



Journey
**Short Term Education Program for
Underrepresented Persons (STEP-UP)**



What is STEP-UP?

- High School Program designed for minority and socioeconomically disadvantaged high school students
- National program funded by The National Institute of Diabetes and Digestive Kidney Diseases, National Institute of Health



STEP-UP

- Goal is to increase and strengthen the shortage of American Indian/Alaska Natives pursuing the fields of biomedical, behavioral, and clinical research.
- Increase American Indian/Alaska Native capacity and scientific knowledge to pursue higher education degrees



High School Program

- Provides hands-on summer research experience for high school Juniors/Seniors interested in exploring research careers in the biomedical, behavioral, clinical and social sciences



Program Highlights

- 8 to 10 weeks of full-time research experience (no additional school or work)
- Summer Research Stipend
- Students are paired with experienced research mentors
- Students receive training in the responsible conduct of research
- No relocation required



Experience for AI/AN high school students

- Stimulate the undertaking of scientific careers
- Stimulate consideration of science based questions and decisions
- Connection between historical and social issues as related to academic knowledge
- Mentorship and interaction with health, medical and social behavioral professionals



STEP-UP Experience

- Link research to relevant theory and cultural contexts
- Pose significant questions and investigate with quantitative, qualitative and ethnographic methods
- Utilize methods that permit direct investigation with a research team approach
- Provide coherent and explicit chain of reasoning



STEP-UP Experience

- Increase knowledge of real-world use of scientific methods
- The role research plays in shaping medical and behavioral fields
- Increased knowledge of responsible conduct in health-related research
- Increased knowledge of the role of research scientists and the diversity of those pursuing medical-science careers



STEP-UP Experience

- Learn concepts that guide scientific investigation
- Carry out procedures of the investigation
- Develop investigation instruments
- Gather and record data
- Reveal conclusions
- Communicate findings



Abstract Example

- **The Effect of Vegetated Roofs on Phosphorus Leaching and Stormwater Quality**
- **Introduction:** Stormwater runoff has become a growing problem for cities all over the United States. Impervious surfaces, including roofs, cause high volumes of stormwater runoff that may deliver harmful levels of nutrients and pollutants to the watershed. Vegetated, or green, roofs lower urban stormwater runoff quantity through retention and evapotranspiration.
- **Objective:** This experiment will examine the effect of green roofs on stormwater quality, specifically nutrients and heavy metals, which has not been well evaluated.
- **Methods:** There will be 30 mini-roofs (4 ft wide x 12 ft long x 4 ft high) that will be used to perform the experiments. Each of six mini-roofs will involve one of the following planting arrangements: Monoculture *Bouteloua curtipendula*, a bunchgrass; Monoculture *Phlox bifida*, a forb; Monoculture *Sedum album*, a succulent plant ; A mix of the 3 species above, in randomized order.
- In addition, there will be 4 roofs with soil only (no plants) and 4 roofs with conventional roofing material. Runoff will be collected from drains after it has percolated through the soil or across the roof surface on conventional roofs. The water will be tested for phosphorous levels.
- **Results:** The predicted results are that the nutrients in the water may be high because of the nutrients in the soil; however, the nutrients present should not prove detrimental to the environment.
- **Conclusion:** The results will be used to make recommendations regarding use of fertilizers on green roofs and nutrient concentrations in green roof soils.



Eligibility Requirements

- Be in their junior (11th) or senior (12th) year of high school (at time of application)
- Have a minimum overall GPA of 2.75
- Have personal medical/health insurance coverage throughout the duration of the program
- Come from a disadvantaged background



Application Process

- Complete and submit the online application
- Complete and submit a personal statement with no more than 600 words
 - Should reflect interest in research
- Submit two letters of recommendation
- Order official transcripts



Important Dates

- Application process opens 11/15/2013
- Application Deadline is 2/15/2014
- Notification of acceptance by email 3/9/14
(participants required to confirm their participation within one week of notification)