

Guideline Criteria for Evaluating Potential of the Activity Planning Document

The EOT Activity Work Plan below has been annotated with guidelines for a NEEScomm EOT review to evaluate both completeness and potential of the work plan. The primary goal is to evaluate the quality of the plan and maximizing its potential for impact (quantity and quality). These guidelines are based on strategies for effective project management and workflow. Sites can use these guidelines to assist their thinking in the completion of this work plan. The NEEScomm EOT leadership can use these guidelines to provide useful feedback to sites in an effort to increase the plans potential impact and successful approval.

Education, Outreach and Training Activity Planning Document

The form must be used to request approval for any EOT funds to be expended at NEES Sites after February 1, 2013 (exclusive of funds for the NEES REU). Request must be sent to NEEScomm, where it will be forwarded to Dr. Joy Pauschke and the Grants and Agreements Office at NSF for final approval.

NEES Site: _____

Name of Activity: _____

Date(s) of activity:

Type of activity (check one):

- Education:** Activities that increase the literacy and potential of learners to engage in inquiry activities that emphasize high-level thinking, problem solving, and collaboration.
- Outreach:** Activities that increase participants' awareness of, and interest in, earthquake engineering and the science associated with the research and development work conducted by NEES
- Training:** Activities that increase learners' ability to use tools, resources, and data associated with NEES facilities and cyberinfrastructure (e.g. NEES.org and the NEESacademy).

Target Audience (check all that apply):

- | | |
|--|---|
| <input type="checkbox"/> K-12 students | <input type="checkbox"/> K-12 teachers |
| <input type="checkbox"/> undergraduate students | <input type="checkbox"/> undergraduate faculty |
| <input type="checkbox"/> graduate students | <input type="checkbox"/> graduate faculty |
| <input type="checkbox"/> researchers | <input type="checkbox"/> practitioners |
| <input type="checkbox"/> general public | <input type="checkbox"/> other (describe): |

Are all the potential stakeholders identified? Who are all the potential agents involved in the activity and how many strategic aims might be met through this activity. If the potential for significant impact to one of the implemented/participants' in the activity can be accomplished, then are they identified (e.g. coupling an outreach experience in a classroom lead by a site affiliate with teacher training could extend the learning experiences to other learners at the school).

Expected number of participants (approximate): _____

Is the number of estimated participants appropriate and justifiable? Is the audience known (such as a visiting class) or does a venue have historical data to provide evidence of past events? Is the activity new and need marketing? If so, how potential audiences be invited to participate and what is an estimate of

potential return (e.g. a museum has 300K visitors a year with an estimate of 1/3 of participants view any exhibit).

Description of EOT Activity (provide a general description of the activity that outlines the general sequence of major learning experiences. Provide enough detail to illustrate how the learning outcomes are achieved and when they are measured.)

The narrative should sufficiently describe the learning experiences with an emphasis on justifying how the activity will achieve the learning outcomes.

Is it clear how a learner will achieve a particular learning outcome?

Does the experience provide sufficient access to knowledge or engagement to realistically achieve a learning outcome? (e.g. listening to a short presentation may lead to recall of the facts by learners, but would not result in critical thinking skills. Ability to identify problems, build, test and explain results from an experiment requires a combination of learning experiences to achieve this richer knowledge)

List any partners in development and delivery of activity:

Current and future impact can be broadened with partnerships – Are there appropriate partnerships with people who could assist with the design of the materials, assessment or broadening the impact of the activity? This could be educational specialist affiliated with the local facility, other sites, or other professional organizations.

Activity Goals (Describe the desired result, e.g. a tour is an outreach activity to increase awareness of NEES capabilities and NEES research. For a middle school visit the goal might be to increase awareness of how engineering is used to mitigate the impacts of earthquakes or tsunamis. For a workshop with researchers the goal might be to increase the use of NEEShub. An activity can have more than one goal and possibly more than one target audience. Refer to *Guidelines for Evaluation and Assessment of NEES EOT Learning Experiences* found at <https://nees.org/resources/5422>)

Are the goals clearly stated and can they be aligned with one or more of the NEES Strategic Aims?

Activity Objectives (These should be measureable accomplishments with a process and target and if possible a timeline to achieve your goal. An activity goal of reaching 1000 participants underrepresented in STEM might have an activity objective of partnering with a school district. For a tour with a goal of increasing understanding of NEES research, might have an activity objective of understanding how a centrifuge models gravitational forces by completing hands-on activities. For a workshop with a goal of increasing use of the Project Warehouse, an activity objective might be completing a data upload to the Project Warehouse. An activity can have more than one objective.)

Achieving the goals of the project will require achieving multiple objectives. Does the proposal provide a high level articulation of major objectives to be achieved and a tentative time line for achieving these objectives? These objectives could state major deliverables and identify when they will be complete.

Responsible Staff (For each staff member please describe their duties. For student assistants you may describe them as a group, e.g. 3 graduate students etc. Under qualifications indicate if students receive training and how extensive this training might need to be.)

Staff Name	Duties	Qualifications
<i>Activities require staff to support a number of basic duties (e.g. design, manage, implement, recruit participants, evaluate and report, [publish]). Does the plan identify adequate staff to meet these responsibilities?</i>	<i>Is there a clear indication of who are the leaders on the activity – Project management, implementation and evaluation? Who are the other workers of the activities?</i>	<i>What experience or certification does the participant have in this area? What experiences/training do they need to successfully achieve the duty? For example, students helping with the implementation of an activity may only need 1 hour of training. A person designing the activity and managing it should have some minimum level of experience to</i>

Describe plan for broadening participation by groups underrepresented in STEM (African American, Hispanic, Native American, Pacific Islander, and women):

What plans are made to maximize the potential of participation of a diverse population of the target audience?

Does the plan provide concrete methods for going to venues that will increase the potential for participation of underrepresentation? [Possible strategies for meeting this requirement can be achieved by targeting venues that serve underrepresented learners will participate, or invite participants from organizations known to have a diverse population (schools, teacher organizations)]

Is there a strong rationale why achieving a broad participation of underrepresented students is difficult?

Expected Learning Outcomes (Learning outcomes should be in the form of what a participant should know at the end of the activity. e.g. for a tour: “Participants will be able to describe what XX-NEES site does.” For a school visit: “Participants will be able to explain that bracing reduces structural damage in a building.” For a workshop “Participants will be able to upload sample data into the Project Warehouse.” An activity can have more than one learning outcome.)

Expected learning outcomes are specific target metrics associated with what the target audience is to achieve through their participation in the experience. Therefore, Are the learning outcomes clearly state what the person should know and be able to do? Can the learning outcome be effectively measured? (The instrument should be described in following sections and actual instrument would be helpful, or a mention of an instrument housed on NEESAcademy).

Target Metrics (Describe the metrics that will be used to measure the success of the activity. Both **measures of reach and measures of quality** must be included. Examples of reach are number of participants and number of underrepresented participants. Examples of quality are number (or %) of participants that meet or exceed the learning outcomes as measured with the assessments.)

Target metrics should align with objectives and learning outcomes. Can it be effectively measured?

Do the metrics provide meaningful indicators the objective/outcome was achieved?

Description of Evaluation Plan (Describe how the activity is going to be evaluated. How will learning outcomes be assessed? Attach a copy of the assessment instrument or assessment questions.)

The evaluation plan should describe how the objectives and learning outcomes are being measured and when they are being measured. The methods and instruments should be identified. A short rationale for why the instrument is appropriate and should align with the targeted objectives and learning outcomes.

Does the plan provide a description of the analysis methods and an estimation of time (cost) associated with gathering, processing and reporting results?

Budget (total budget request + itemized budget You may include the cost of staff time)

The budget items will align with expenses associated with meeting the activities' goals, objectives, learning outcomes, implementation expenses (venue, personnel, materials etc.) and evaluation expenses (materials, personnel)?

Budget Justification (justification of items in budget)

What evidence is provided for the level of effort or materials for the item? Past records/experience, quotes from vendor.