NGSS Tool 2
Using Performance Expectations to Plan for Classroom Assessments
Focus: MS-LS2 Ecosystems: Interactions, Energy, and Dynamics*

Introduction

Tool 1 used information from an NGSS page to develop a Unit Blueprint. The purpose of Tool 2 is to help teachers begin to plan for classroom assessment and evidence of learning based on performance expectations and aligned with SEPs, DCIs, CCCs, and Connections.

High quality assessment practices are critical to the success of the NGSS. To learn the process for Tool 2, teachers revisit Instructional Sequence 1 from the Tool 1 Unit Blueprint Template Example. Using a backwards design approach (where teachers think about the assessment before the instruction) teachers use bundled performance expectations from the NGSS and develop Evidence of Learning Specifications, which describe what qualifies as evidence for students' proficiency. The Evidence of Learning Specifications represent learning at the nexus of the three NGSS dimensions. Teachers develop a three-dimensional phenomenon focused instructional sequence based on the 5E Instructional Model in Tools 3 and 4 and then revisit their Evidence of Learning Specifications in Tool 5 to design an assessment task. While this is not true "backwards design," teachers are thinking about what qualifies as evidence at the end of instruction before formalizing the instruction.

Goals and Outcomes:

- Understand the role of NGSS performance expectations in classroom assessment
- Consider how SEPs, DCIs, and CCCs impact assessment and instruction
- Develop specifications to frame the summative assessment for an instructional sequence for middle school students focused on ecosystems

***Text in red font found throughout this document is content specific and needs to be modified based on the standards page and NGSS card deck selected to use in the process.**

Prerequisite: Participants should have experience using Tool 1.

Total Time **290 minutes not including breaks (4 hours and 50 minutes or a partial-day workshop)**

Part 1 Introduction (Slides 1-10) [30 minutes]

Purpose: Set the stage for developing Evidence of Learning Specifications (EoLS) for the performance expectations bundled in one instructional sequence.

Summary: After reviewing the goals and agenda, participants chart the characteristics of high quality assessment. Next, they code their characteristics according to the three facets of high quality assessments. Finally, the participants consider the relationship between formative and summative assessment and are introduced to three design features of classroom assessment: PEs, EoLS, and assessment tasks.

Part 2 Understanding Tool 2 (Slides 11-29) [140 minutes]

Purpose: Participants learn a process for developing Evidence of Learning Specifications (EoLS) to provide a foundation for the development of an assessment task in Tool 5.

a. Introduction to Tool 2 (Slides 11-13) [30 minutes]

b. Developing Evidence of Learning Specifications (Slides 14-29) [110 minutes]

Summary: In Part 2a, participants learn how to construct and revise EoLS by using a fictitious example related to planning a dinner party. In Part 2b, participants practice the process of developing EoLS through a Think-aloud and revising sample EoLS.

Part 3 Working on Your Evidence of Learning Specifications (Slide 30) [90 minutes]

Purpose: Participants practice writing EoLS for the PEs of Instructional Sequence 2 from the Tool 1 Unit Blueprint Template Example.

Summary: Participants develop the Evidence of Learning Specifications for the second Instructional Sequence of the Tool 1 Unit Blueprint Template Example and observe another group's work. The amount of time should allow for the development of at least one set of specifications and the beginnings of another set of specifications.

Part 4 Review and Complete Tool 2 (Slides 31-33) [30 minutes]

Purpose: Participants reflect on their experience.

Summary: Participants do a Gallery Walk and provide feedback to other groups. They consider potential revisions to their work based on the feedback of other groups. Participants enter their EoLS into Tool 2 template and reflect on their learning.

Total Time = 290 minutes (4 hours 50 minutes) not including breaks

Materials:

- Tool 2 Electronic Template for capturing the Evidence of Learning Specifications
- 3X3 orange, blue, green, and purple sticky notes (1/2 pad of each color/group)
- Chart paper
- Markers (must include blue, orange, green and red)
- Tape
- PEs from card deck used in Tool 1

Handouts

HO 1	Classroom Assessment Design
HO 2	Tool 1 Template Example – Unit Blueprint for MS-LS2
HO 3	General Features of the Practices
HO 4	Initial Specifications
HO 5	Tool 2 Template Example – EoLS for Instructional Sequence 1

HO 6 Guide to Developing Evidence of Learning Specifications

Resources

R 1 *A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas* (2012) by National Research Council

R 2 *Next Generation Science Standards For States, By States Volume 1: The Standards* (2013) by NGSS Lead States

R 3 *Next Generation Science Standards For States, By States Volume 2: The Appendices* (2013) by NGSS Lead States

Charts/Posters

Create two demonstration charts. The **first demonstration chart** is for EoLS for MS-LS2-2 using Slide 15 (photo of sample chart can be found in the Appendix at the end of this facilitation guide).

You will need to gather and make the following:

- PE card from Tool 1 card deck for MS-LS2-2 and MS-ESS3-4
- Sticky notes for MS-LS2-2: (Write each example in the appropriately colored sticky note.)
  - Orange (predator-prey, competition, symbiosis, organism interactions in different ecosystems, relationships among living and non-living components, interdependence)
  - Green (patterns can be used to ID cause & effect, cause & effect can be used to predict phenomena)
  - Blue (construct an explanation that predicts phenomena, qualitative relationships, quantitative relationships, analyze and interpret data, develop and use a model to describe phenomena, construct an argument)

Slides

Slide 1 Five Tools & Processes for NGSS
Slide 2 Five Tools and Processes Graphic
Slide 3 Goals
Slide 4 High Quality Classroom Assessment
Slide 5 Three Facets of High Quality Assessment
Slide 6 Code Your Brainstormed List
Slide 7 Connection to Five Tools
Slide 8 Types of Assessment
Slide 9 What Are Evidence of Learning Statements? (optional)
Slide 10 Classroom Assessment Design
Slide 11 Tool 2: Planning for Assessment
Slide 12 Dinner Party "Performance Expectation"
Slide 13 Dinner Party Example
Slide 14 Developing Evidence of Learning Specifications
Slide 15 EoLS Foreground/Background Chart

Slide 16	Tool 1 Template Example
Slide 17	Developing EoLS (optional)
Slide 18	Bundled PEs
Slide 19	Getting Familiar with one PE
Slide 20	Developing EoLS
Slide 21	Developing EoLS
Slide 22	Evidence of Learning Specifications (initial example)
Slide 23	Evidence of Learning Specifications (revised example)
Slide 24	Evidence of Learning Specifications (final example)
Slide 25	Getting Familiar with the other PE
Slide 26	Evidence of Learning Specifications (initial example) (optional)
Slide 27	Evidence of Learning Specifications (revised example) (optional)
Slide 28	Evidence of Learning Specifications (final example) (optional)
Slide 29	Developing Evidence of Learning Specifications
Slide 30	Apply Process
Slide 31	Gallery Walk
Slide 32	Enter Your Specs on Tool 2
Slide 33	Reflection

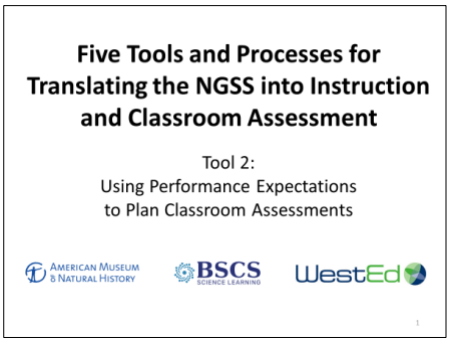
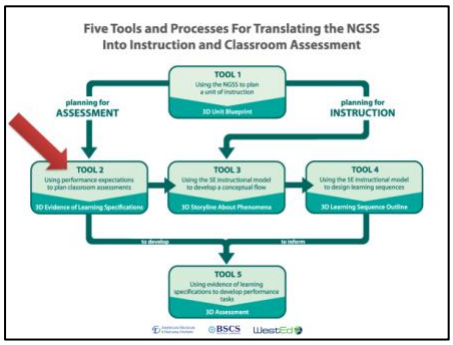
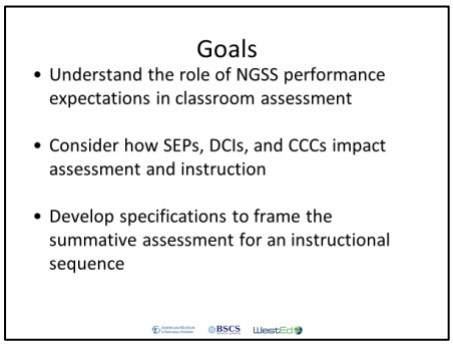
PD Leader Resources (*NOT used by participants*)

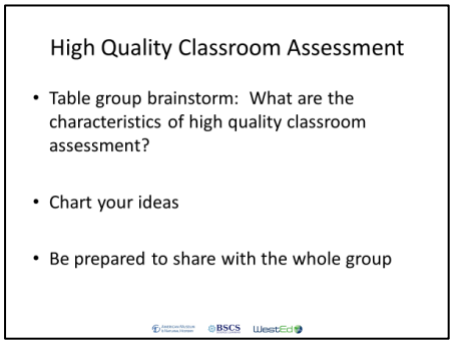
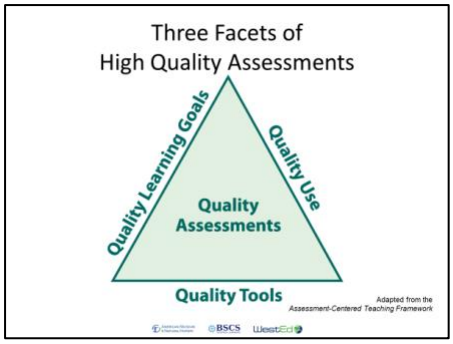
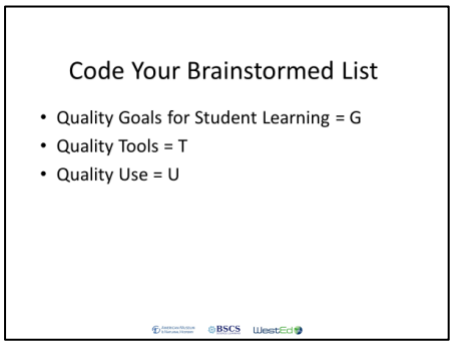
- *Assessment-Centered Teaching: A Reflective Practice* (2008), DiRanna, K., Osmundson, E., Topps, J., Barakos, L. Gearhart, M., Cerwin, K. Thousand Oaks, CA: Corwin
- *Developing Assessments for the Next Generation Science Standards* (2013) by James W. Pellegrino, Mark R. Wilson, Judith A. Koenig, and Alexandra S. Beatty, Editors; Committee on Developing Assessments of Science Proficiency in K-12; Board on Testing and Assessment; Board on Science Education; Division on Behavioral and Social Sciences and Education; National Research Council

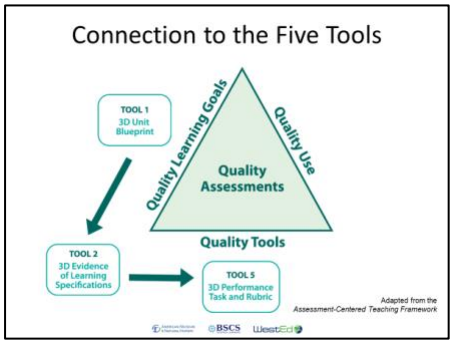
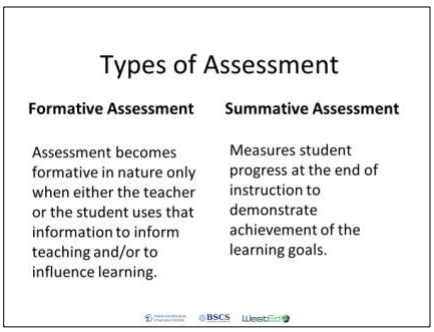
Advance Preparation:

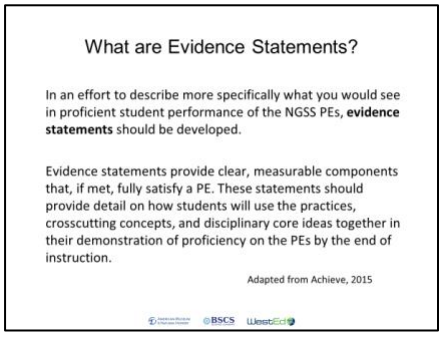
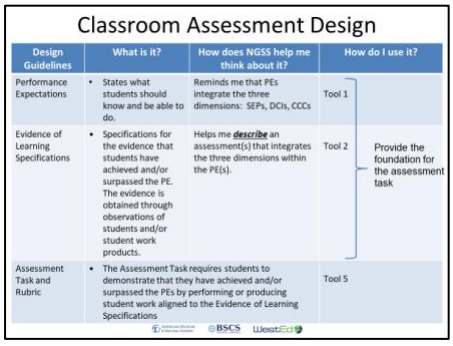
- Communicate with participants prior to the session that they should bring both **HO3: Tool 1 Example Unit Blueprint** from their previous PD session *and* their own Tool 1 Unit Blueprint (either electronic or printed). Suggest that participants bring a computer to record their product from the Tool 2 session in an electronic template.
- Print Handouts
- Create a blank "Development of the Evidence of Learning Specification Chart" using Slide 15 and prepare the colored sticky-notes listed above. An image of an example chart is shown in the Appendix at the end of this Facilitator Guide.
- Transfer electronic Tool 2 Template to participants

Part 1 Introduction (30 minutes)

Slide and Time	Facilitation Notes
 Slide 1 (0 minutes)	**Display Slide 1 Five Tools & Processes for NGSS** a. Welcome participants to the session.
 Slide 2 (2 minutes)	**Display Slide 2 Five Tools and Processes Graphic** a. Orient the participants to the purpose of Tool 2 and its role in relationship to the rest of the tools. Possible narrative: *The purpose of Tool 2 is to provide a process to develop Evidence of Learning Specifications for the selected performance expectations to prepare for classroom assessments and performance tasks. The role of Tool 2 in relationship to the rest of the tools is shown in the graphic.* b. Let participants know that the products of Tool 2 influence both Tools 3 and 4 (instructional design), and Tool 5 (designing classroom assessment tasks).
 Slide 3 (2 minutes)	**Display Slide 3 Goals** a. Emphasize that the focus of this session is to use the NGSS to plan for classroom assessment based on an instructional sequence from Tool 1. The actual assessment will be developed later in Tool 5. b. Note that, in planning for classroom assessment, they will consider how the nexus of the SEPs, DCIs, and CCCs impact both instruction and assessment. c. Share that in this session, they will plan for assessment using a backward design and that they will revise and refine their ideas as they design instruction in Tool 4 and the assessment tasks in Tool 5.

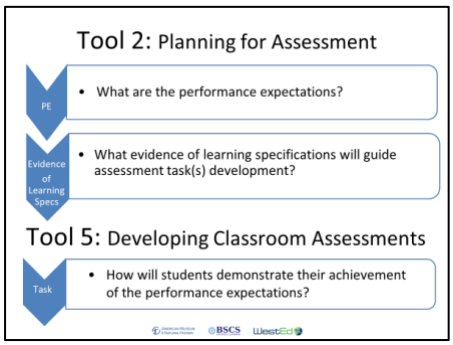
Slide and Time	Facilitation Notes
 Slide 4 (6 minutes)	**Display Slide 4 High Quality Assessment** a. Distribute chart paper and markers. Ask participants to think individually in response to the prompt: What are the characteristics of high quality classroom assessment? b. Ask participants to share with an elbow partner. c. Have table groups chart their responses. d. Invite groups to share their ideas with the whole group.
 Slide 5 (1 minute)	**Display Slide 5 Three Facets of High Quality Assessment** a. Briefly explain this diagram is adapted from an assessment framework developed from an NSF funded research project that involved UCLA, Stanford, Berkeley, Lawrence Hall of Science and WestEd. b. Mark that the framework consists of three facets of high quality assessments represented by the three sides of the triangle: quality learning goals, tools, and use of assessments. c. Refer to "Quality Learning Goals" and explain this includes the three dimensions of NGSS. d. Refer to "Quality Tools" and explain that quality tools include tasks/prompts and rubrics/scoring guides. e. Refer to "Quality Use" and explain that quality use includes how assessment results guide instruction.
 Slide 6 (10 minutes)	**Display Slide 6 Code Your Brainstormed List** a. Have participants reconsider their charted list of components of high quality classroom assessment. Ask participants to use the three facets of high-quality assessment to sort the components on their list. b. Have participants write the letter "G" to indicate items on their list related to goals for student learning. Have participants write the letter "T" to indicate items on their list related to tools/prompts or rubrics/scoring guides. Have participants write the letter "U" to indicate items on their list related to use. c. Facilitate a discussion of participant rationale for each designation, making the connection that, as good teachers,

Slide and Time	Facilitation Notes
	they already have knowledge and practices about quality classroom assessments that they can apply to Tool 2.
 Slide 7 (4 minutes)	**Display Slide 7 Connection to Five Tools** **PD leader note:** This slide is animated. a. Explain that in Tool 1 [CLICK], we developed a three-dimensional blueprint for a *unit* that contains 3-5 *instructional sequences* that align with the learning goals in NGSS. In Tool 2 [CLICK] we will develop criteria or Evidence of Learning Specifications that will inform the development of quality assessments. b. Remind them that aligning 3D learning goals from NGSS with assessment tools takes planning and careful consideration of what learning and student work look like at the nexus of SEPs, DCIs, and CCCs. In addition, thinking about assessments that align with bundled PEs is complex! c. In Tool 5 [CLICK] we will use the Evidence of Learning Specifications from Tool 2 to develop a performance task and rubric to serve as assessment tools. d. Once students have completed a performance task and teachers have used a rubric to assess students' understanding, these results can be used to inform instruction (although the Five Tools do not address this). **Transition:** *Before we begin our work with Tool 2, we want to revisit the types of classroom assessment to make sure that we are all using the same terminology.*
 Slide 8 (3 minutes)	**Display Slide 8 Types of Assessment** **PD leader note:** This slide is animated. a. Ask to briefly discuss with an elbow partner what they think about when they see these two terms. Ask a few pairs to share their ideas with the whole group. b. Advance the slide twice to reveal both "definitions." Comment on how they match (or not) the discussion the group just had. c. Explain that Tool 2 informs the development of a *summative* classroom assessment in Tool 5 for an instructional sequence developed in Tool 1. d. Tool 2 can also be used to inform the development *formative* assessments when designing learning sequences for instruction in Tool 4.

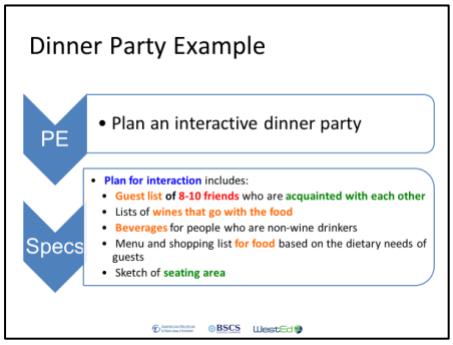
Slide and Time	Facilitation Notes
	PD leader note: Remind participants that formative and summative are two types of assessments that fit into the area of quality tools. Evidence of Learning Specifications are used to develop both formative and summative assessments. Participants may ask why we would want to develop our own evidence specifications when Achieve already released evidence statements for each PE. One response might be that while we can use the Achieve statements to inform our own, they are not bundled, as emphasized during Tool 1. When we develop our own specifications, we will keep in mind the integration of one or more PEs, as Achieve suggests. If participants show high interest in Evidence Statements from Achieve, you may decide to include Slide 9.
 Slide 9 (optional)	**Display Slide 9 What are Evidence Statements? (hidden)** a. This slide provides a definition of Evidence Statements from Achieve, taken from the front matter of the Evidence Statements. Have a participant read the slide and ask groups to turn and discuss the quote briefly. Answer any questions.
 Slide 10 (2 minutes)	**Display Slide 10 Classroom Assessment Design** a. Distribute **HO1: Classroom Assessment Design**. b. Have table groups review the chart and have a brief discussion of what they understand and any questions they might have. c. Mark that we will now take a deep dive into the NGSS with a different lens. Explain that this chart will help guide the construction of Evidence of Learning Specifications that will eventually lead to the development of an assessment task(s) in Tool 5.

Part 2a-b. Understanding Tool 2 (140 minutes)

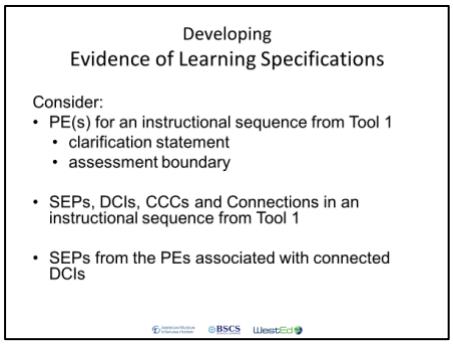
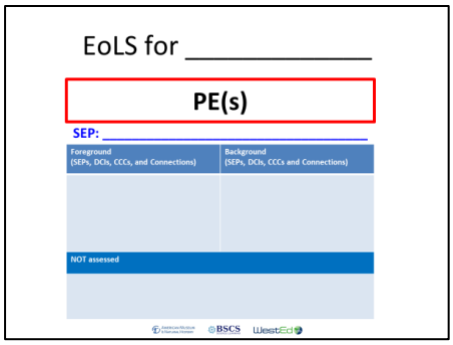
Part 2a. Introduction to Tool 2 (30 minutes)

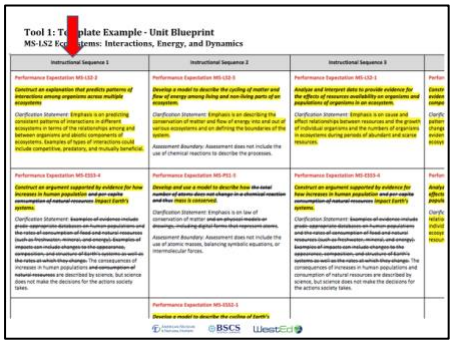
Slide and Time	Facilitation Notes
 Slide 11 (5 min)	**Display Slide 11 Tool 2: Planning for Assessment** **PD leader note:** This slide is animated. a. Ask participants to discuss with an elbow partner what they recall about Performance Expectations (PEs). Ask for several groups to share, making sure the following points are made: • A PE is a statement or claim of what students should know and be able to do at the end of instruction; • examples of the PE topic are given in the clarification statements; • the assessment boundary defines the scope of the assessment; and • the PEs are not assessment tasks. b. Advance the slide. Share that Tool 2 develops the Evidence of Learning Specifications for the PEs. Explain that the EoLS help identify what would serve as evidence of learning as defined by the PEs. c. Advance the slide. Emphasize that the EoLS are not the assessment task, but they provide criteria for the task. Information from Tool 2 will inform the development of an assessment task or set of tasks that will measure what students have learned through instruction. Tool 5 provides a process to design the specific assessment task or sets of tasks that will collect the evidence described in the EoLS. **Transition:** *To help you develop Evidence of Learning Specifications (EoLS), we'll offer a couple of scaffolds. The first will be an "everyday example" to highlight the kinds of thinking you'll do and the structure of the EoLS. The second will be a graphic organizer to help deepen your understanding of PEs and the ideas and practices developed in an instructional sequence.*

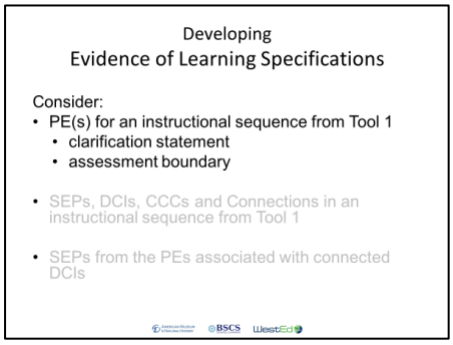
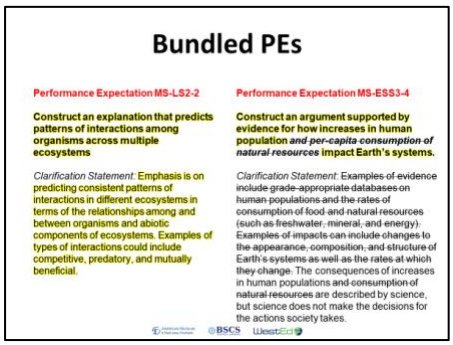
Slide and Time	Facilitation Notes
 Slide 12 (15 minutes)	**Display Slide 12 Dinner Party "Performance Expectation"** **PD leader note:** This slide is animated. a. Share with participants that we'll be developing Evidence of Learning Specifications for this PE. Note that the purpose of this example is to have a little fun, as well as to highlight the kind of thinking we'll do as we develop EoLS for one of our instructional sequences. b. Advance the slide to display the performance expectation text and provide a moment for participants to read the PE and take note of the clarification statement and assessment boundary. c. Advance the slide to reveal the DCI, Practice, and CCC associated with this PE. Provide a minute for participants to review the information. d. Invite participants to work with an elbow partner to identify what they would expect as evidence that someone had achieved this performance expectation. **PD leader note:** As participants are talking, listen for a group who identifies evidence more consistent with successfully ***planning*** for a party. It's helpful to have these ideas shared in the whole group. Also listen for a group that negotiates the difference between ***planning*** for a party and ***conducting*** a party. This nuance of the PE needs to be addressed with the whole group during the charting and discussion. e. Invite pairs to share their ideas with the whole group. Chart ideas as they are shared. Probe for clarification of thinking. Ask questions such as: • Where did you get that idea? • Why did you focus on that? • When/how would you know that happened? • Is there a difference between planning and conducting a party and if so, what is it?

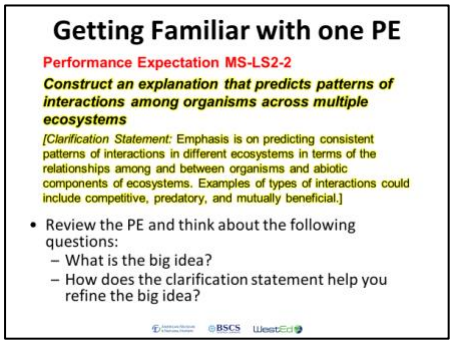
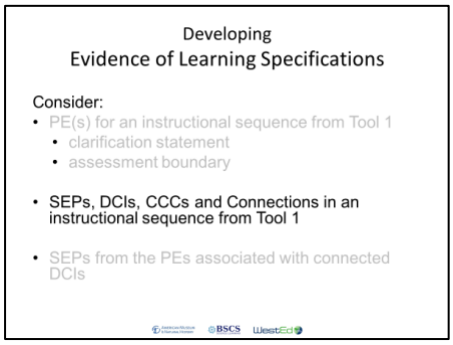
Slide and Time	Facilitation Notes
 Slide 13 (10 minutes)	**Display Slide 13 Dinner Party Example** a. Review how the charted list of Evidence of Learning Specifications (Specs) fits into Tool 2. Share that the slide shows one example of EoLS for this PE. b. Invite participants to compare their charted list with the EoLS on the slide. c. Highlight key ideas: • The PE is the driving statement. • The EoLS are not the task, but rather the criteria for the task that will be developed in Tool 5. • For this PE, the EoLS are focused on *planning* and not *conducting* to be consistent with the PE and SEP. • The assessment boundary and clarification statement both guide and limit the EoLS. • It's important to study all the dimensions and connections to fully understand the PE and to inform the EoLS for the summative assessment. • These EoLS will also inform formative assessment and instruction. Possible narrative: *Why is this kind of thinking important as we implement NGSS in classrooms? Thinking about Evidence of Learning Specifications is a meaningful way of planning for assessment. It helps align the assessment to the PEs, DCIs, CCCs, and SEPs because the process helps to articulate what the end product will look like, rather than leaping right to designing the task—otherwise, we might have focused on an assessment of "conducting" the dinner party rather than "planning" the party.* **Transition:** *We'll now transition from the "party" example to Evidence of Learning Specifications for NGSS performance expectations. We'll start with an example using an instructional sequence from the example MS-LS2 blueprint from Tool 1. Then, we will develop EoLS for one of your instructional sequences and PE(s).*

Part 2b. Developing Evidence of Learning Specifications (110 minutes)

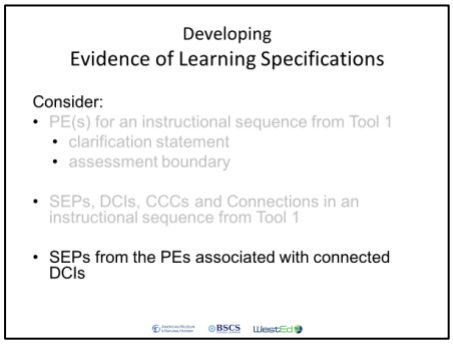
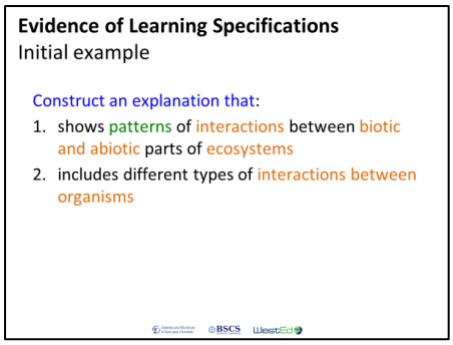
Slide and Time	Facilitation Notes
 Slide 14 (2 min)	**Display Slide 14 Developing EoLS** a. Review the three steps we will use in the Tool 2 process to ensure the assessment we develop in Tool 5 is aligned to the NGSS. b. Remind participants that just as in the Dinner Party example, they will study three key aspects of an instructional sequence from Tool 1: the PE(s), the three dimensions and Connections, and the SEPs from PEs associated with connected DCIs. c. Make a link back to the Quality Assessment triangle and the important role of aligning quality learning goals, quality tools, and quality use.
 Slide 15 (5 min)	**Display Slide 15 EoLS for ___** a. Distribute **HO2: Tool 1 Template Example: Unit Blueprint for MS-LS2.** b. Explain that we'll make our thinking public using a graphic organizer. Orient participants to the headers on the EoLS chart. Explain that you will use a Think-aloud and some group participation to model each step. **PD leader note:** One of the most challenging parts of the process is to make decisions about what will go in the foreground and what will go in the background. If you think your group needs a better understanding of foreground/background at this point, do one of the following: • Ask them to hold their questions until they experience the full model OR • Define the terms: Foreground ideas and practices are intentionally built into the summative assessment and into instruction; Background practices and ideas might impact formative assessment and might impact instruction • Provide examples from their context. - Some districts use the phrase "priority standards" so anything that's a priority standard will go in the foreground.

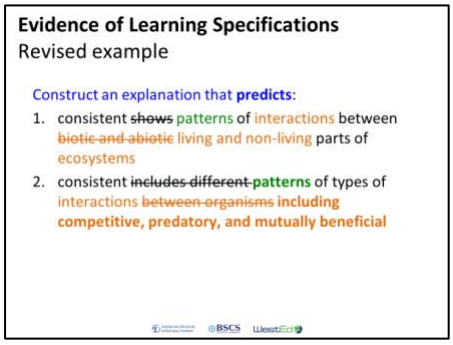
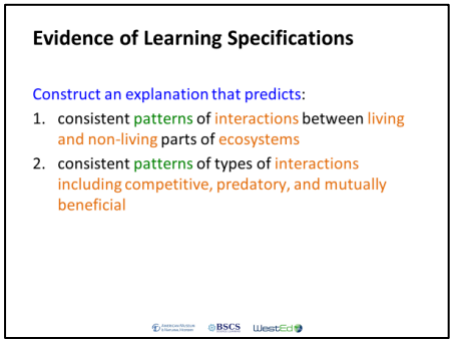
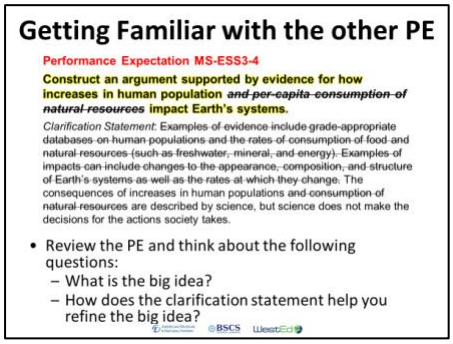
Slide and Time	Facilitation Notes
	- Teachers know their curriculum and can make links to ideas/practices developed in the past or ideas/practices that will come in future lessons. These ideas will go in the background. c. Remind participants that the goal of doing this model together to is to help participants understand the process and thinking that goes into the development of EoLS for an instructional sequence. **PD leader note:** For the Think-aloud, you will use Instructional Sequence 1 from the MS-LS2 Unit Blueprint Template Example from Tool 1. Then participants will have an opportunity to build Specs for their own instructional sequence.
 Slide 16 (3 min)	**Display Slide 16 Tool 1 Template Example** **PD leader note:** This slide is animated. a. Remind participants that each cell in this tool represents one of the cards they used in Tool 1. b. Mark that the Think-aloud is one person's voice, but that voice is representative of a collaborative group using Tool 2. **PD leader note:** Possible narrative notes include: • *Think-aloud possible script* written in italics, and • MOVES you will make (e.g., ADVANCE SLIDE, POINT, TAPE, WRITE, POST, MODEL, and DRAW) written all caps and bracketed. <u>Possible narrative:</u> • *I need to review my instructional sequence to determine where I want to start. In the unit we mapped out in Tool 1, students will study how organisms, including humans, interact with one another and with their environment.* • *I'm going to start with Instructional Sequence 1* [CLICK]. *In Sequence 1, students will study the patterns of interactions among organisms in ecosystems*. • [RECORD "MS-LS2 Ecosystems: Interactions, Energy, and Dynamics, Instructional Sequence 1" at the top of the chart] c. Ask participants to individually scan column 1 of **HO2** including the rows for PEs, DCIs, SEPs, CCCs, and Connections of the example Tool 1 blueprint to find evidence of the ideas developed as noted in the think aloud.

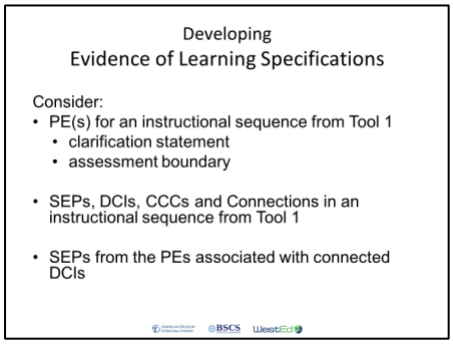
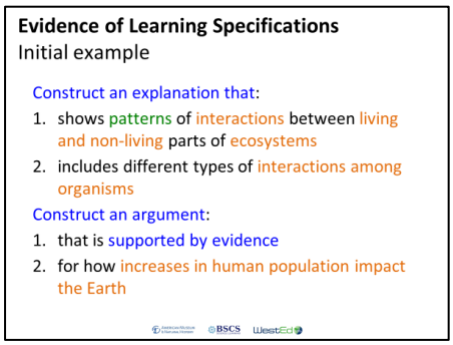
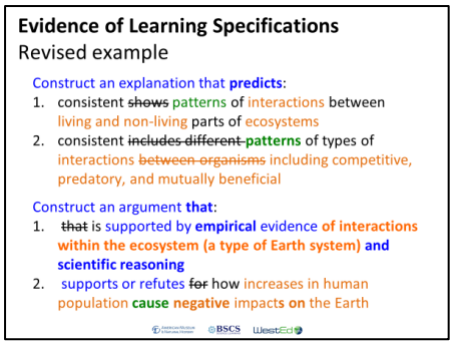
Slide and Time	Facilitation Notes
 Slide 17 (optional)	**Display Slide 17 Developing EoLS (hidden)** a. Share that we'll begin by considering the PEs for instructional sequence 1.
 Slide 18 (5 min)	**Display Slide 18 Bundled PEs** a. Note that there are two PEs bundled together in Instructional Sequence 1. Provide time for participants to read the two PEs. <u>Possible narrative:</u> • *I see that I have two PEs bundled in this sequence. The instructional sequence is more focused on the MS-LS2-2 PE with only parts of the other PE, MS-ESS3-4, highlighted and a large portion of the PE crossed out.* [POINT TO TEXT ON SLIDE] • *The first PE focuses on "constructing an explanation" but the other PE focuses on "constructing an argument"* [POINT TO TEXT ON SLIDE] *Based on this observation, I will eventually need to develop two sets of EoL Specs. If I had selected Sequence 2, with PEs that have the same practice "develop a model", I would only need one set of EoLS.* • *I'm going to start by developing one set of EoL Specs for the first PE, so I'm going to tape that PE card to the chart to help me analyze what the PE is really asking students to know and do* [TAPE the PE card for MS-LS2-2 into the red box on the chart.] • *Now, I want to study the PE to really understand what it is asking of the students*

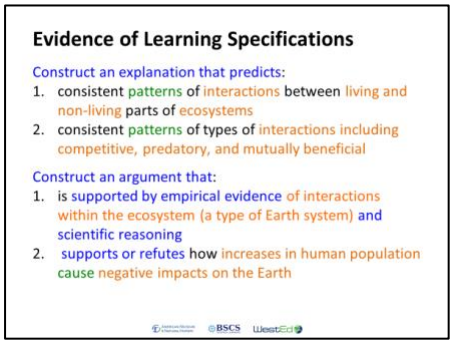
Slide and Time	Facilitation Notes
 Slide 19 (5 minutes)	**Display Slide 19 Getting Familiar with one PE** a. Explain that the first step in filling out the chart is to get very familiar with the PE. b. Ask participants to review the PE and think about the first question. Invite table groups to share their ideas. c. Gather a few ideas from the whole group, then continue the Think-aloud. <u>Possible narrative</u>: • *I've read the PE and now I'm ready to fill out my chart. First, I'm going to enter the SEP from the PE as a tentative sentence stem for my Evidence of Learning Specifications.* • [WRITE "Construct an explanation" in blue marker on the SEP row in the chart] • *Next, I'm going to look at what is not part of the assessment. In this PE there is no assessment boundary. If it there were, I would record these ideas into the space at the bottom of the chart where it says, "NOT assessed." Anything I've crossed out on the PE would also go there.*
 Slide 20 (30 min)	**Display Slide 20 Developing EoLS** a. Continue the think aloud. <u>Possible Narrative:</u> • *Now for a harder part. I need to decide which ideas and practices will be in the foreground and which will be in the background. Anything in the foreground will be explicitly addressed in both formative assessments and the final assessment task we develop in Tool 5 and will impact instruction. Anything that we put in the background might be included in instruction and perhaps inform the development of formative assessments.* • *I'm going to re-read the clarification statement again to see if that gives me any ideas. I'm also going to look at Instructional Sequence 1 from the MS-LS2 Unit Blueprint to ask myself, which DCIs, SEPS and CCCs should be considered foreground and which should be considered background.*

Slide and Time	Facilitation Notes
	• *As I read, I'm going to jot down my ideas on the appropriate color post it (blue = SEP; orange = DCI; green = CCC; purple = Connections).* b. Invite participants to study Instructional Sequence 1 from the MS-LS2 Unit Blueprint with an elbow partner and identify one idea that they are confident would be in the foreground. c. Invite pairs to share their ideas with the whole group. Ask questions to reveal participant reasoning: • Where did you get that idea? • Why do you think it should be foregrounded? d. Get consensus from the whole group before posting an idea. If the idea is one already on a pre-made sticky note, add it to the chart. Alternatively, write the idea on the appropriate color sticky note and add it to the chart. e. Repeat the process several more times. Add any pre-made sticky notes not shared by participants to the foreground side of the chart. **PD leader note:** If the idea shared is a practice, remind participants that the SEP attached to the PE is foregrounded because it will be part of the summative assessment. If the practice is different from the one in the PE, place it in the background for now. f. Invite participants to identify an idea that would be backgrounded. Again, ask for participants' reasoning. g. Follow the same process used for foreground ideas until all pre-made sticky notes are added to the background side of the chart. h. Remind participants that this is an opportunity to revisit the decisions they made about grouping ideas and practices during Tool 1. The information gathered will not only be used to revisit groupings and sequences, but also inform ideas that will likely be backgrounded on the chart. **PD leader note:** See the Appendix at the end of the facilitation guide for a photo of example sticky-notes for this chart.

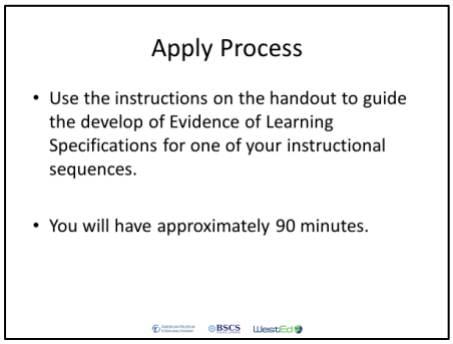
Slide and Time	Facilitation Notes
 Slide 21 (15 min)	**Display Slide 21 Developing EoLS** a. Note that the last consideration for the EoLS chart is any practices that are associated with selected DCIs from the bundled PEs. b. Continue the think aloud. Possible Narrative: • *The bundled DCI in this sequence is ESS3.C. When I go to the standards page for MS-ESS3 (NGSS Vol. 1, p. 83-84), I see that ESS3.C is the DCI for PEs MS-ESS3-3 and MS-ESS3-4 (which is the one I bundled). I'm going to decide to add a blue sticky-note to background the practice of "construct an argument" as a possible practice I might have students engage in during instruction, but I'm not going to add one for "design a process" since that doesn't make sense for this sequence in my unit.* • [MODEL looking up a connected DCI and the associated PE. POST the blue sticky note on the chart in the background section.] • *I've completed the three considerations to fill out my chart. I've now got foreground ideas that should go into my summative assessment and instruction and background ideas that might inform my instruction and formative assessments.*
 Slide 22 (25 minutes)	**Display Slide 22: Evidence of Learning Specifications** a. Explain that writing EoLS is an iterative process, with several steps for refinement. We're going to imagine that a group wrote an EoLS; we will take their initial EoLS and try to revise them to make them more aligned with the NGSS. b. Distribute **HO3: General Features of the Practices**. Share that while writing EoLS, it can still be helpful to use what Achieve has written to check for alignment. Appendix F of the NGSS includes components of the SEPs that can be helpful when refining our EoLS c. Distribute **HO4: Initial Specifications**. Invite participants to work with their group and mark up the text on the page (cross out, add words, etc.). If a document camera is available, you can use it to model how to begin this process (For example, add the word "predicts" to the SEP stem).

Slide and Time	Facilitation Notes
	d. Invite table groups to share out examples of their suggested revisions.
 Slide 23 (4 minutes)	**Display Slide 23: Evidence of Learning Specifications (Revised example)** a. Share that the slide shows one example of how a group revised the EoLS. b. Invite participants to compare their revised example with the one on the slide. **Transition:** *We've looked at how one group revised the EoLS. The next slide will show the final EoLS.*
 Slide 24 (1 minute)	**Display Slide 24: Evidence of Learning Specifications (Final example)** a. Distribute **HO5: Tool 2 Template Example**. b. Explain that at this point, participants would transfer their Evidence of Learning Specifications to their electronic Tool 2 Template. c. Remind participants that developing EoLS is one way to assure that our assessments align with the NGSS as emphasized in the Quality Assessment triangle.
 Slide 25 (5minutes)	**Display Slide 25 Getting Familiar with the other PE** a. For more guided practice, share that we will repeat the process for the second PE of Instructional Sequence 1. b. invite participants to make a graphic organizer on chart paper for MS-ESS3-4 and consider the questions on the slide.

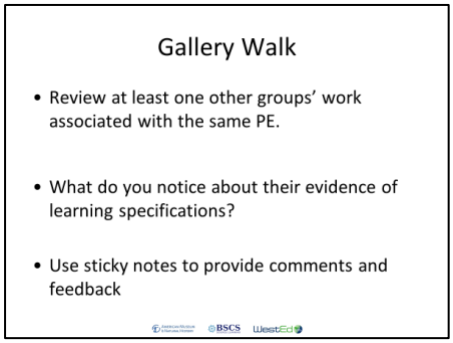
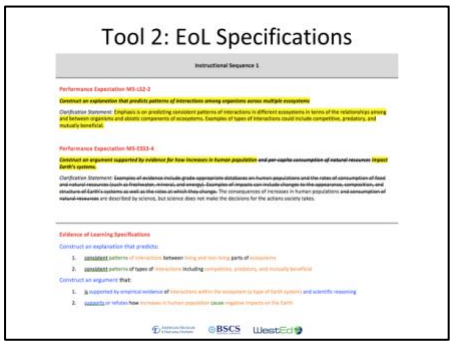
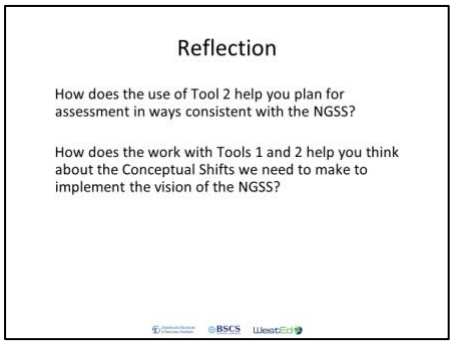
Slide and Time	Facilitation Notes
 Slide 26 (20 minutes)	**Display Slide 26 Developing EoLS** a. Remind participants of the steps for the process of creating sticky-notes. Support groups as necessary. b. As participants complete their EoLS, have them send one person from their group to observe the EoLS chart of another group and report similarities and differences to the rest of the group. **PD leader note:** See the Appendix at the end of the facilitation guide for a photo of example sticky-notes for this chart. **PD leader note:** If participants are having difficulty writing EoLS for this PE, unhide and use Slides 27-29.
 Slide 27 (optional)	**Display Slide 27 Evidence of Learning Specification: Initial Example (hidden)** a. Share that this slide shows a group's initial draft of both EoLS from Instructional Sequence 1. b. Forecast that the next slide will show the group's revisions to the EoLS.
 Slide 28 (optional)	**Display Slide 28 Evidence of Learning Specification: Revised Example (hidden)** a. Allow participants a moment to consider the revisions to the second EoLS. b. Share that the next slide will show the final EoLS for Instructional Sequence 1.

Slide and Time	Facilitation Notes
 Slide 29 (optional)	**Display Slide 29 Evidence of Learning Specifications (hidden)** a. Share that these EoLS would now be entered in the electronic Tool 2 Template.

Part 3 Working on Your Own Evidence of Learning Specifications (90 minutes)

Slide and Time	Facilitation Notes
 Slide 30 (90 min)	**Display Slide 30 Apply Process** a. Distribute **HO6: Guide to Developing EoLS.** Invite participants to skim the six steps, thinking about the process they just experienced. Ask for any clarifying questions about the handout or the process. b. Tell participants they have approximately 90 minutes to develop their own Evidence of Learning Specifications for MS-LS2-3, the first PE of Instructional Sequence 2. Note that this PE includes an assessment boundary that they will need to consider. c. Support participants as they complete the process. **PD leader note:** If groups finish before the time is over, invite them to continue the process with the second PE of Instructional Sequence 2, MS-PS1-5.

Part 4 Review and Complete Tool 5 (30 minutes)

Slide and Time	Facilitation Notes
 Slide 31 (20 minutes)	**Display Slide 31: Gallery Walk** a. Review the directions on the slide with participants. b. At the end of 15 minutes, close the gallery walk and have participants return to their charts. c. Invite groups to consider the sticky note comments and feedback on their charts and consider what revisions they might make to their EoLS. d. Invite several participants to share any aha's about this process with the whole group.
 Slide 32 (5 minutes)	**Display Slide 32: Enter Your EoLS on Tool 2** a. Provide groups 5 minutes to enter their EoLS into the electronic Tool 2 Template.
 Slide 33 (5 minutes)	**Display Slide 33 Reflection** a. Provide a few minutes of time for participants to respond individually to one or both questions. b. Select a strategy to have individuals share at least one idea from their reflection.

Appendix

Sample EoLS Charts