

Assessing and Addressing ESIP's Professional Development Needs

January 2012

Winter Meeting

LuAnn Dahlman, Margaret Mooney, and
ESIP Student Fellows: Brent Maddux,
Jesse Roberts, Yasmin Zaerpoor, Tom Narock,
Eric Rozell, Oleg Aulov

Interviews

In the fall of 2011, ESIP Student Fellows interviewed 11 cluster and group leaders to find what challenges or needs they perceived in ESIP collaborations.

Thanks to our interviewees

Allison LaBonte
Amber Budden
Annette Schloss
Becky Reed
Bruce Caron
Chris Lynnes

Curt Tilmes
Hook Hua
Mark Parsons
Rob Raskin
Ruth Duerr

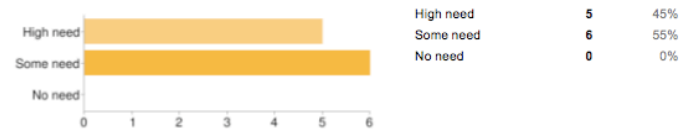
Surveys

20 individuals indicated their need for 14 different types of training or services.

Interviews and Surveys

Summary documents from interviews and surveys will be available on the Wiki.

4. Which of the following services could benefit your ESIP group? - B. Best practices for communicating up the chain of command to agency program managers or executives




4. Which of the following services could benefit your ESIP group? - C. Development and analysis of use-case examples (user stories)



4. Which of the following services could benefit your ESIP group? - D. Development of practice exercises for students or new users

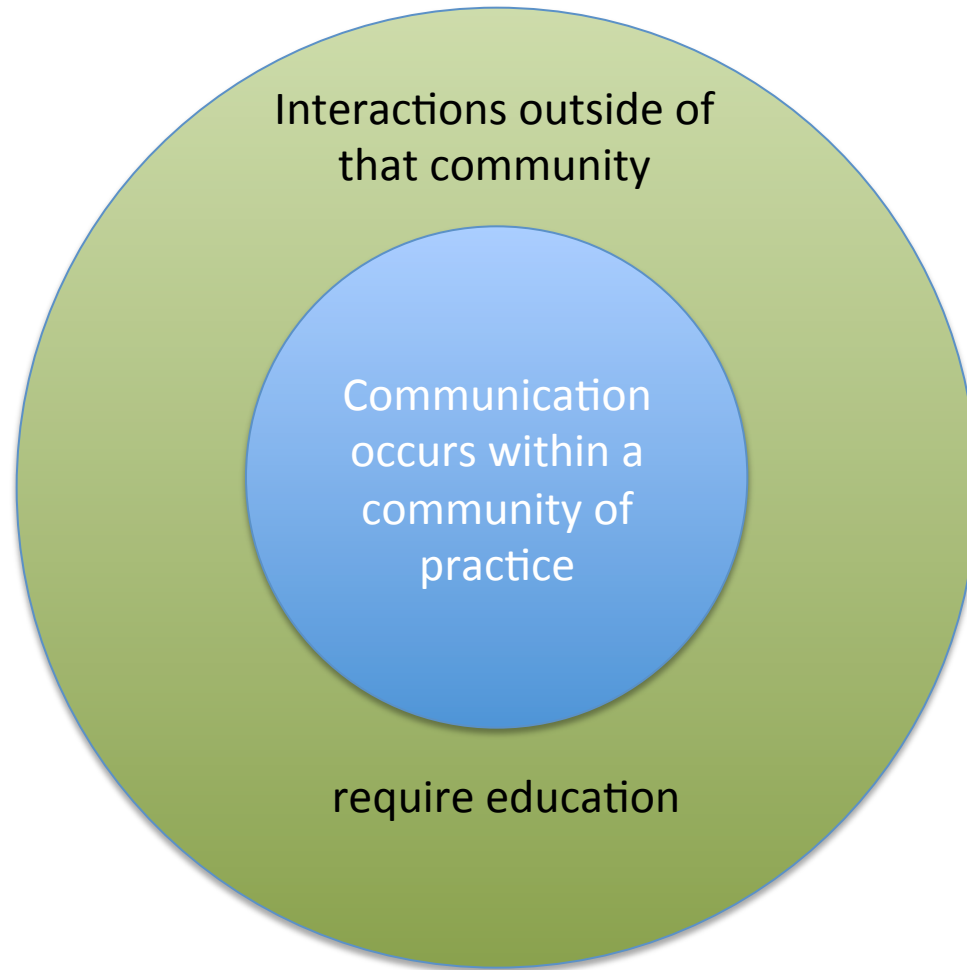


Suggestion



Communication
occurs within a
community of
practice

Suggestion



Generalized Results

Several interviewees cited needs for **strategies to build and maintain a reliable community of volunteers**. They want “more people” who have “more time” to accomplish their work

- Some groups need ways to keep people engaged and ensure that things get done
- Other groups have a clear goal, but could use more people to contribute

Generalized Results

The most mature groups have important goals and a sense that they are moving toward their realization

- A couple groups are concerned with ways to distribute their methodologies or products

Top needs

75% or more indicated High Need or Some Need

community in-reach

communication up the chain of command

effective technology demonstrations

understanding users' needs

usability information

overview of platforms

message development

social media

Solutions?

Do it yourself ----- Attend a seminar ----- Work with consultant ----- Outsource the task

Solutions

Example: Goal-setting –
ESIP groups need inspiring, realistic goals

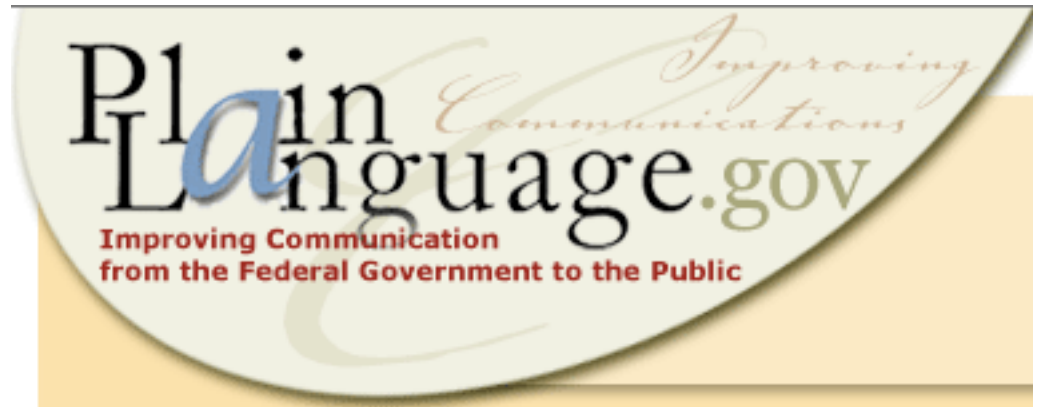
Seminar: learn best practices for setting goals

Facilitator: walks group through process to set goals

Improving Communication

The **Plain Writing Act of 2010**

requires federal agencies to use clear communication that the public can understand.



Plain Language is...

Communication that your audience can understand the first time they hear or read it

PlainLanguage.gov

Provides guidelines and training
to help you help your audience

- **find,**
- **understand, and**
- **use**

the information they need

Plain Language Concepts

Figure out who is in your audience
and what they need from you

- For what groups of people do you have something of value?
- What questions do they need answered?
- What do they hope to know or be able to do with your information?

Plain Language Concepts

Speak directly to your audience

- Focus on the 80 percent of people who are in the middle of the novice-to-expert spectrum

Anticipate the questions your audience has

- Organize your information to answer questions in the order they are likely to occur to your audience

Plain Language Concepts

Use plenty of descriptive headings throughout your documents

- Headings serve as “Signposts” to help readers find the information they want
- Headings break up dense blocks of text
- Headings expose the logic you followed in writing the document

Plain Language Concepts

Use lists and tables to simplify complex material

- Introduce each list with a concise phrase or sentence
- Ensure that all items fit together (parallelism)
- Recognize that lists break up dense blocks of text and draw attention

Plain Language and the Web

Web users don't read — they scan

Studies show that most folks read less than 20% of the words on a page

Most focus goes to headings and lists



Eye-tracking map from useit.com
Red = most viewed Gray = least viewed

Jargon, Acronyms, and Letter Strings

- Don't shy away from necessary technical terms, but provide enough context around them to encourage novices along
- Recognize that your word choices send a powerful message that tells a reader if they are in your target audience or not
- To grow your audience, encourage potential users by projecting inclusive rather than exclusive messages

Use clear, uncluttered visuals

- Check how your visuals will look in their final medium
- If you know your audience can't make out the words or details of a diagram, don't include it
- If the information is truly essential to your audience, take the time to re-cast it in a visually useful way

Take advantage of what is already known about best practices for designing or re-designing Web sites:

Research-Based Web Design and Usability Guidelines

Step-by-Step Guide

We provide a [step-by-step visual map](#) to guide you through the user-centered design process.



Resources

Section 508/Accessibility

[HHS Web Communications & New Media Division 508 Resources](#) – includes general information and resources on PDFs, Standards, Compliance & Remediation, Presentations, Video, Points of Contact, and Training.



Enhancing the User Experience!

Usability.gov is a one-stop source for government web designers to learn how to make websites more usable, useful, and accessible. The site addresses a broad range of factors that go into web design and development. The site will help you to:

- Plan and design usable sites by collecting data on what users need
- Develop prototypes
- Conduct usability tests and write up results
- Measure trends and demographics

Usability Basics and Methods

The [Usability Basics](#) section provides information about what usability is, why it is important, how much it costs, measurement and other basic information. The [Usability Methods](#) section includes various user-centered design methods that can help improve the usability of your site. Find out how to perform card sorting, create personas and other great methods.

Templates

Usability.gov provides a wide range of [templates](#) for your use. They can be customized for your organization's usability needs. All of the templates are in the public domain and can be freely downloaded.

Guidelines

We have packaged our core knowledge into a [set of guidelines](#) for user-centered design. The content can be viewed on line or accessed via PDF format.

Resources Across Government

The [Resources Across Government](#) section provides information and resources to help you implement usability in your government Web efforts.

Articles & Discussion

Usability and Mobile Devices



As the prevalence of PDA and other smart devices with Internet connectivity increase, so does the need for attention to the usability of these devices. [Read More and Comment.](#)

RSS



[What's new RSS feeds](#)
[Help with RSS](#)

Step-by-Step Guide

We provide a [step-by-step visual map](#) to guide you through the user-centered design process.





Planning the Project

Analyze Current Site

Design New Site

Test & Refine the Site

Methods at a Glance

Usability Methods

There are multiple methods that fit into each of the steps of the user-centered design process. These methods can help improve the usability and usefulness of your site. The following table organizes usability methods according to where they take place in the user-centered design process.

	Analyze	Design	Test
Card Sorting	✓	✓	✓
Contextual Interviews	✓		
Focus Groups	✓	✓	
Heuristic Evaluation	✓		✓
Individual Interviews	✓	✓	✓
Parallel Design		✓	
Personas	✓		
Prototyping		✓	✓
Surveys (Online)	✓	✓	✓
Task Analysis	✓		
Usability Testing	✓	✓	✓
Use Cases		✓	
Writing for the Web		✓	

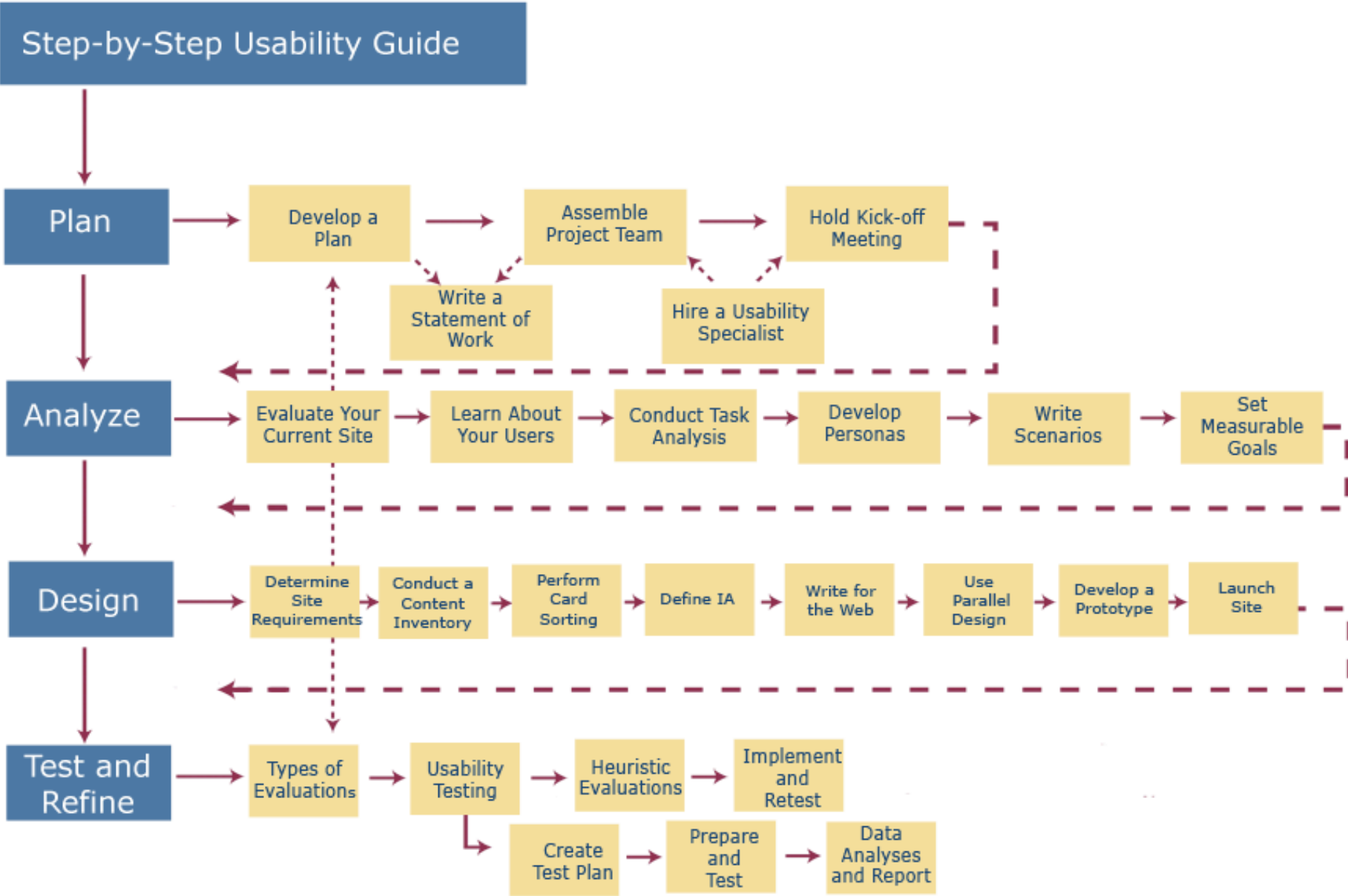
Step-by-Step Guide

We provide a [step-by-step visual map](#) to guide you through the user-centered design process.



Visual Map

To learn more about a topic, click on a box.





Don't Make Me Think **A Common Sense Approach to Web Usability**

Steve Krug / New Riders / 2005 (2nd Edition) / 216 pages



Rocket Surgery Made Easy **The Do-It-Yourself Guide to Finding and Fixing Usability Problems**

Steve Krug / New Riders / 2010 (2nd Edition) / 168 pages



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How To Make a Video for YouTube : Editing Videos For YouTube

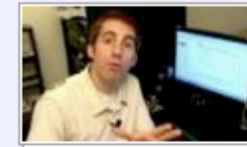
From: [videotoolbox](#) | Feb 2, 2008 | 827,424 views

How to edit videos for YouTube; learn more about online video software in this free instructional video.

Expert: Craig Scime

Bio: Craig got involved in television at the early age of 7 as an actor for McDonalds. When he entered high sch... [\(more info\)](#)

[View comments, related videos, and more](#)



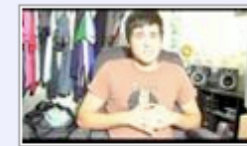
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Special Effects

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[more info](#)



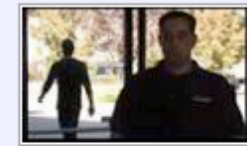
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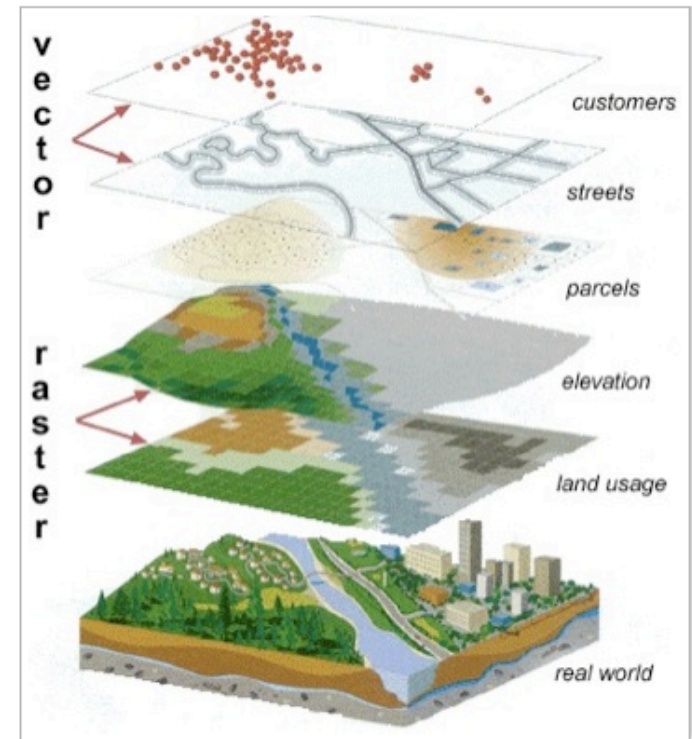
Platforms for Web Courses

Week 5: Monitoring Invasive Species

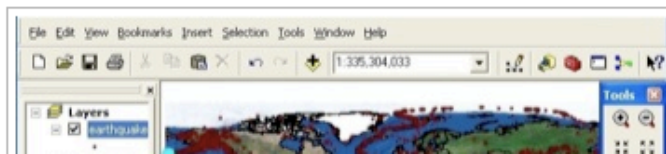
Intro to Geographic Information Systems (GIS)

You have spent the first four weeks of this course studying raster images. You have accessed, downloaded, controlled, and analyzed raster images using ImageJ and Giovanni. Another important class of data which we will introduce in the upcoming weeks is *vector* data. Vector data can be represented by the same elements students learn in geometry. These are points, lines, and polygons. These data are different from raster data in that they are infinitely scaleable. This means they remain smooth at all zoom levels, without the pixelation you see when you zoom in on raster images.

You have already seen that the pixels in raster images are visual representations of numerical information such as elevation, temperature, reflectance, population density, ozone concentration, etc. Image processing tools allow you to visualize, manipulate, and analyze this information in a variety of ways. For example, you may be able to use reflectance data at different wavelengths to infer the type of land cover across a region. If a comparison of your predictions to the actual ground cover shows a good correlation (a process called *ground truthing*), your technique can be applied to new regions with some certainty.



Data in GIS is displayed in either raster or vector layers.



Vector data defines features by their geometry, representing each feature as a point, line, or polygon. Information about a group of related features with the same type of geometry is collected in a database, which includes not only the geometric description of the feature, but any other information you want

Eyes in the Sky II

GIT Web Course

PreCourse Activities

Module 1

Module 2

Week 5

Intro to GIS

Intro to AEJEE

Intro to ArcGIS

Intro to My World

Eyes on Dr. Jeff Morissette

Getting to Know Querying in GIS

Using GIS to Analyze and Predict Invasions

Share and Discuss

Week 6

Week 7

Week 8

Review & Install

Module 3

Resources

Announcements

Summer Workshops

« Fly High with Your Email Newsletter!

Why wing it? Our **Custom Services** team can help you take flight. We do everything from account setup through custom design – so your newsletter creates maximum impact and your response rates fly high.

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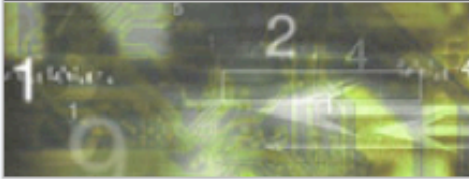
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Awards

Discoveries

News

Funding



[Directorate for Engineering](#)

Research Experiences for Teachers (RET) in Engineering and Computer Science

Full Proposal Deadline Date: October 1, 2012
First Monday in October, Annually Thereafter

SYNOPSIS

The Directorate for Engineering (ENG) and the Directorate for Computer and Information Science and Engineering (CISE), Research Experiences for Teachers (RET) in Engineering and Computer Science program supports the active involvement of K-12 science, technology, engineering, computer and information science, and mathematics (STEM) teachers and community college faculty in engineering and computer science research in order to bring knowledge of engineering, computer science, and technological innovation into their classrooms. The goal is to help build long-term collaborative partnerships between K-12 STEM teachers, community college faculty, and the NSF university research community by involving the teachers and community college faculty in engineering and computer science research and helping them translate their research experiences and new knowledge into classroom activities. Partnerships with inner city schools or other high needs schools are especially encouraged, as is participation by underrepresented minorities, women, and persons with disabilities. This announcement

Opportunities to work
with educators



National Science Foundation
WHERE DISCOVERIES BEGIN

NSF Web Site



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Research Experiences for Undergraduates (REU)

Full Proposal Deadline Date: August 22, 2012

Deadline for REU Site proposals except for those requiring access to Antarctica
Fourth Wednesday in August, Annually Thereafter

SYNOPSIS

The Research Experiences for Undergraduates (REU) program supports active research participation by undergraduate students in any of the areas of research funded by the National Science Foundation. REU projects involve students in meaningful ways in ongoing research programs or in research projects specifically designed for the REU program. This solicitation features two mechanisms for support of student research: (1) *REU Sites* are based on independent proposals to initiate and conduct projects that engage a number of students in research. REU Sites may be based in a single discipline or academic department, or on interdisciplinary or multi-department research opportunities with a coherent intellectual theme. Proposals with an international dimension are welcome. A partnership with the Department of Defense supports REU Sites in DoD-relevant research areas. (2) *REU Supplements* may be requested for ongoing NSF-funded research projects or may be included as a component of proposals for new or renewal NSF grants or

Opportunities to work
with educators

Communicating Research to Public Audiences

PROGRAM SOLICITATION

NSF 03-509

REPLACES DOCUMENT NSF 97-70

Opportunities to work
with educators



National Science Foundation

Directorate for Education and Human Resources

Division of Elementary, Secondary and Informal Education

Full Proposal Deadline(s):

No fixed deadline

Synopsis of Program:

Communicating Research to Public Audiences is a component of the Informal Science Education program (ISE) in the Division of Elementary, Secondary, and Informal Education. ISE projects provide rich and stimulating contexts and experiences for individuals of all ages, interests, and backgrounds to increase their appreciation for, and understanding of, science, technology, engineering, and mathematics (STEM) in out-of-school settings. Requests for up to \$75,000 will be considered to support projects that communicate to public audiences the process and results of current research that is being supported by any NSF directorate through informal science education activities, such as media presentations, exhibits, or youth-based activities. The purpose of these efforts is to disseminate research results, research in progress, or research methods.



The Federation of Earth Science Information Partners
Fostering connections to make data matter

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Education and Outreach

Opportunities to work with educators

Education-related collaboration allow practioners along the value chain and cross organization to come together around to develop education materials for both professional development and K-12 curriculum. These are the currently active collaboration areas. Feel free to participate in any of the areas that are applicable to you.

- [Climate Education Working Group](#)
- [Data Management Training](#)
- [Education Committee](#)
- [Internal Education Working Group](#)

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Characterizing Users

Gather **systematic** information on users'

- levels of knowledge about the subject matter
- levels of experience in finding and using data
- specific reasons for coming to your site

Characterizing Users

Two suggestions

Contextual Interview – watch someone use your tool or site and its products with their technology. Have a conversation about what works and what could improve.

The direct ask – Send an email or an IM to ask a user what they think about a specific feature of your tool or site. Be willing to consider all input they offer.

Communicating Up the Chain

Develop several “elevator” anecdotes featuring the real-world benefits of your work. Actively look for chances to share them.

Don’t assume that folks at the top are familiar with your work. Always provide sufficient context before sharing your successes or challenges.

Before communicating UP the chain, ensure that you’ve communicated clearly and completely ACROSS the chain.

Communicating Up the Chain

Get to know who you're communicating with

- What does that person **want to know** and **need to know**?
- How will they use your information with their managers?

Make it crystal clear why you are communicating with them

- In your introduction, include a **bold font** statement telling what you would like them to do as a result of your communication

When seeking help on an issue, make it clear that you've explored the results of a range of potential solutions

Developing Messages

1. Figure out what ACTION you want to happen.
2. Consider WHO could help you accomplish that goal. These folks are in your target audience for receiving your messages.
3. Put yourself in the shoes of your target audience. What do THEY want? (Think of what they want in a general sense, not just what they might want from you).
4. Find the overlap between what you want and what your audience wants. Your strategic messages lie within the intersection.