

Dear Teachers,

As part of our effort to ensure quality STEM learning experiences, **we invite you to participate in two new survey options for our Ocean Acidification (OA) module.** You can complete both or any part of each.

1. **[Retrospective Pre/Post Survey for students](#)** - This is an 8-minute survey that students will complete at the **end** of the module.
 - a. Survey purpose: This will provide insight into how students' ideas about science, technology, engineering, math, and careers may have changed while completing the module. The post-survey helps us understand how the module helps students build on STEM pathways across their lives.
 - b. **[Retrospective Pre/Post Survey](https://www.surveymonkey.com/r/SEEClassroom2019-2020)** - <https://www.surveymonkey.com/r/SEEClassroom2019-2020>

2. ***OA Mini-Survey Series for students and teachers*** - A mini-survey is a short survey (1-3 minutes) that students and teachers will use several times over the course of the module. The questions are identical each time, so the same link can be used each time.
 - a. Survey purpose: The mini-survey helps us better understand student engagement over time, in relation to specific Next Generation Science Standards, for the purposes of program improvement. See below for more information.

STUDENT MINI-SURVEY (link address: <https://www.surveymonkey.com/r/2019-2020SEEMiniSurvey>)

TEACHER MINI-SURVEY (link address: https://www.surveymonkey.com/r/OA_TeacherSurvey)

Please provide **2-4 minutes for students** to complete the mini-survey while in class. It should take most students one minute or so, especially after the first survey or two (because the questions remain the same).

In the survey, the students will be prompted to think of the “last two lessons” when answering questions. In some cases, they will have completed two lessons (such as Lesson 1 - Critical and Systems Evaluation of News Articles and Lesson 2 - Exploring CO₂). In other cases, they will have only completed one lesson which has extended across multiple days (such as with Lesson 3, 4, 5 and 6). Prior to having students complete each survey timepoint, please briefly remind them of the lessons they should have in mind when answering the survey questions. We have included examples of words you can use to remind them at each timepoint in the table below.

Please **complete the teacher version** while students are taking the mini-survey, or at the end of the day. Please take it on the same day the students take theirs.

These surveys are completely voluntary. If completed, it will provide us with valuable feedback. Your name will not be associated with your answers and all responses will be reported in aggregate. Your responses will not affect your standing with ISB or your grades.

(TIMELINE on next page)

MINI-SURVEY TIMELINE		
Survey timepoint 1	At the end of Lesson 2	<i>Example prompt for students:</i> Take this survey while thinking of the lessons we completed on [Monday and Tuesday] that allowed you to: <ul style="list-style-type: none"> ● evaluate and map news articles and ● work in the lab to make and detect carbon dioxide.
Survey timepoint 2	At the end of Lesson 3	<i>Example prompt for students:</i> Take this survey while thinking of the lessons we completed on [Wednesday and Thursday] that allowed you to: <ul style="list-style-type: none"> ● watch a video and PowerPoint on OA and ● evaluate whether OA is something that requires a systems approach
Survey timepoint 3	At the end of Lesson 4	<i>Example prompt for students:</i> Take this survey while thinking of the lessons we completed on [Friday and Monday] that allowed you to: <ul style="list-style-type: none"> ● plan with your interest group to ● develop your experimental question, hypothesis and procedure
Survey timepoint 4	At the end of Lesson 5 Please complete this survey when all of Lesson 5 is complete. This may include 5a, 5b and/or 5c depending on what you chose to complete.	<i>Example prompt for students:</i> Take this survey while thinking of the lessons we completed on [Tuesday through Friday] that allowed you to: <ul style="list-style-type: none"> ● work on your experiment, ● use online data, websites, videos, and ● use models to further explore and understand OA
Survey timepoint 5	At the end of Lesson 6 (which is also the end of the module)	<i>Example prompt for students:</i> Take this survey while thinking of the lessons we completed on [Monday through Tuesday] that allowed you to: <ul style="list-style-type: none"> ● plan and present your work and recommendations at a mock global summit
RETROSPECTIVE PRE/POST SURVEY TIMELINE		
Survey timepoint 6 or as the only survey if not completing the mini-surveys	At the end of the entire module regardless of which lessons you completed.	<i>Example prompt for students:</i> In this survey, you are asked to first think back to before your work on the module started--it may have been several weeks ago--and answer the question the way you would have BEFORE completing these lessons. Then you're asked to give your thoughts now, TODAY.