

## Background & Context \*

Please provide any relevant background about your organization/team including your mission and/or expertise. Please also lay out the rationale for the proposed project such as context on the issue that your project would address. This section is meant to give us more information about you, while also giving you more space below to talk toward your proposed project. Responses are limited to 3,000 characters including spaces.

Environmental science fields and organizations lack the diversity represented in population demographics, reducing our ability to effectively address climate change issues. Low biodiversity in our ecosystems likewise results in low resilience in the face of climate change. The Bio/Diversity Project aims to tackle these mirrored issues by creating a more diverse and inclusive local environmental science workforce and increasing University of Arizona students' ability to do effective science communication and inclusive environmental outreach. Each year, we recruit University of Arizona students from groups traditionally underrepresented in the environmental sciences - specifically women, students of color, and/or allies—into our for-credit internship program. Interns are trained to serve as environmental science outreach educators in local K-12 schools. Over the course of a semester, interns receive mentorship on developing hands-on and culturally responsive environmental science lessons and then implement these lessons in local K-12 schools that serve primarily students of color and students from low-income households. Action Projects serve as a culmination of the interns' sustained engagement with students and are planned and facilitated by UArizona student interns. Through action projects, interns work with K-12 students to envision and implement a project focused on fostering local biodiversity at their school site. The Bio/Diversity Project student workers play an important role in the project as they are hired out of the pool of intern alumni to best be able to support incoming interns. Hiring outstanding interns as student workers reflects our goal of diversifying the pipeline of students into paid positions within environmental organizations. Student workers gain experience and skills that set them up for success further in their careers. Beyond supporting interns through the program, student workers also show initiative in developing workshops specific to the needs of the interns in regard to the Action Projects. The peer-to-peer learning and mentoring further the interns' ability to facilitate their Action Project.

Through the environmental lessons, interns amplify the voices and perspective of their K-12 students —of which the majority are black and brown young scholars who are historically systematically excluded from the environmental and conservation fields. Additionally, the UArizona interns facilitating these action projects are from diverse backgrounds, giving students a connection to college in a way. Having UArizona interns conduct outreach in our local community encourages K-12 students to see themselves belonging in science and in higher education. Part of Bio/Diversity Project programming includes featuring a Scientist of the Week in every lesson who comes from an underrepresented background, exposing students to the breadth of science careers out there and allowing them to develop a strong science identity.

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## Project Description \*

Please provide a description of your project. Please include information on the need your project fills and how it does so. Include objectives, an anticipated timeline, and expected impact(s). Responses are limited to 3,000 characters including spaces.

\$3200 of funding is requested from the Sustainability Fund to support the Action Project component of The Bio/Diversity Project internship. Action Projects are an end-of-the-year capstone project that take place within local Tucson schools. These projects are implemented by Bio/Diversity Project interns who have been placed within a specific classroom for the semester to give weekly environmental science outreach lessons. Interns take the initiative to select an Action Project that best suits their skills and fills the needs of their classroom. Action Projects can be: 1) ArcGIS StoryMaps, a digital portfolio and presentation tool that can take various forms to suit the advocacy project the students decide to take on, 2) Building a school pollinator garden, school gardens that allow students to practice stewardship for native pollinator populations as well as teaching valuable skills that students can take back to their own communities to make gardening more accessible, and 3) Building bat boxes, bee homes, or bird feeders, an engineering project on building sustainable features that help pollinators. These options are projects we have implemented in the past and are prepared to provide support with.

Interns are responsible for the design of their Action Project and their budget, with the goal of creating a collaborative, memorable experience for their students. Interns are provided training and mentorship throughout the process of developing a project plan and budget by a student worker who is an Intern Support Specialist and alum of The Bio/Diversity Project. Projects are required to: 1) fundamentally relate to pollinators of the Sonoran Desert 2) facilitate hands-on, active learning 3) build on the lessons and activities the students have engaged in throughout the semester 4) allow for student-centered & culturally relevant learning. This year, action Project submissions are due March 2nd and are evaluated by March 11th. Any revisions required are due by March 16th, after which materials will be ordered for the project, ready to be picked up by March 23rd. Implementation takes place through the final month of the intern's time in the classroom, from March 28th to April 29th.

The Title One schools we target are often overlooked for environmental science education outreach, including larger sustainability projects. With Action Projects, we want to provide the school and its students with skills and experience in hands-on environmental projects that increases their skill-base, fosters a greater sense of belonging in sustainability issues, and creates an inspiring monument to environmental advocacy. The Action Projects allow young scholars and scientists to address a local environmental issue they have been learning about throughout the academic year.

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## Project Summary Snapshot \*

Please provide a short summary of your project. This summary will be used on our new website and other Office of Sustainability materials, if approved. Think of this as a hyper-concentrated summary limited to just a few sentences. Responses are limited to 800 characters (~60-100 words).

Every Spring, the Bio/Diversity Project aims to facilitate meaningful environmental science projects at our partner school sites. We call these Action Projects, which are essentially capstone projects that address relevant environmental needs concerning biodiversity in our region. Action Projects can take the form of a pollinator school garden, a pollinator ArcGIS StoryMaps website or the construction of bat houses, bee homes, or bird feeders. UA interns and the students they teach collaborate to create these Action Projects, increasing their abilities with environmental projects and cultivating positive, inclusive experiences with environmental advocacy.

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## Project Feasibility & Logistics \*

Please provide a description of the work that has been completed so far to make this project feasible. Have all relevant partners been contacted/coordinated with? Please identify them in your response. Have you received reasonable quotes for supplies? What research has been completed to lay the foundation for this project? Proposals that have not thoroughly pre-planned may be rejected outright. Responses are limited to 3,000 characters including spaces.

The Bio/Diversity Project has been operating for 4 years. Over that time, we have made strong connections with the K-12 partner teachers that serve as mentors to our interns. Partner teachers are excited about these projects and provide the institutional support and approval to establish them on their school campus. Most of our partner teachers are returning teachers and have relevant experience coordinating with interns to carry out these Action Projects. Action Projects are unique in that they are intern-led. We allocate each classroom's Action Project with a budget of \$75 which interns use to build their own materials list. This amount is carried over from previous year's budgets. We expect some interns to go slightly over budget but it balances out with interns who go slightly under budget, resulting in a balanced budget overall. Interns will be responsible for generating an itemized budget, researching the cost for the materials they need and submitting it for approval. Our goal is to allow interns to practice self-efficacy in leading their projects and recognize areas where they can stretch their budget by reaching out to available resources.

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## Environmental Sustainability Outcomes \*

Please provide a brief description of how you expect your project to advance environmental sustainability on campus. Responses are limited to 3,000 characters including spaces. A definition of environmental sustainability is provided in our Spring 2022 Information.

Students and interns who take part in this not only gain place-based education on the importance of conservation, they also get hands-on experience with creating a conservation project. The skills they gain are valuable to solving further challenges associated with the climate crisis. The UArizona interns who create and facilitate these Action Projects develop strong leadership skills and become an asset to both our local Tucson and the UArizona campus community. The personalized nature of these Action Projects requires interns to identify the needs of their K-12 school environment by conducting a brief needs assessment in order to address small scale environmental issues. Interns become empowered as leaders on their school campus, and developing environmental sustainability projects in their own capacity allows them to take these skills back to their academic field.

Increasing the spread of school pollinator gardens and planting native plants works to improve the landscape, soil, and ecosystem health, while disseminating knowledge on utilizing local resources for the benefit of the larger ecosystem. The plants that make up these gardens are adapted to local environmental conditions and are resilient while requiring less resources in the form of water, fertilizer, and pesticides, in addition to providing vital services to wildlife. The bat boxes, bee homes, and bird feeders do the same job of providing services in a sustainable way. The physical project will live on to benefit future generations while the students carry the knowledge to recreate these projects and teach others in the future. The focus on biodiversity within the curriculum and fostering it through the Action Projects directly builds resilience in the face of climate change. The work of these students and interns builds capacity within the Tucson community to generate ecosystem services and support ecosystem resilience with these pollinator-focused Action Projects.

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## Social Sustainability Outcomes \*

Please provide a brief description of how you expect your project to advance social sustainability on campus. Responses are limited to 3,000 characters including spaces. A definition of social sustainability is provided in our Spring 2022 Information.

The partnership between UArizona interns and local students is an intentional way of bridging the gap between academia and the community surrounding it. We focus on fostering community relationships and a community network that has a combined goal of social sustainability. Through Action Projects, we are able to highlight a model of social sustainability where environmental action takes place in a local area addressing small-scale community issues, and where the community itself is involved as part of the solution to that issue. The demographics of certain communities lead them to be excluded from environmental decisions, and we intentionally seek out these demographics to empower them to be involved in environmental fields. The Bio/Diversity Project attracts UArizona students from 7 different colleges representing up to 21 different academic departments, increasing connectivity across environmental causes. The identities involved in these projects are underrepresented in environmental sustainability outreach, with Bio/Diversity interns representing as 91% female, gender-fluid, or non-binary, 48% students of color, 43% first-generation college students, 26% self-identify as low-income, and our K-12 partner schools being Title 1 schools that serve primarily students of color and students from low-income households. UArizona interns enter the classroom community with knowledge of the disparities in environmental fields as well as in higher education. They serve as role models to the students to show that anyone and everyone can get involved with environmental issues and to act as a connection between current K-12 students and secondary education. The hands-on, positive exposure to environmental projects through the Action Projects allows students and interns to see themselves as a more integral part of the environmental field. Action projects are an accessible experience with environmental issues that builds positive attitudes toward the environment and empowers participants to continue acting towards environmental sustainability. We also recognize accessibility issues in this line of work where experience is gained through unpaid internships. Though we cannot pay all of our interns, we hire outstanding interns as student workers who receive a wage of \$15-17 per hour for their time to make participation in the environmental field more accessible and recognize the value of their work. Having students as staff allows the facilitation of peer-to-peer mentoring. Student staff can help interns with more than just program duties to serve as a mentor for moving through higher education.

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## Student Leadership & Involvement \*

Please provide a brief description of how you expect your project to benefit students on campus regarding the creation of leadership opportunities or student engagement. What leadership opportunities exist within your proposal? If you plan to hire/ or involve students, please describe in what capacity. For example, if you plan to hire students, create an internship, or seek student involvement, please describe relevant details thoroughly (wages, responsibilities, duration of job, extent of involvement, how you will solicit/ market these opportunities etc.). Responses are limited to 3,000 characters including spaces.

Bio/Diversity Project interns develop skills in program design, implementation, and evaluation through the development and facilitation of inquiry-based, phenomena-driven Action Projects. Interns are entirely responsible for planning the Action Project that will take place in their classroom. Besides following a base project outline and spending limit, the details of these projects will be unique to each K-12 classroom. Interns have the best vision of what works for their classroom and their students, so they are entrusted with bringing their vision to fruition with guidance as needed. Interns get project management experience in this opportunity that allows them to create and lead their ideal project. Interns gain confidence and benefit from the skills gained in their experience in constructing this community based, leadership development project.

Our student workers directly support the efforts of the interns and have the opportunity to create and lead their own workshops on creating successful Action Projects. Student workers collaborate with the interns over the semester, recognize their needs and areas where support is needed and take the initiative to directly meet those needs through these workshops.

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## Education, Outreach, & Behavior Change \*

Please provide a brief description of how you expect your project will communicate its impacts to the campus community. How will your project educate the campus community and/or incorporate outreach and behavior change? How are you reaching beyond the "sustainability choir?". Responses are limited to 3,000 characters including spaces.

Title 1 schools are ideal to host these Action Projects to reach the communities they service. Students gain an experience that they can share with family and friends. The school community serves as an audience to these projects that inspire others to take action for the environment. Projects live on in the school and its community, inviting interaction from areas that are often overlooked for environmental action. ArcGIS stories can be shared online to showcase the sustainability efforts of the students. Pollinator gardens inspire appreciation of the environment with the presence of the natural space and with the wildlife attracted. Interns and students build a lasting representation of the information shared over the year with students through their Action Project, making tangible progress on the environmental issues students learn about throughout the year. Interns also recognize the value of small-scale environmental projects and are equipped to manage projects like these in the future.

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## Timeline

We understand that for some Mini Grant projects, having a deadline of June 30th, 2022 is not enough time. Should you feel that your project cannot be completed and closed out by this date, please provide a thorough explanation as to why your project requires a project timeline extension. Timeline extensions will be granted on a case-by-case and limited basis. Responses are limited to 3,000 characters including spaces. This question is optional, please omit if not relevant to you.

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## Project Budget \*

Please provide a completed project budget using our Budget Template. The template can be found here: <https://arizona.box.com/s/5wmduso6tz27pyskc822tknf6pxr002v> Using the link, click "Download" at the top right corner and it will download as an Excel Sheet. You will need to sign into Box if you haven't used it prior. Please save your Excel sheet as: Project Name\_Budget Template

Campus Sustain...

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