ESS in NGSS: The work of a diverse community toward full implementation

Aida Awad, Maine East High School, Park Ridge IL, NAGT Past President
Susan Sullivan, CIRES, U. of CO Boulder, NAGT Past President
Ed Robeck, AGI, Director, Center for Geoscience & Society
overview:

➢ collective impact thinking supports moving forward
➢ expanding the network
  ○ what we learned at the Summit
➢ establishing a working group
  ○ who, why, what is the charge, initial focus?
➢ upcoming talks, workshops & Town Halls

Please complete this quick feedback request: https://goo.gl/nYEMTR
thinking about expanding the network & collective impact:

The Five Conditions of Collective Impact

- **Common Agenda**: All participants have a shared vision for change including a common understanding of the problem and a joint approach to solving it through agreed upon actions.
- **Shared Measurement**: Collecting data and measuring results consistently across all participants ensures efforts remain aligned and participants hold each other accountable.
- **Mutually Reinforcing Activities**: Participant activities must be differentiated while still being coordinated through a mutually reinforcing plan of action.
- **Continuous Communication**: Consistent and open communication is needed across the many players to build trust, assure mutual objectives, and appreciate common motivation.
- **Backbone Support**: Creating and managing collective impact requires a dedicated staff and a specific set of skills to serve as the backbone for the entire initiative and coordinate participating organizations and agencies.

expanding the network:

What we learned about the network at the Summit on the Implementation of NGSS at the State Level:

➢ stakeholder groupings
➢ where do you fit on the diagram?
➢ do you identify with multiple categories?
pre-post assessment of network connections:

➢ “I know how I can collaborate with this person on NGSS implementation”
➢ participants with less than 9 connections at the onset tripled their connections

<table>
<thead>
<tr>
<th>number of pre &amp; post surveys completed</th>
<th>43</th>
</tr>
</thead>
<tbody>
<tr>
<td>pre survey data</td>
<td>range from 1-38, average 15</td>
</tr>
<tr>
<td>post survey data</td>
<td>range from 8-48, average 29</td>
</tr>
</tbody>
</table>
pre-post assessment of network connections:

➢ “I know how I can collaborate with this person on NGSS implementation”

➢ mutual connections

  ○ pre-Summit: 162 instances
  ○ post-Summit: 324 instances
expanding the network:

thinking more about network connections:

➢ what does your NGSS connected network look like?
➢ where are the logical “next connections?”
➢ who will you bring into the network?
➢ where are the gaps?
➢ how do we move forward?
The Earth and Space Science portion of the *Next Generation Science Standards* (NGSS-ESS) provide an exciting opportunity to enhance the status and practice of geoscience education across the United States. To facilitate that, a meeting was convened jointly by the American Geosciences Institute (AGI) and the National Association of Geoscience Teachers (NAGT) in the spring of 2015 entitled “Summit on the Implementation of the NGSS at the State Level” (NGSS-ESS Summit). That meeting initiated and encouraged a great deal of networking and activity in support of NGSS-ESS implementation.

To continue those important activities, it will be worthwhile to convene an NGSS-ESS Working Group. The Working Group will engage in a range of activities to provide contact, coordination, and support for NGSS-ESS implementation nationally. Specifically, the Working Group will:

- Encourage and keep track of the community discourse around NGSS-ESS
- Monitoring of areas of need and opportunities that relate to support of the NGSS-ESS community
- Work with a broad range of organizations that support schools and teachers, to facilitate organizations working directly with formal and informal educators
- Coordinate the flow of information so as to encourage action around emerging and time-sensitive issues
- Consider actions that are appropriate responses to opportunities such as disseminating new resources, accessing funding, and maintaining ongoing and coordinated effort and communication

The working group will form by mutual consensus, with initial leadership provided by the conveners of the NGSS-ESS Summit meeting.
NGSS-ESS Working Group initial focus areas:

- developing a slate of webinars topics & webinar presenters/facilitators
- identifying funding opportunities for efforts around NGSS-ESS implementation
- broadening the opportunities for community engagement
- developing & broadening access to resources lists
- as with the network … we hope to expand to include others as the community’s activities become more well defined
establishing an NGSS-ESS Working Group:

➢ Summit conveners:
  ○ Susan Sullivan, CIRES, NAGT Past President
  ○ Ed Robeck, AGI, Director, Center for Geoscience & Society
  ○ Aida Awad, Maine East High School, NAGT Past President
  ➢ Eric Pyle, James Madison University
  ➢ Anne Egger, Central Washington Univ.
  ➢ Frank Niepold, NOAA
  ➢ Louisa Koch, NOAA
  ➢ Cheryl Manning, NESTA President
  ➢ Michael Wysession, Washington University, NGSS Writing Team
  ➢ Juan-Carlos Aguilar, Council of State Science Supervisors
5 conditions for collective impact & the NGSS-ESS Working Group:

➢ how do our current NGSS-ESS efforts align to the 5 conditions of collective impact?
  ○ while we are not there yet … we are …
  ○ moving forward
  ○ positives … working group … events receive strong community support …
  ○ shift from informal discourse to a bit more formal

➢ still working toward … paradigm shift in a complex system
➢ leverage collective impact framework thinking moving forward
➢ new ways to work together on this “wicked” problem

http://www.collaborationforimpact.com/collective-impact/
GSA upcoming talks, workshops, Town Halls:

➢ Town Hall meeting: “Next Steps for the NGSS in ESS”
  ○ join a community discussion of what has happened in NGSS ESS implementation
  ○ help to shape a slate of activities going forward
  ○ explore new ways to work together
  ○ November 4th from 12:15-1:15p.m. Room 321, Baltimore Convention Center
AGU upcoming talks, workshops, Town Halls:

➢ Town Hall meeting: “Next Steps for the Next Generation Science Standards in Earth and Space Science”
  ○ December 14, 12:30-1:30p.m. Moscone West 2007

  ○ December 15, 10-11:30 a.m. Marriott Marquis Golden Gate A

➢ talks: Implementing K-12 Geoscience with the Next-Generation Science Standards II
  ○ December 16, 4:00-6:00p.m, Moscone South 104
thank you for joining the discussion today!

let’s keep the conversation moving forward:

➢ reach out and engage another stakeholder
➢ join us at the Town Hall meeting on Wednesday
➢ suggest a webinar topic - better yet … offer to organize a webinar
➢ run an implementation or transition workshop

Aida Awad: aawad@maine207.org
Susan Sullivan: susan.sullivan@colorado.edu
Ed Robeck: ecrobeck@agiweb.org