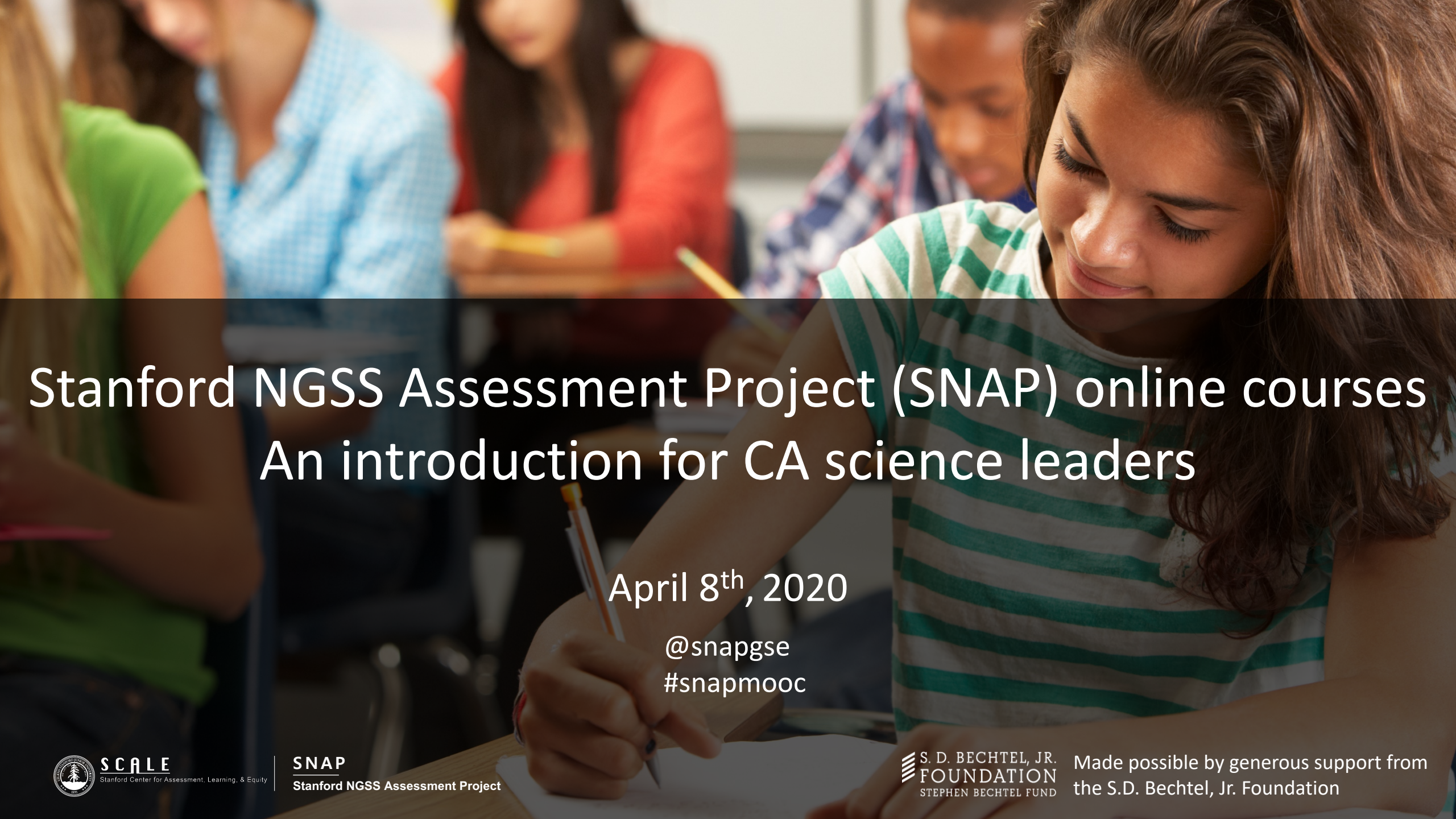


Stanford NGSS Assessment Project (SNAP) online courses
An introduction for CA science leaders

April 8th, 2020

@snapgse
#snapmooc

SCALE
Stanford Center for Assessment, Learning, & Equity

SNAP
Stanford NGSS Assessment Project

S. D. BECHTEL, JR. FOUNDATION
STEPHEN BECHTEL FUND

Made possible by generous support from the S.D. Bechtel, Jr. Foundation

Introduce

Stanford NGSS Assessment Project (SNAP)
&
SNAP Courses

Consider

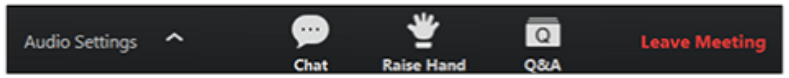
How can courses can be used to support NGSS implementation efforts?

Discuss

What questions do you have about using the courses in your context?

Logistics

Questions you would like to ask using audio: Raise your hand



Comments: Enter comments for everyone or specific recipients into the chat box

Questions you would like us to answer: Use the Q&A box

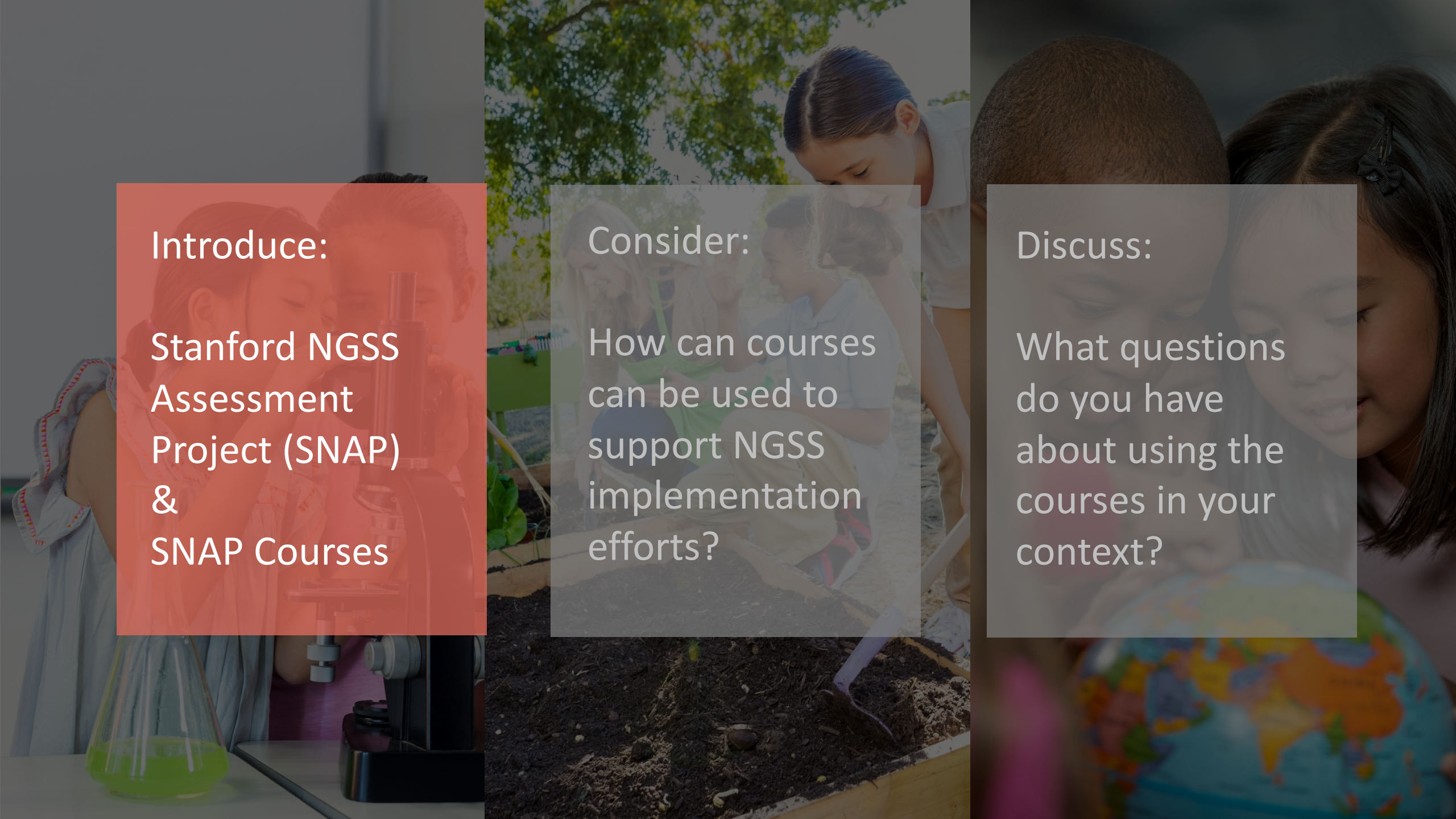
Poll:

Have you, or colleagues, used any:

1. SNAP assessments?

2. SNAP courses?

3. Would you be willing to share how you used them and your experience?



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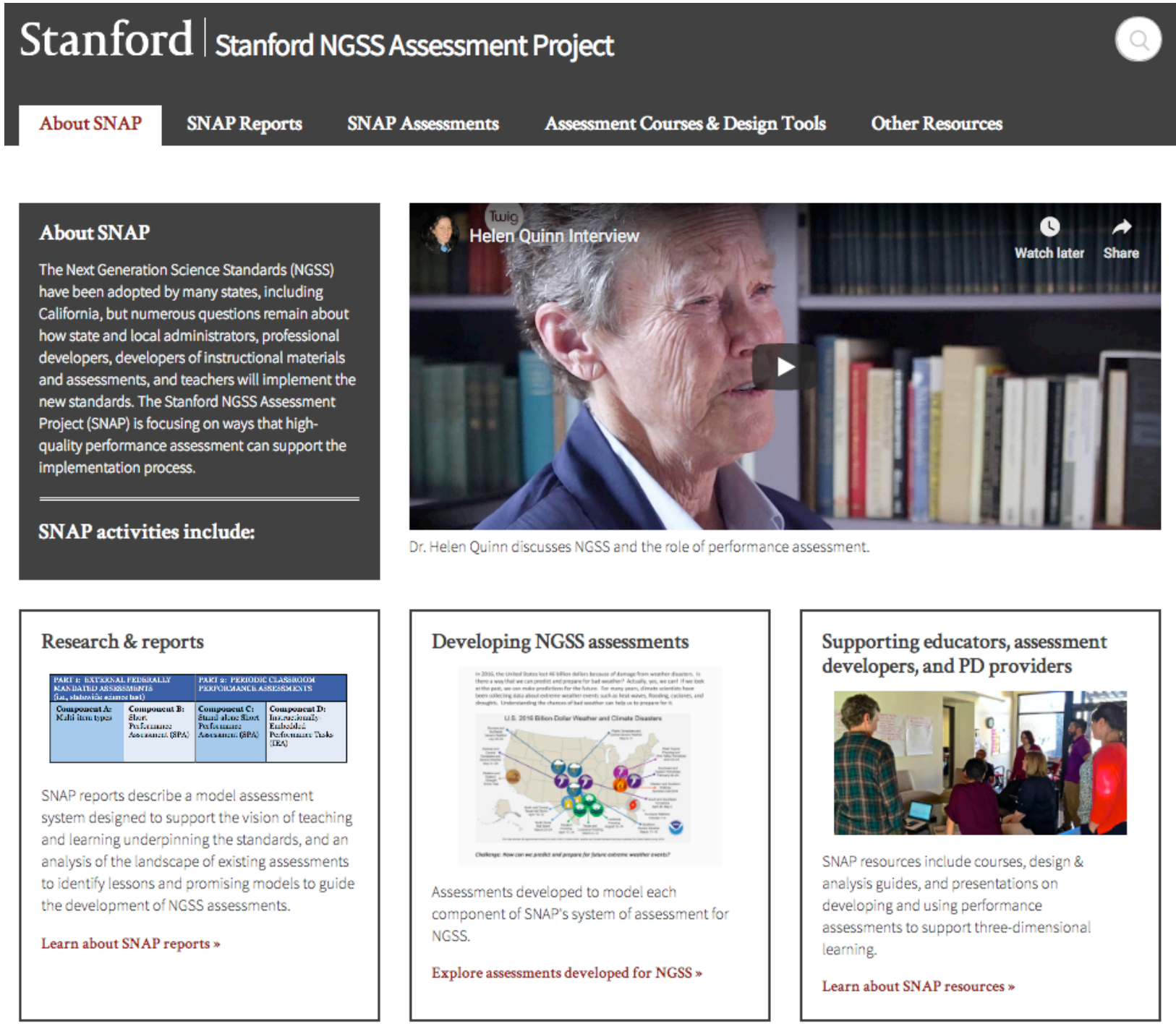
Stanford NGSS Assessment Project

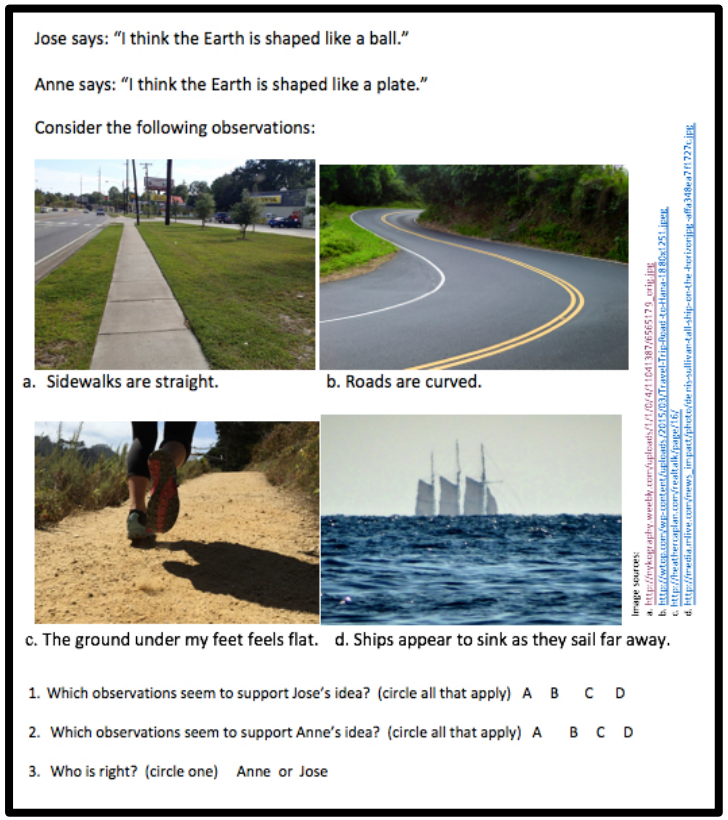
How can high-quality systems of assessment support implementation of the NGSS in California?

snapgse.stanford.edu

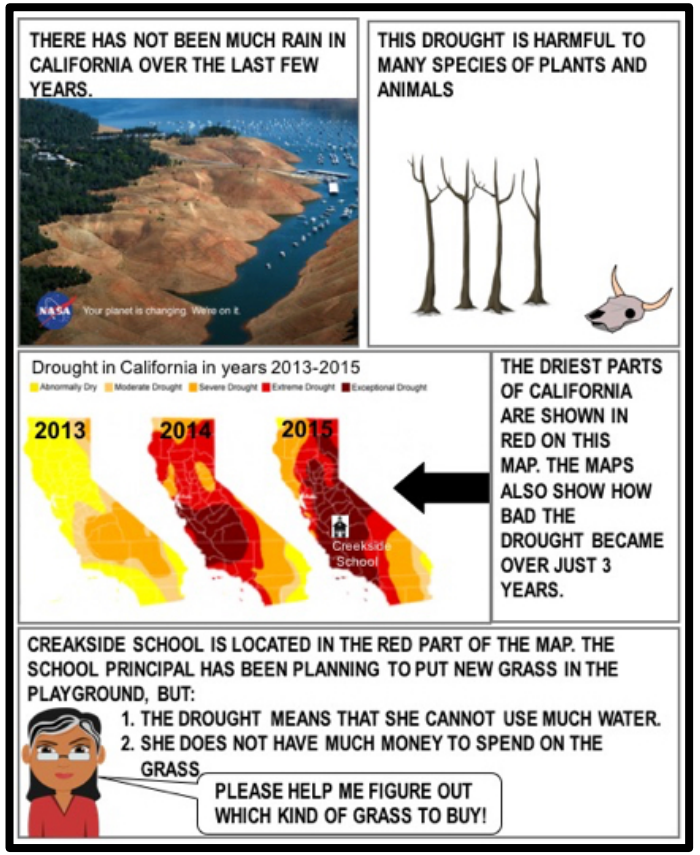


II. Exemplar Assessments for NGSS

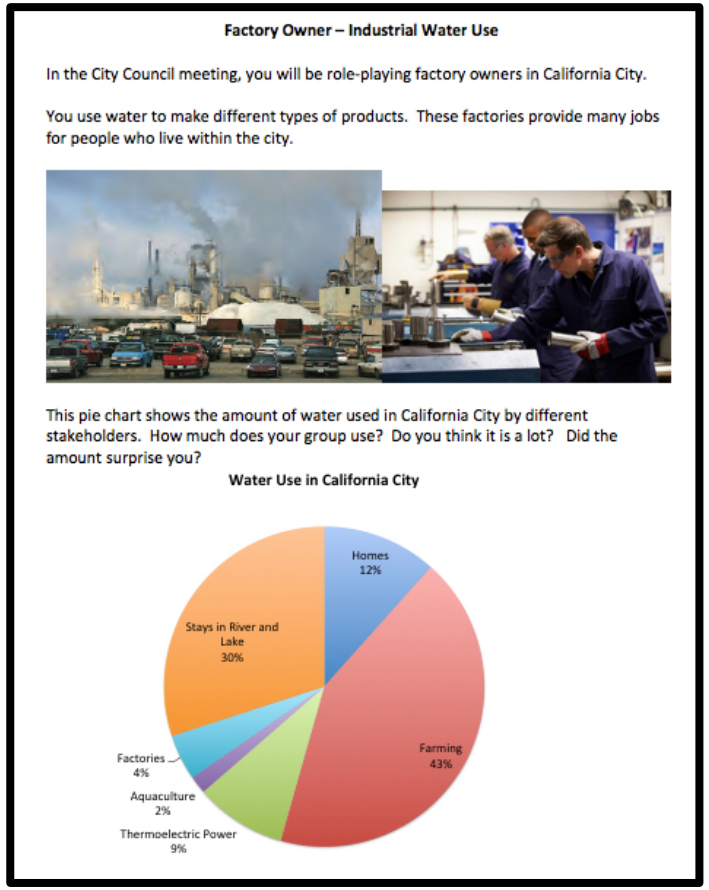
Multiple-choice items



Short performance assessments



Instructionally-embedded assessments



"During this assessment, I felt important and I really felt like I was actually planning to keep this country more safe. I really enjoyed this, because it was not boring test, but I found it fun and entertaining. Thank you!"

-7th grade student

About SNAP | SNAP Reports | SNAP Assessments | Assessment Courses & Resources

NGSS Assessment Design and Analysis Resources

SNAP's resources for supporting performance assessment design and use

SNAP has developed sets of tools to support educators in designing and using performance assessments for NGSS. **Free online courses** provide instruction on how to use these resources to support professional learning communities around NGSS assessment.

Resources for analyzing performance assessments to inform instructional decisions

Open-ended performance assessments that engage students in sense-making around a phenomenon hold tremendous promise for supporting students' progress with multidimensional reasoning. But for these assessments to support NGSS classrooms, educators must understand how to find evidence of each dimension in students' responses and how to use this evidence to inform instructional decisions. The tools you will find below are designed to guide groups of educators in practicing doing collaborative analysis of a performance assessment. Examples embedded in the tools are based on SNAP's Natural Hazards Short Performance Assessment, which can be downloaded below.

Download all 5 tools »

Tool 1: Analysis of an NGSS Performance Assessment »

Resource for Tool 1: Finding the NGSS and Framework Resources Online »

Tool 2: Analysis of Student Data »

Tool 3: Using a Rubric to Evaluate Student Data »

Tool 4: Using Assessment Data to Provide Feedback to Students »

Tool 5: Using Assessment Data to Make Instructional Decisions »

Ancillary Materials: Natural Hazards PE »

Ancillary Materials: Natural Hazards Short Performance Assessment »

Resources for developing performance assessments

In SNAP's vision of high-quality assessment for NGSS, classroom assessment blends almost seamlessly with instruction. Students are presented with a challenging task or problem, and through discourse, group work, opportunities for peer feedback, and scaffolded learning experiences, they build their expertise so that they are prepared to do their best possible work on a summative product. Our design tools use SNAP's design principles as a foundation to guide developers in building instructionally-embedded performance assessments (IEAs) that elicit actionable information about students' progress with the dimensions being assessed.

Tool 1. SNAP IEA Design Criteria »

IEA Planning Guide »

SAMPLE Planning Guide (for Biosphere IEA) »

Template - Teacher's Guide for an Instructionally-Embedded Assessment »

Template - Student Version for an Instructionally-Embedded Assessment »

Resource for evaluating performance assessments

Peer feedback is essential to the design of any high-quality assessment. This feedback form is designed to guide peer and/or expert feedback. It is based on **SNAP's Performance Assessment Design Criteria**. The use of the criteria varies based on whether a short performance assessment (SPA) or extended assessment (IEA), and instructions for the different uses are embedded in the form.

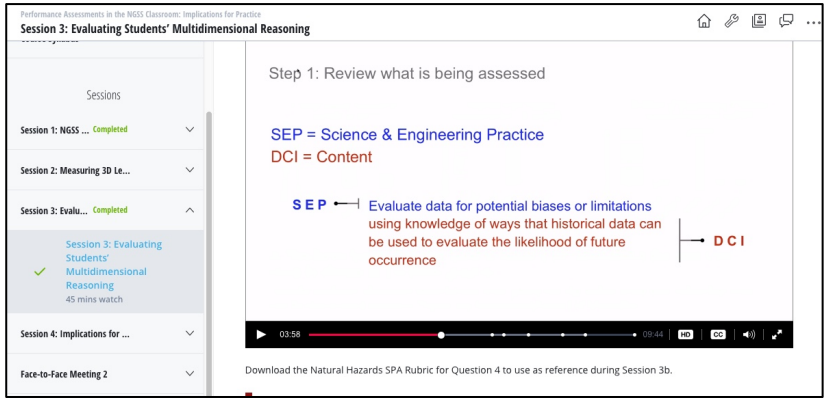
SNAP Performance Assessment Review Form »

Capacity-building: hybrid online MOOCs

- Engage in collaborative analysis of student work and planning feedback
- Focus learning around the activities teachers will use in the classroom
- Guide horizontal and vertical alignment in schools
- Cultivate a robust community of collaborators

(Wei et al., 2010; Kazemi & Franke, 2004)

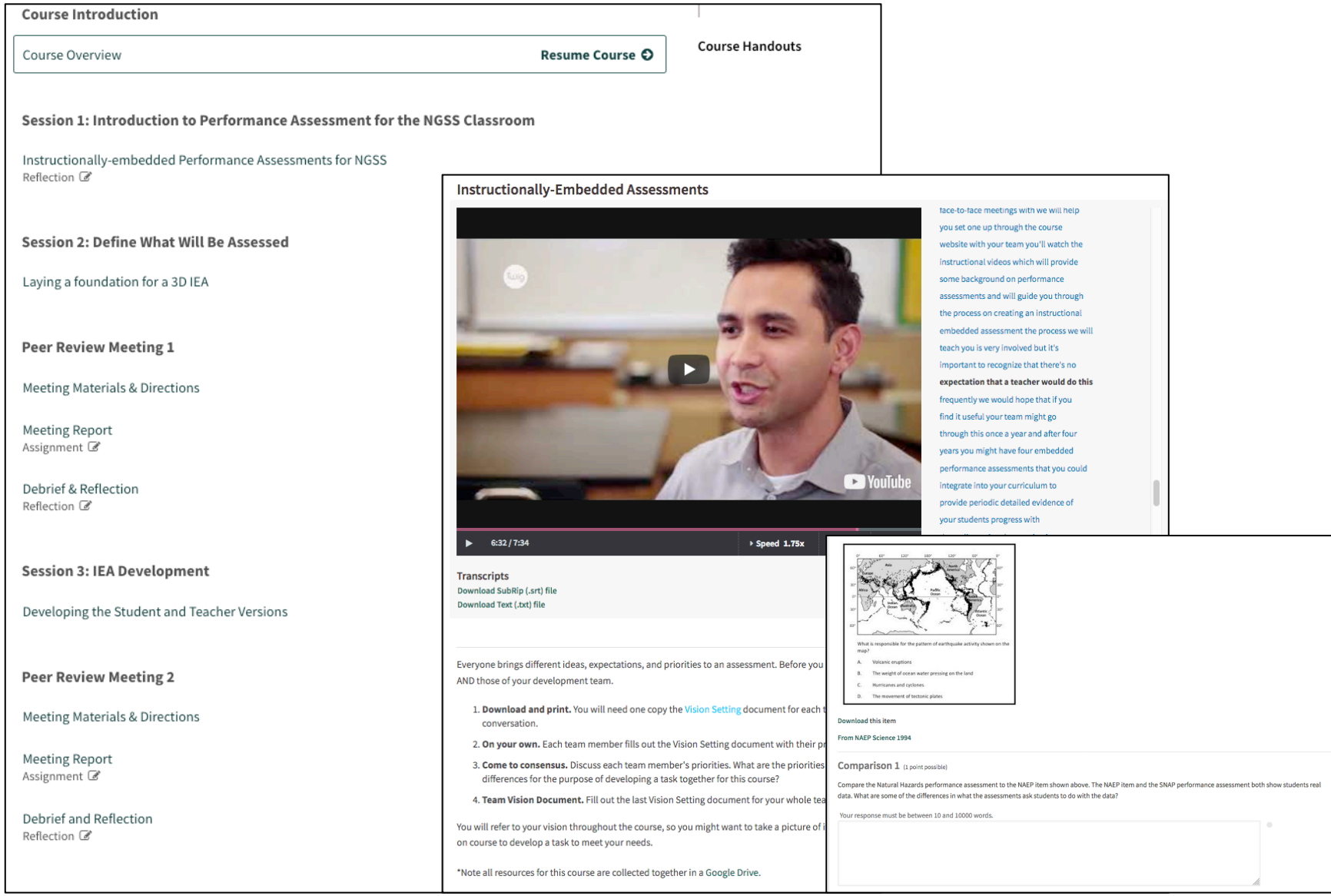
online



Face-to-Face

Features of Hybrid online/Face-to-Face Courses on edX

- Flexible Structure
- Self-paced
- Adaptable
- Free
- Certificate of completion



Course 1: Performance Assessment in the NGSS Classroom: Implications for Practice

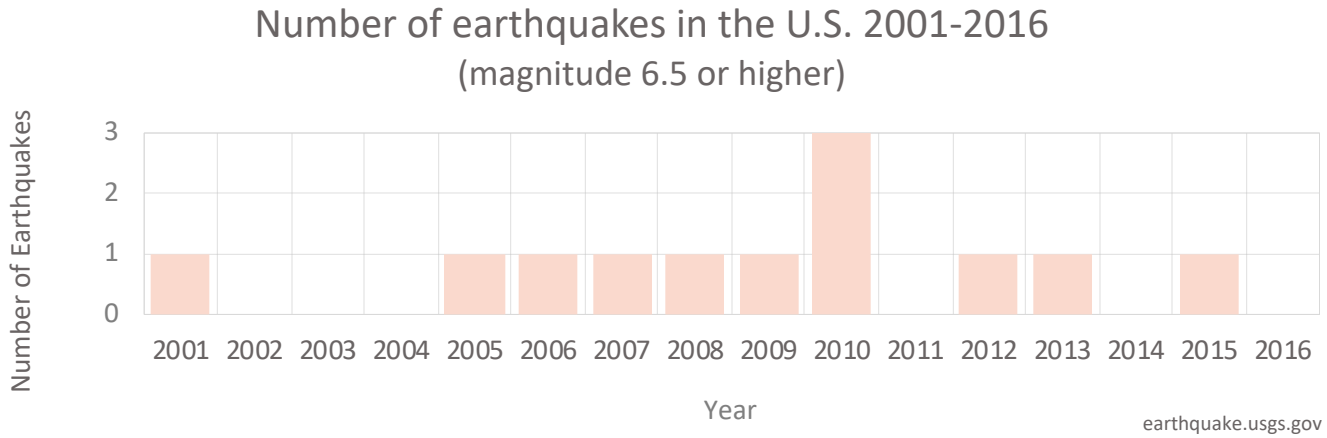
Course goals:

01 Evaluate alignment of a performance assessment to an NGSS performance expectation

02 Analysis of student work for evidence of 3 dimensions

03 Use analysis to plan instructional moves

One of the city leaders has claimed that the graphs showed that it was not necessary to plan for earthquakes



The graph above shows additional data on earthquakes in the U.S. Use the data and what you know about earthquakes to explain why you agree or disagree with this claim.

Course 1 Structure

Team Kickoff Meeting

Session 1 & 2: online

Face-to-Face Meeting

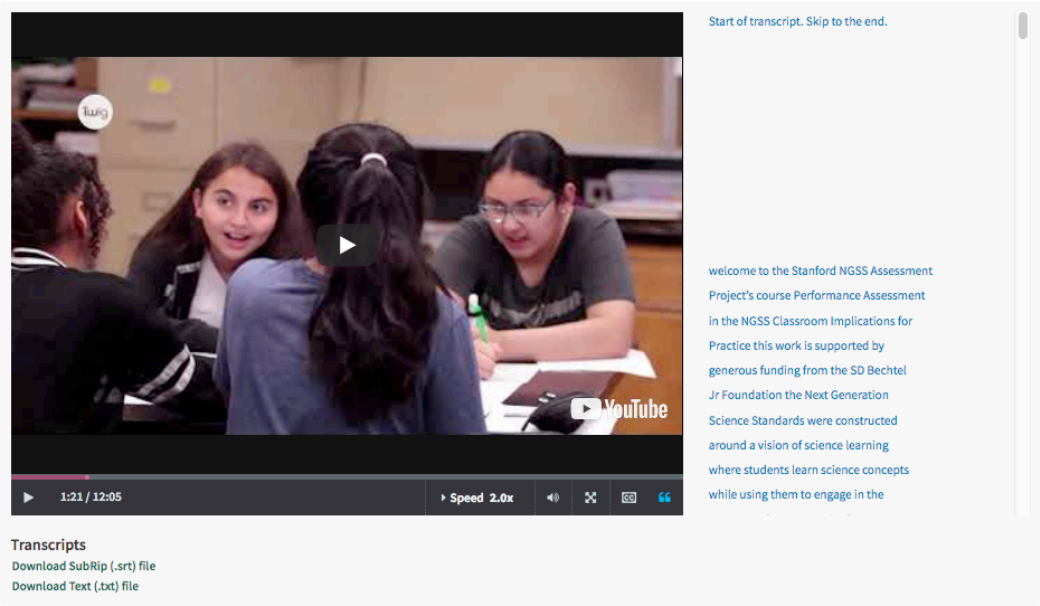
Session 3: online

Face-to-Face Meeting

Session 4: online

Face-to-Face Meeting

~ 12-15 hrs



Tools for Facilitators

Planners/organizers

Online vs in-person		Tasks	Notes	Approximate Time	Team Schedule: team needs to agree on a schedule for sessions in red prior to beginning the course.
Online	Orientation	Watch Video Build Team Create a Whole Team Schedule	Teams may include subteams e.g. a whole team is from a district and individual teams are formed for HS, MS, ES participants. We recommend that the whole team meets for the F2F meetings so you can do assignments separately but engage in broader discussions all together.	20 mins	
Online	Session 1	Session 1 Part I: videos and embedded tasks Complete Natural Hazards Short Performance Assessment as a student Session 1 Part II: videos and embedded tasks		1 hour	
Online	Session 2	Session 2 Part I: videos and embedded tasks Session 2 Part II: videos and embedded tasks		1-1.5 hrs	
Online	Preparation for Face-to-Face meeting 1	F2F Meeting 1 pre-video, print or download Materials for Meeting 1 (Optional: try assignment)	Individual teams should select a task to work with for the assignments **prior** to the F2F meeting so everyone can prepare and review their materials.	20 mins	
In person (with colleagues)	Face-to-Face Meeting 1	Assignment Reflection	Completed assignments do not have to be submitted to the course, but reflections are required.	2.5 hours	
Online	Session 3	Session 3 Part I: videos and embedded tasks Session 3 Part II: videos and embedded tasks		1.5 hours	
In person (with colleagues)	Preparation for Face-to-Face meeting 2	F2F Meeting 2 pre-video, print or download Materials for Meeting 2 (Optional: try assignment)	Teams will work with the same task they worked with during the previous F2F meeting.	20 mins	
In person (with colleagues)	Face-to-Face Meeting 2	Assignment Reflection		1.5 hours	
Online	Session 4	Session 4 Part I: videos and embedded tasks Session 4 Part II: videos and embedded tasks		1 hour	
In person (with colleagues)	Face-to-Face Meeting 3	Assignment Reflection		1.5 hours	

Materials for Assignments

Examining the three dimensions of a PE to determine what we need to know about our students

Performance Expectation Unpacking Table for IEAs

PE(s):

Clarification Statement:

Science & Engineering Practice (SEP)	Disciplinary Core Idea (DCI)	Crosscutting Concept (CCC)
What are the main goals for this practice?	**What are the main ideas for the DCI?**	**What are the components of the CCC?**
Additional Information from Appendix F:	**Additional Information from Appendix E AND the Framework.**	**Additional Information for Appendix G:**

Optional: some people find the Evidence Statements provide a useful check to see if you missed any important components of each dimension, particularly the DCI. Check the evidence statement for this PE against your descriptions of expectations and revise your unpacking as necessary.

Challenges to address: Are there any challenges that you expect students to face when they learn this PE (e.g. common misconceptions) that you would want to see addressed to make sure you are getting information about?

Facilitation Guides

SNAP Facilitator Guide for Face-to-Face Meeting 1

Goals for Face-to-Face Meeting 1

- Get feedback on Alignment Tables
- Revise Alignment Tables

Time	Topic	Resources	Activities, Assignment Directions and Facilitator Notes
5-10 min	Organize teams for meeting	NA	1. Organize the meeting space for pairs of teams to sit together. 2. Guide the introduction of the team members if they don't already know each other. 3. For each pair of teams, designate 1 team Team A and the other Team B
10 min	Discussion	NA	As a whole group, discuss: • How is the development process going so far? • Is there anything that your team is struggling with that you want to bring to the whole group? Facilitator: if there are any problems or questions that are still unresolved by the end of the meeting, post them to the course discussion board.
25 min	Presentation of Alignment Tables	**1 copy per team or google doc** • Completed Alignment Tables • Blank Peer Review Form • Peer Feedback Protocol	1. Facilitator: ask teams to skim the Peer Feedback Protocol and Peer Review forms, discuss procedure 2. Follow Steps 1-3 on the Feedback Protocol
45 min	Analyze Alignment Table	• Completed Alignment Tables • Blank Peer Review Form • Peer Feedback Protocol	1. Teams A and B separate and move to different rooms if possible 2. Follow Step 4 on the Peer Review Protocol
20 min	Present Feedback	• Completed Alignment Tables • Completed Peer Review Forms A&B • Peer Feedback Protocol	1. Teams A and B get together again 2. Follow Steps 5-6 on the Peer Review Protocol

Course 2: Developing Performance Assessments for the NGSS Classroom

Course goals:

01 Develop a 3D IEA using SNAP's principled-design process

02 Evaluate 3D performance assessments

03 Develop community of practice

Course 2 Structure

Development Team

Peer Review

Sessions 1&2 with Development Team

Peer Review Meeting

Session 3: with Development Team

Peer Review Meeting

~ 20-30 hrs

Participant Feedback: value for NGSS instruction

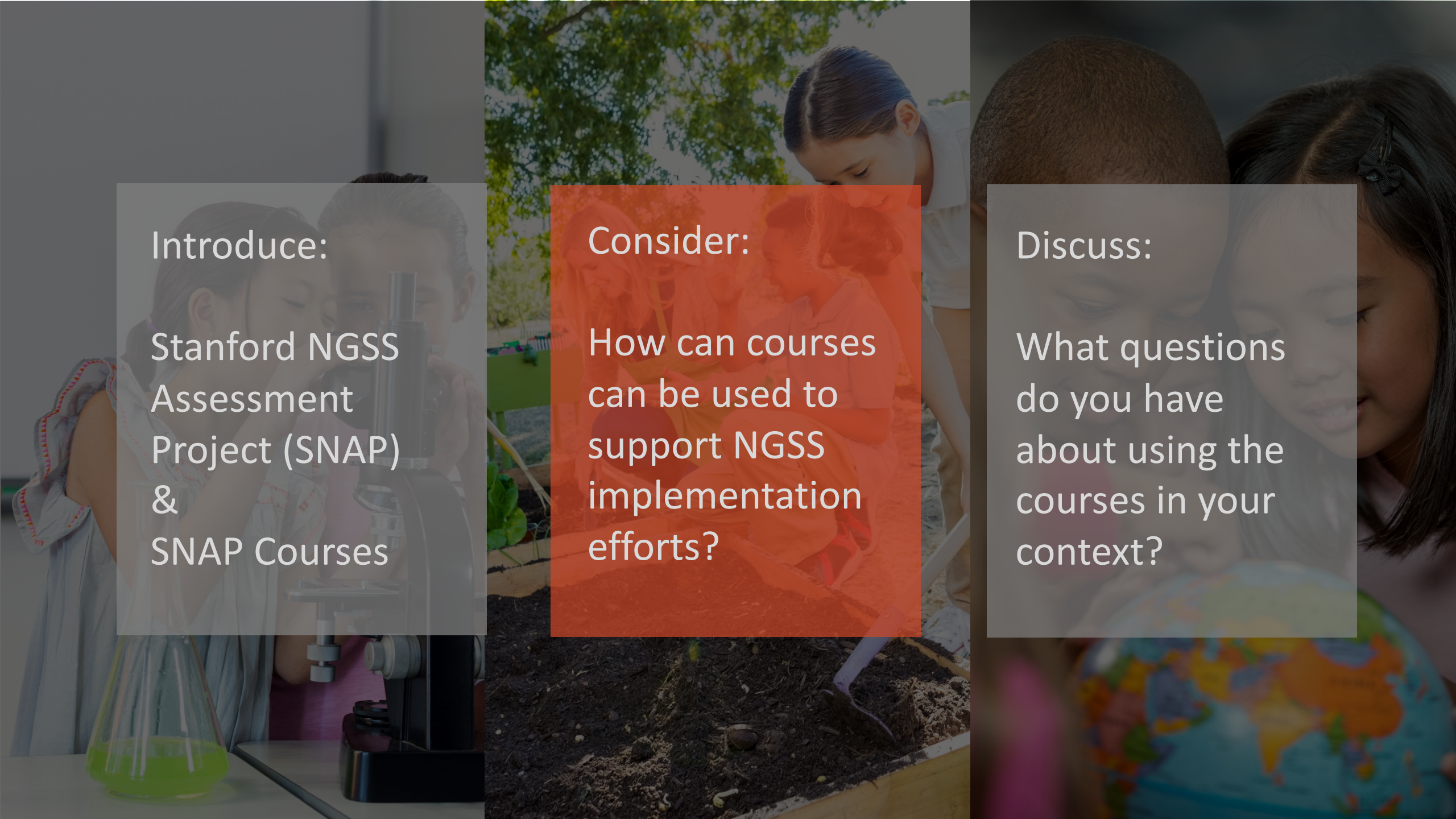
"One of the many things I reflected on over the course of this class is how this can change the way I deliver instruction…I now have a better understanding of how to deliver instruction that will support the expectations of an NGSS assessment."

"Our group came to the consensus that this process was a piece of the puzzle that we have been missing…This process will help us select/develop assessments that thoroughly assess the standard..."

Participant Feedback: value for administrators

"It allowed for a more cost effective and self-running way of doing PD where I as the department chair, had to take leadership and engage much more deeply than usual."

Questions?



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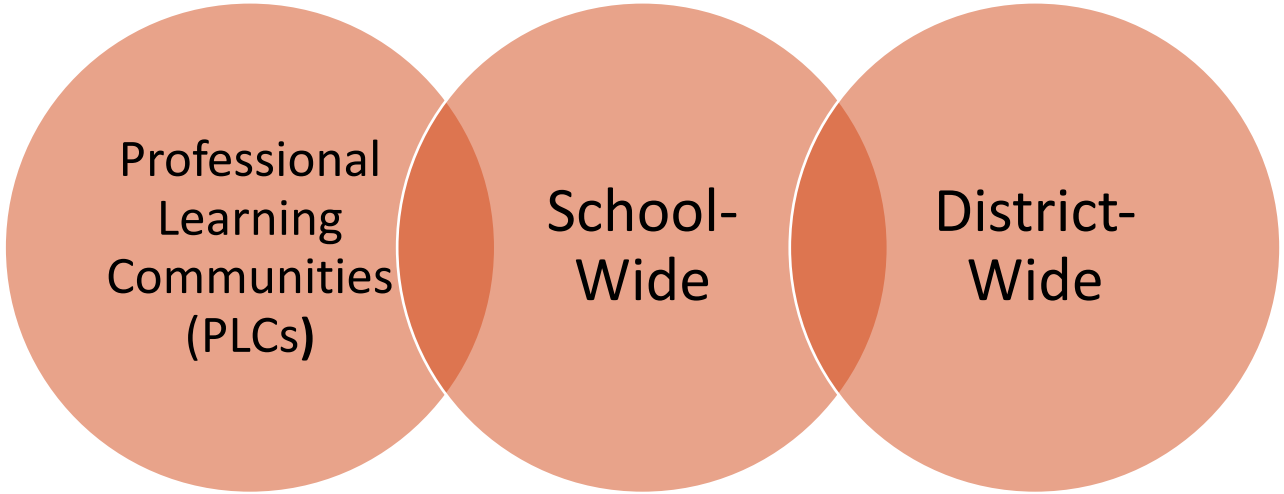
What questions do you have about using the courses in your context?

Three Lenses to Consider When Using Courses to Support the Implementation NGSS



Strategies to Use in Professional Learning Communities

- Designate part of PLC meeting time to focus on addressing the instructional and assessment shifts of NGSS

- Plan ways to use practices, resources and tools from courses as part of assessment and instruction work in PLCs (e.g., review a common science assessment using unpacking process)

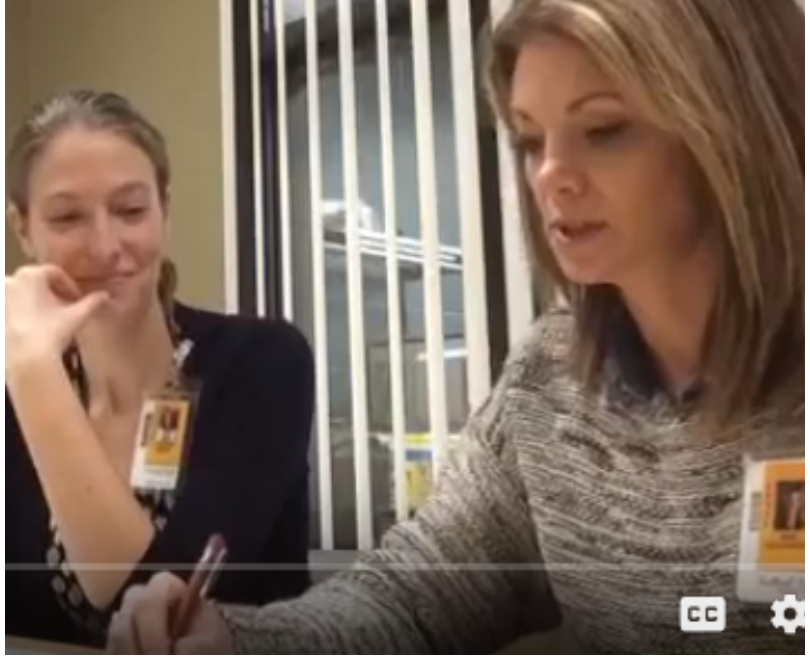
- Reflect on the information science assessments used currently provide and what is still needed in relation 3 dimensions of NGSS

Strategies to Use School-Wide

- Support teachers to meet over the summer to focus on this work
- Provide tools to streamline the processes for adapting and developing NGSS assessments
- Develop plans to support teacher collaboration and sharing of resources across the year

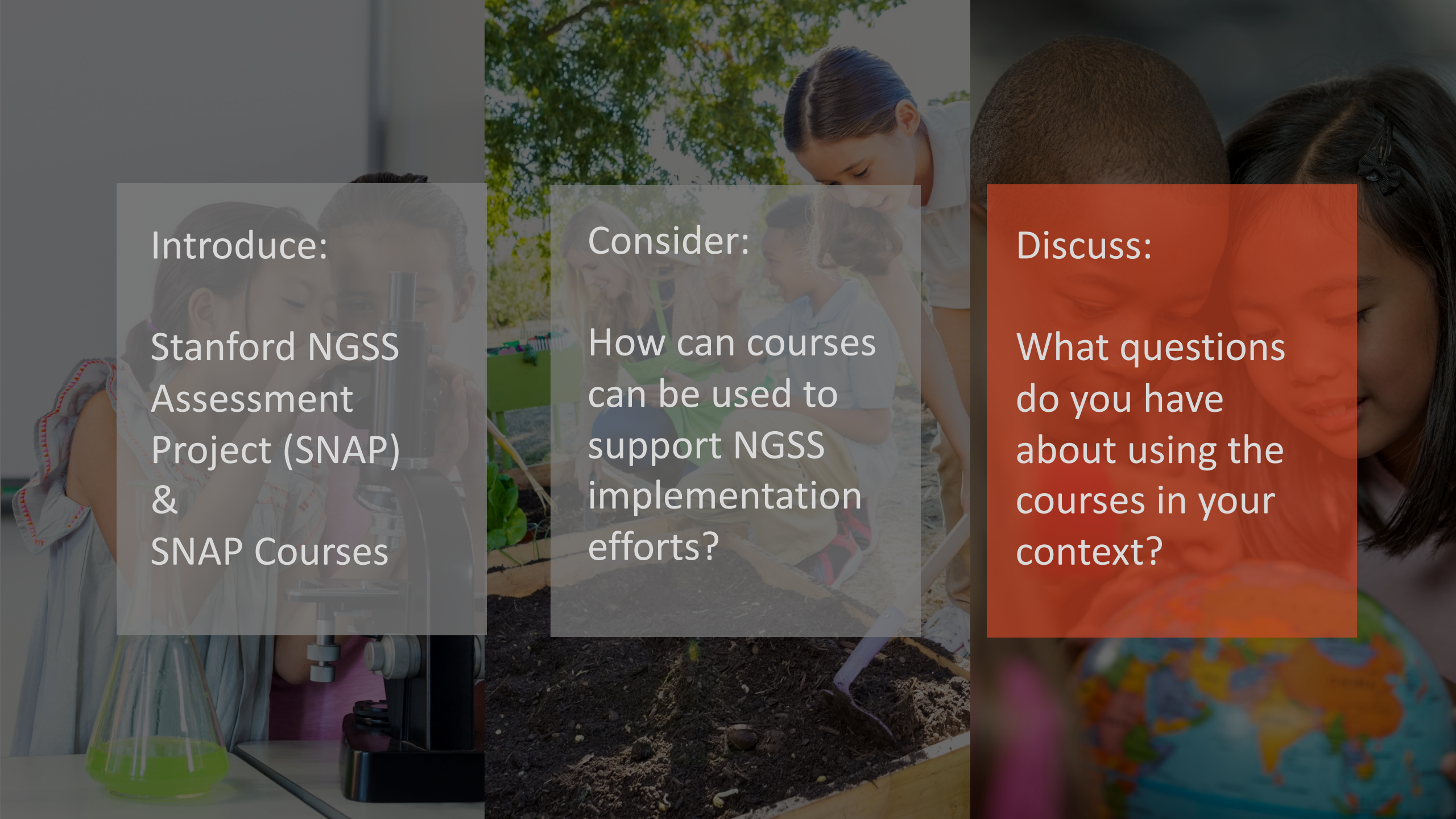
Strategies to Use District-Wide

- Create forums and structures to support NGSS work across school sites
- Organize different teams for multiple purposes that serve district goals
- Provide leadership support for district developed teams
- Reflect upon uses of data provided by new assessments developed across district



Course Use Cases:

1. Professional Learning Communities
2. Instructional coaches
3. District and regional PD providers



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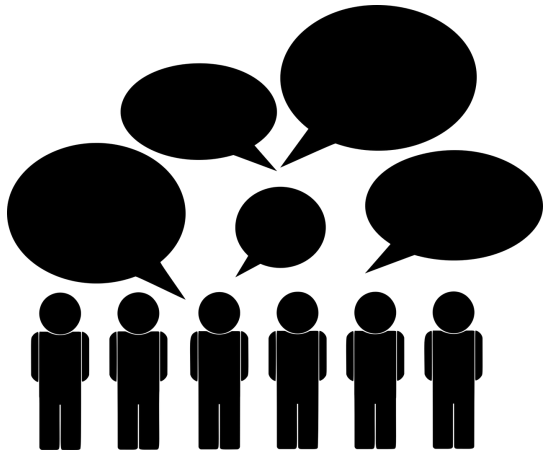

Experiences &
Recommendations to share

Questions?

Convene a group of educators to begin Course 1

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Contact us with any questions

jwerthei@stanford.edu