Abstract
The purpose of this work was to develop an 'Attitudes towards science' pre- and post- test that the community can use to identify changes before and after students become involved in GLOBE related activities. The test is appropriate for middle and high school students. We ask for feedback from teachers, country coordinators, US partners or other groups, so as to make the necessary adjustments and finalize the tool.

Methodology
A survey was developed to understand the changes in student's attitudes towards science, before (pre-test) and after (post-test) their participation in GLOBE related activities. The post-test has some additional questions compared to the pre-test, that are GLOBE tailored. The survey will be implemented by several schools and the feedback from teachers will be collected to evaluate and improve the survey.

The students will voluntarily complete the pre-test before participation in the GLOBE related activity. The attitude of are measured using four different scales, as listed in the table below with some example of the survey questions:

<table>
<thead>
<tr>
<th>Question</th>
<th>Likert Scale</th>
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<tbody>
<tr>
<td>I would rather find out why something happens by doing an experiment then being told how it works.</td>
<td>1 (Strongly disagree) to 5 (Strongly agree)</td>
</tr>
<tr>
<td>I like to use data and math to work on real problems.</td>
<td>1 (Strongly disagree) to 5 (Strongly agree)</td>
</tr>
</tbody>
</table>

Dichotomous Scales, with Yes, No and Neutral answer.

- Do you think that science is an interesting subject and you want to study it?
- Do you think that understanding science would be important for you in the future even if you are not a scientist?
- Do you feel that you are good at science?

Categorical answers

- Which subject do you prefer studying at school?
  a. Math
  b. Language
  c. Biology
  d. Chemistry
  e. Art
  f. Music
  g. History
  h. Geography
  i. Physics

Open answer questions

- How do you think society benefits from science?

Results
The next stage of this project is implementing the survey.

It will be interesting to see how the results vary from region to region, and even from one county to another. The survey has not considered any regional diversity issues and has focused on the activity only.

Conclusion
This work is an Evaluation Working Group project that aims to facilitate the investigation of GLOBE's effectiveness in changing the attitude toward science, and encourage more student to consider this field as a future career option. It will also help identify the impact of these activities on individual skills.

References