs to incorporate support for the arts to shift toward fuller realization of STEAM in Oregon
- Continue expanding eligibility for districts accessing courses through Oregon Digital Learning, as needed

Course Development and Implementation

- Expand courses available through Oregon Digital Learning course catalog.
- Facilitate educators in identifying and developing high-quality course content, including the arts courses
- Engage educators to increase use of the OOL to access and share content
- Work with additional providers secured through Year 1 competitive procurement process to implement deliverables

Evaluation and Dissemination

- Incorporate lessons learned from previous year’s evaluation.
- Survey teachers, parents, and students about their experience with courses developed and offered under this grant project
- Develop and execute a plan to disseminate the results of the project. If needed, hire a consultant to create a public-facing deliverable to broadly share lessons learned.

3. The extent to which the design of the proposed project reflects up-to-date knowledge from research and effective practice.

Course Content

To ensure high quality of course content developed or curated as part of ODE’s grant activities, ODE will apply research-based standards such as those published by [National Standards for Quality, Quality Matters](#), and [Achieve](#) throughout the process (see also [Section C.4](#)).

Course Delivery

As ODE explores options for providing students with course access through online and distance learning formats, ODE will apply knowledge from research to ensure effective, culturally sustaining, and developmentally appropriate practices. Some examples of research that will inform ODE’s approach include [Open educational resources, student efficacy, and user perceptions: a synthesis of research published between 2015 and 2018](#) (John Hilton, *Education Tech Research Dev* 68, 853–876 (2020)), [Open in a Time of Crisis](#) (Tanya Spilovoy, *WCET Frontiers* (2020)), and [Stories and Case Studies of OER in K-12 Education](#) (U.S. Department of Education, Office of Educational Technology). ODE will continue to seek out additional research during the planning phase of the grant period.

C. Quality of the Project Services

1. The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.

ODE proposes to both expand existing STEM course-access programs and develop an arts course-access program that will provide students across Oregon with access through a combination of in-person, online, and distance learning formats. In addition, ODE plans to utilize a combination of state and national organizations to widely disseminate information on course-access programs to other State and local education leaders and researchers and make course content developed through this grant project available to educators across Oregon and in other states through platforms such as the OER commons.

By leveraging existing partnerships with both STEAM Hubs and institutions of higher education and forging new relationships with arts organizations throughout the state, ODE believes that the proposed approach will build and strengthen local capacity in providing students with access to high quality STEAM course options. Similarly, ODE proposes to expand the use of existing ODE programs and supported platforms to provide educators and students with access to well-rounded course options. This will enable ODE and educators around the state to maximize the return on both the time and resources already invested in implementing these programs. ODE will then strategically select additional providers to supplement these existing programs to address needs identified through the robust stakeholder engagement process included in the Year 1 planning phase.

As described in Section C.3 below, ODE will meet the needs of students living in rural communities, disadvantaged students, and students with disabilities through a combination of strategies. First, ODE will center its process for developing and curating course content and providing associated professional learning opportunities for educators around the principles of universal design for learning with a focus on culturally sustaining practices. Section C.3 also describes how ODE's plan for providing students with access to the course-content developed and curated under this grant will emphasize delivery models that will specifically meet the needs of both students living in rural communities as well as in low-income communities that may not currently have access to well-rounded course offerings. As described in Section B.2 of this proposal, online course access through Oregon Digital Learning has historically provided students in Oregon's small and rural districts with increased curricular options, flexibility, and personalization to meet their desired pathway for career and college. ODE now plans to expand Oregon Digital Learning, by both increasing the types of courses available and increasing ODE's capacity to serve students in every district across the state, including those in low-income communities. To maximize the engagement and participation of students in the target population for this grant, ODE will implement a robust stakeholder engagement process, not just to inform the final grant project design in Year 1, but throughout the duration of the grant period to ensure that the work happening under the grant is meeting the needs of students and their communities. This will also involve an ongoing outreach and communications strategy to promote student access and participation in course offerings as they roll out.

2. 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.

This grant is focused on access to STEAM education, with anticipation that the scope may expand to include additional aspects of well-rounded education in response to stakeholder and community input received during the planning phase. ODE hopes to expand work that is already underway and successful in regards to existing STEM education initiatives and address existing gaps in supports for arts education as ODE currently provides little to no support for arts education in the state. ODE plans to use grant funds to expand access to arts content for students across the state in part by strengthening ODE's connection to arts organizations. This will include using grant funds to create limited duration staffing within ODE to coordinate efforts with arts organizations and partners around the state. Depending on the success of these efforts during the grant period, ODE also plans to seek permanent funding and position authority from the Oregon State Legislature to sustain efforts once the grant period has ended.

Beyond STEAM education, ODE has recognized throughout this proposal that the Year 1 planning phase and attendant stakeholder engagement process will likely elevate additional opportunities to expand access to well-rounded courses for the grant's target population of students living in rural communities, disadvantaged students, and students with disabilities. ODE remains committed to incorporating that input into the final grant project design for the duration of the grant period, which may expand the scope of ODE's proposed grant project beyond the current focus on STEAM education.

In addition, ODE knows that rural students, students with disabilities, and many communities of color have been underserved by the educational system and have not historically had the same access to a well-rounded education. An [analysis](#) of civil rights data from the U.S. Department of Education indicates that students with disabilities are less likely to enroll in common STEM courses such as Algebra II, Calculus, and Physics. Similar inequities in access show up in the arts: according to a [2019 report](#) by the Oregon Community Foundation, 179 schools throughout Oregon reported offering zero arts courses; many of those schools are very small, such as one-room schoolhouses in rural Oregon. In addition to lack of funding, some report that schools have difficulty attracting and retaining high-quality arts teachers to a rural area. Lack of funding also results in inequitable access to the arts; in order to keep their doors open, some arts providers are unable to offer their services at an affordable rate for partners and students. Through the grant's planning year, ODE will deepen stakeholder engagement with these students, their families, and communities to ensure that the program proactively prioritizes their access to these courses. Outreach plans to attract students to this coursework will specifically and actively work to engage these groups of students.

Finally, Oregon has recently invested in high-quality online and distance learning, but there is more work to be done. This grant might also bolster statewide capacity to implement high-quality online and distance learning, with a focus on STEAM. The focus of implementation will be driven by what is learned in the first year. The proposal might illuminate a key truth in Oregon, which is that ODE has many significant investments running in motion alongside each other but have the opportunity to make critical connections, build alignment, and expand and extend the richness of educational offerings to provide a

well-rounded education to more students in a sustained approach that cultivates alignment, connection, and quality.

3. The extent to which the services to be provided by the proposed project are appropriate to the needs of the intended recipients or beneficiaries of those services.

After reviewing district Student Investment Account (SIA) plans submitted to ODE and identifying access to well-rounded courses as the second-most prevalent district priority for those funds, ODE recognizes that access to well-rounded courses is a priority for Oregon's districts. This may be particularly important for rural schools which likely have a greater need for online learning resources or in-person classes through the STEM hubs to provide a well-rounded education.

In addition, ODE will leverage existing partnerships with Oregon's STEM Hubs and their ongoing work to meet the needs of disadvantaged students and students with disabilities using tools such as the STEM Teaching Tools developed to support educators in implementing [culturally responsive teaching practices](#), creating learning experiences that engage and support [learners receiving special education services](#) and [learners who are emerging bilinguals](#). ODE will also apply the principles of [universal design for learning](#), relevant for all learners and particularly helpful to support students with disabilities, and maintain a focus on culturally sustaining course content and recommended instructional practices promoted through professional learning under this grant. As part of ODE's work in the OER Commons, ODE has already begun developing an equity-focused professional development program designed for K-12 facilitators of NGSS working throughout the rural areas of Oregon that will inform ODE's work under this grant. The equity-focused professional learning modules developed as part of the [Oregon Science Project](#) provide an example that demonstrates ODE's proposed approach to supporting the development and curation of course content and resources.

ODE plans to leverage key strategies to provide students with access to the course-content developed and curated under this grant will benefit both students living in rural communities as well as in low-income communities that may not currently have access to well-rounded course offerings. As described in Section B.2 of this proposal, online course access through Oregon Digital Learning has historically provided students in Oregon's small and rural districts with increased curricular options, flexibility, and personalization to meet their desired pathway for career and college. As Oregon plans to expand Oregon Digital Learning, ODE anticipates that Oregon Digital Learning will also increase the types of courses available and increase ODE's capacity to serve students in every district across the state. ODE will use the Year 1 planning phase to engage stakeholder groups and partners to identify additional strategies for expanding access to well-rounded courses in Oregon's rural and low-income communities.

4. The adequacy of mechanisms for ensuring high-quality products and services from the proposed project.

In order to ensure high-quality courses and strong outcomes for this program, ODE will apply research-based standards such as resources published by the [National Standards for Quality, Quality Matters Course Design Rubric Standards](#), and [Achieve's Guidance to States](#) throughout the course content development process). In addition, ODE will explore using a review tool developed through Oregon

Open Learning to assess whether to include a specific resource in the Oregon Education Resources platform. This tool includes questions related to:

- The alignment of Oregon state standards and whether those standards are at the appropriate grade level;
- Teaching strategies, including whether the course materials support students to be college and career ready, relate content to students' cultural context and funds of knowledge, and incorporates disciplinary and content area literacy;
- Instructional supports such as a clear overview and rationale of the materials and straightforward and accessible guidance for teaching and learning, including differentiation.

During the program, ODE will also use the continuous improvement cycle (described in [Section D.4](#) below) to review a wide range of data, including but not limited to student outcomes as well as family and student surveys. ODE will also commit to ongoing engagement with stakeholder groups, making mid-stream changes as appropriate.

D. Quality of the Management Plan

1. 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.

To assess the adequacy of the management plan to achieve the objectives outlined by this grant, please review the project timeline which outlines proposed milestones in Section B.2 as well as the attached budget narrative.

2. The extent to which the proposed project will integrate with or build on similar or related efforts to improve relevant outcomes (as defined in 34 CFR 77.1(c)), using existing funding streams from other programs or policies supported by community, State, and Federal resources.

The grant program will integrate with and build on existing related efforts to improve relevant outcomes using a combination of state and federal funds. This section identifies known funding federal and state sources that ODE plans to integrate into the proposed project. In addition, as described in [Section B.2](#), ODE will continue exploring a number of additional federal, state, and philanthropic funding streams that may be available that align with the scope of this grant project during the Year 1 planning phase.

Federal Funding

ODE also works closely with [STEM Teaching Tools](#), a part of the Advancing Coherent and Equitable Systems of Science Education (ACESSE). [ACESSE](#) just received a 3 year National Science Foundation (NSF) Grant for \$1,261,856 to move beyond the original 13 states—including Oregon—to include all 50 states, the District of Columbia, U.S. Territories, and the Department of Defense. ODE signed onto the NSF grant, which focuses on high quality instruction, including the formative assessment process.

State Funding

Currently, the Regional STEM Hubs receive \$4.8M in state STEM Network support and \$4.6M in state STEM Innovation grants. In part, these funds already support course development, which funding from this grant could potentially supplement. In addition, Oregon Digital Learning received \$1.6M from the State School Fund for 2017 to 2020. ODE anticipates a similar investment for 2021 - 2026.

3. How the applicant will ensure that a diversity of perspectives are 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.

For this specific grant program, ODE's partnerships are particularly important for the execution and ultimate success of this program.

During the grant duration—both in the planning year and the operation of the proposed project—ODE believes that it is critical to authentically and meaningfully engage students, families, staff, and the broader community including the business sector in the selection, development, and implementation of this program to improve access to well-rounded courses. The Student Success Act requires robust community and stakeholder engagement at the state and district levels, and ODE is fully committed and prepared to execute a similar effort for this grant program.

Using recent experience with increasing community engagement, ODE has a proven plan to solicit and incorporate feedback. First, ODE will start by reflecting on and grounding staff in the purpose of engaging community partners and then develop goals and a plan to support and guide ODE's engagement efforts. ODE will focus on facilitating timely, authentic, two-way dialogue by asking stakeholders what brings them to the meeting or conversation. ODE will let stakeholders and community partners know why they were invited and come prepared to listen and learn about their perspective and expertise. ODE will have public engagement activities. Also important, ODE will be transparent about how feedback will be incorporated into the program plan and share how ODE plans to follow up.

Critically, ODE recognizes that meaningful community and stakeholder engagement occurs at every stage of the program—not just at the onset. Also, ODE understands that reaching a diversity of perspectives often means a diversity of engagement strategies from webinars and online chats to surveys and individual interviews.

This is particularly important when it comes to identifying which courses ODE will develop and/or expand. Any student in Oregon will have access to this course access program. If there are more students than available funds can support, ODE will determine which students can participate using criteria that ODE will establish with community and stakeholder voice that are fair and publicly available. If a specific course is not available for a given student, ODE will provide an online survey tool for parents and students to request access to an existing course or the development of a new course not included in ODE's course access program. ODE will review all requests and respond in writing.

Using these various strategies, ODE plans to engage the community partners and stakeholders outlined below in Table 1.

Table 1. Community and Stakeholder Engagement

Stakeholder and Partner Groups	Families (including parent groups such as the PTA and PTO) Community Members The Nine Federally Recognized Tribes in Oregon American Indian / Alaska Native Youth African American/Black Student Success Plan Advisory Group American Indian / Alaska Native Strategic Plan Advisory Group English Learner Strategic Plan Advisory Group
Education Partners	Regional STEM Hubs Oregon STEM Council Oregon Educator Advancement Council Educational Service Districts Oregon Association of Education Service Districts Higher Education Philanthropy
Professional Organizations	Oregon Science Teachers Association (OSTA) Oregon Council of Teachers of Mathematics (OCTM) Oregon Computer Science Teachers Association (OCSTA) Teachers of Teachers of Mathematics (TOTOM) Teachers Development Group (TDG) Math Learning Center (MLC) Oregon Music Teachers Association Oregon Arts Council Oregon Arts Commission Oregon Visual Arts Association Oregon Ed Tech Cadre

4. The adequacy of procedures for ensuring feedback and continuous improvement in the operation of the proposed project.

The Oregon Department of Education developed a continuous improvement cycle to effectively implement, evaluate, and improve programs. This continuous improvement work will ensure that the application of grant funds is having the intended impact for educators and students, including both the access to well-rounded courses as well as the student outcomes of those courses.

As one example, ODE uses this model to support districts and schools:

- Determine what is working and what needs to change;
- Establish a process to engage stakeholders to effect change;
- Leverage effective practice to implement a plan; and
- Use data to monitor and make timely adjustments to improve outcomes.

Based on ODE's experience using this model and supporting districts and schools to do this work in their own communities, the continuous improvement process results in the development of an ambitious, priority-driven action plan where routine collaboration and decision-making among district leaders is reflected throughout implementation. ODE will take the same approach to this grant program.