

Notes from the Education Committee Meeting
17th Annual Meeting, August 11, 2013

Feedback on the Science Panel Review recommendations RE: Teachers Guide

Investigation areas to be changed to	spheres:
Atmosphere	Atmosphere
Land Cover/Biology	Biosphere
Hydrology	Hydrosphere
Soil	Pedosphere

Macroinvertebrates will remain in Hydrosphere, even though dealing with living organisms, since this protocol deals with water quality based on macroinvertebrates found during sampling.

The current Earth as a System Investigation will be split up: the protocols (and potentially some of the learning activities) will become part of the Biosphere collection along with Land Cover/Biology; the remaining learning activities deal mainly with Earth system connections and therefore will become an EARTH SYSTEM SCIENCE section along with ESSPs materials, Earth System Posters, etc.

Committee is in agreement with these changes.

Modernization of the Teacher's Guide

Discussed evolution of the development of the guide from a static document to one that should be more connected and dynamic.

Elementary teachers: there should be a section on the definitions of sphere for these teachers

Going Digital in the guide: Suggestions from the Committee

- Ability to do background changes (e.g. colors) for spheres that are consistent throughout the spheres, so you know where you are
- Countries contribute to the media portion of the site through video clips
- Technology rich throughout the guide
- More pictures
- Multiple Languages
- Pdf versions as well for the low technology and low connectivity areas

Additional Protocol Suggestions:

- Possibility of protocols added for urban areas
- And/or Repackaging protocols to be suitable as well for that environment
- Implementation issues should be included/addressed within the protocols
- Probeware is the fastest growing technology; GLOBE should work to incorporate this more into instrumentation options

Review of Trainer and Master Trainer Training Documents

Overall, new training diagrams and narrative approved by the committee. The new documents are an attempt to simplify the instructions for the training approach. Before the meeting, GPO staff connected with other similar environmental education projects, like Project WET and WILD, to inquire how they certified their trainers. While the system GLOBE created was similar to these, the representation of the GLOBE certification system diagrammatically seemed very complicated. GPO attempted to simplify this and it seemed that the committee appreciated this and approved this new version.

However, some of the following still need to be considered and resolved

1. Assessments:

How to assess candidates: Develop a standardized assessment form and then promote conversation between the mentor and the trainee to ensure communication and feedback during the assessment process. The goal of assessment should be to help the trainee grow in his/her training abilities in order to (eventually) become a master trainer.

2. Documentation:

Alter documents to include experience, the science courses and levels taught and the different roles played in education. Most formative learning occurs through the act of teaching in ways that engage students. The examples examine academic involvement without regard to when, the relationship to the protocols, the experiences in teaching field studies and the types of sciences the person has taught. Additionally, trainers should not only have experience with adults but also in primary and/or secondary education if possible.

3. Create online capabilities and infrastructure of the website to manage the documentation associated with the training system

4. Training offered between countries for teachers especially in absence of CCs. GPO check into that.

5. Organizing sufficient trainer and master trainer events so that people can be certified. This is especially important regionally.

6. Evaluation of documentation:

Should the country coordinator or regional office personnel evaluate the documentation to allow an individual to begin the master trainer process?

7. Trainer evaluation:

The Master Trainer should evaluate all trainers (during a TTT) rather than making the process an automatic one. Discussions between trainers and master trainers regarding protocols, instructional practices and opportunities as part of the evaluative process would be more informative than just watching or in addition to watching someone do a protocol and ticking a box.

----- **Standards and Assessment with GLOBE**

Trying to collect assessment and evaluation information can prove difficult both in the US and internationally. Perhaps tying in with existing assessments is a way of completing this task.

NGSS (US Standards): Marcy Seavey (IA Partner) is leading the development of this alignment with David Bydlowski (MI Partner) and others in the U.S. Partner community. GPO is assisting in supporting this. Marcy received a NSF grant for this project.

Pakistan: Cambridge University private schools. Do the schools use specific assessments that GLOBE could be incorporated into?

Council of International Schools: London

<http://www.cois.org/>

Perhaps work with this group to advertise GLOBE in schools around the world as well

Europe: Campaign working with 8 schools across the countries; National curricula are being considered as part of this campaign.

Create a template for GLOBE concepts perhaps based on new NGSS and placed on the web site so that countries can use this and align with their curricula.

See: <http://www.datainthe classroom.org/>

Who should lead the standards alignment for international community? This Committee?

Review of Protocols and Campaigns documents

How to define “pedagogical merit” within the New Protocol Guidelines

Designer of a new protocol should commit through a “contract” to ensure scientific use of data.

Regarding campaigns, can GPO ensure a quicker turn around than 3 months? Promote Community/Place-based processes

Time did not allow for a complete review of this process.

Other Protocols:

Pollinators: bees, butterflies, hummingbirds, and bats

Use existing protocols as observation

Can these new protocols also be tied into other programs, such as NEON and National Phenological Network (NPN)?