SCILLSS Classroom Science Assessment Workshop

**Outline of Workshop Materials and Resources**

# General Reference Resources

## State-specific

* State standards
* State curriculum guides, if available
* State teacher guides, if available
* Vertical articulation documentation, if available
* State performance level descriptors, if available

## NGSS-related

* [A Guide to Develop Classroom-based Next Generation Science Standards Assessment Tasks: A Principled-design Approach](https://www.scillsspartners.org/scillss-resources/)
* American Museum of Natural History NGSS Card Decks
  + [By DCI](https://www.amnh.org/learn-teach/curriculum-collections/five-tools-and-processes-for-ngss/tool-1/ngss-card-decks-by-dci)
  + [By Topic](https://www.amnh.org/learn-teach/curriculum-collections/five-tools-and-processes-for-ngss/tool-1/ngss-card-decks-by-topic)
* [NGSS evidence statements](https://www.nextgenscience.org/evidence-statements)
* [A Framework for K-12 Science Education](https://www.nap.edu/catalog/13165/a-framework-for-k-12-science-education-practices-crosscutting-concepts)
* [Appendices E, F, G of the NGSS](https://www.nextgenscience.org/resources/ngss-appendices)
* [Wonder of Science Phenomenon Link](https://thewonderofscience.com/phenomenal)
* [STEM-Teaching-Tool-30-Task-Formats-for-3D-Assessment-Design-v2](http://stemteachingtools.org/assets/landscapes/STEM-Teaching-Tool-30-Task-Formats-for-3D-Assessment-Design-v2.pdf)

# General Materials

* table tents
* name tags / lanyards
* pens/pencils/sticky notes/dry erase and Sharpie markers/tape or adhesive
* chart paper
* projector, mic, screen, remote/clicker
* participant folders including copies of the PowerPoint, evaluation form, and any other needed materials
* file sharing platform (i.e., Google Drive, Box, SharePoint, etc.)
* scrap paper/graph paper/printing paper

# Overview of Workshop Materials

| Key | General Materials | |  | | Tools and Templates |  | | Resources |  | Activities |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | Type | | Audience | | | Purpose/Description | | | | |
| *Facilitators* | | *Educators* |
| *General Materials* | | | | | | | | | | | |
| PowerPoint Presentation and Script | |  | | **X** | | **X** | The PowerPoint Presentation articulates SCILLSS’ principled approach for developing three-dimensional classroom science assessment tasks, including an overview of the process and an explanation of the available tools and resources. The Script includes slides and embedded presenter notes. | | | | |
| Agenda | |  | | **X** | | **X** | The agenda includes goals and suggested activities for a three-day workshop articulating a principled approach for developing classroom science tasks aligned to three-dimensional standards. | | | | |
| Facilitator Process Agenda | |  | | **X** | |  | The process agenda provides facilitators with a blueprint for the workshop. It includes an overview of the workshop goals, activities, and materials for each day. | | | | |
| Facilitator Guidance to Complete Activities | |  | | **X** | |  | This document includes key concepts, guiding questions, and strategies for facilitators to use to support workshop participants with each phase of the principled-design approach. | | | | |
| Evaluation Form | |  | |  | | **X** | The evaluation form captures participants’ feedback on the overall quality of the workshop as well as its success at meeting its goals. | | | | |
| *Unpacking the Performance Expectations* | | | | | | | | | | | |
| Unpacking Tool Activity Directions   * 5-ESS1-2 * MS-PS3-1 * HS-LS4-5 * HS-ESS2-5 | |  | |  | | **X** | The Unpacking Tool Activity Directions provide instructions and unpacked statements related to each performance expectation (PE) for participants to use to complete the Partially Completed Unpacking Tool. The purpose of the activity is to provide educators the opportunity to engage in the unpacking of a PE prior to developing their own. | | | | |
| Partially Completed Unpacking Tool   * 5-ESS1-2 * MS-PS3-1 * HS-LS4-5 * HS-ESS2-5 | |  | |  | | **X** | The Partially Completed Unpacking Tools are pre-populated unpacking tools for educators to complete using the provided statements in the Unpacking Tool Activity Directions. Educators can also generate new statements to include in the partially developed tools. | | | | |
| Completed Unpacking Tool—Activity Answer Key   * 5-ESS1-2 * MS-PS3-1 * HS-LS4-5 * HS-ESS2-5 | |  | | **X** | |  | The Completed Unpacking Tools—Activity Answer Keysprovide the correct, sorted unpacked statements (see Unpacking Tool Activity Directions) to the Partially Completed Unpacking Tools. | | | | |
| *Unpacking the Performance Expectations, Cont.* | | | | | | | | | | | |
| Unpacking Tool Template | |  | |  | | **X** | Unpacking the dimensions of each PE provides a clear focus for what is to be measured and helps educators to plan for assessment. Using the Unpacking Tool Template, participants will work in their collaborative teams (elementary, middle, high) to unpack their chosen PE. The tool asks educators to consider the key aspects of the selected PE as well as any necessary prior knowledge and connections between the Crosscutting Concepts (CCCs) and the Science and Engineering Practices (SEPs). | | | | |
| SCILLSS Model Unpacking Tools   * 5-PS1-1 * 5-PS1-3 * MS-PS4-1 * MS-PS4-2 * HS-ESS1-5 * HS-ESS2-7 | |  | | **X** | | **X** | The SCILLSS Model Unpacking Tools provide educators with example completed unpacking tools for PEs at grade 5, middle school, and high school. | | | | |
| *Task Specifications Development* | | | | | | | | | | | |
| Task Specifications Tool Template | |  | |  | | **X** | The Task Specifications Tool Template indicates the components needed to be considered by educators to develop a high-quality task. It gives an overview of the specifications to follow when making design choices about what information is presented to a student, how it is presented, how the examinee interacts with the task, and how responses are provided to create a task. | | | | |
| SCILLSS Model Task Specifications Tools   * 5-PS1-1 * 5-PS1-3 * MS-PS4-1 * MS-PS4-2 * HS-ESS1-5 * HS-ESS2-7 | |  | | **X** | | **X** | The SCILLSS Model Task Specifications Tools provide educators with example completed task specifications tools for PEs at grade 5, middle school, and high school. | | | | |
| Completed Task Specifications Tools   * 5-ESS1-2 * MS-PS3-1 * HS-LS4-5 * HS-ESS2-5 | |  | |  | | **X** | The Completed Task Specifications Tools for the listed standards provide educators with example completed Task Specifications Tools for the PEs associated with the Unpacking Tool Activity and the Example Task Idea Activity. Facilitators will guide grade level/band teams through the Example Task Ideas using the completed unpacking and task specifications tools to consider the quality of the task ideas and scenarios. | | | | |
| *Task and Rubric Development* | | | | | | | | | | | |
| Example Task Ideas   * 5-ESS1-2 * MS-PS3-1 * HS-LS4-5 * HS-ESS2-5 | |  | |  | | **X** | Facilitators will guide grade level/band teams through the example task ideas using the Completed Unpacking and Task Specifications Tools and will facilitate discussions about the quality of the task ideas. | | | | |
| Task Development Tool Template | |  | |  | | **X** | Facilitators guide their group in the development of a task in their grade-level teams. Participants should complete their drafts in Word and save to the file sharing platform. | | | | |
| Rubric Development Tool Template | |  | |  | | **X** | Facilitators guide their group in the development of the task rubric and exemplar responses. Participants will complete the Rubric Development Tool and save their work to the file sharing platform. | | | | |
| Illustration of Task Features Informed by the Unpacking and Task Specifications Tools | |  | | **X** | | **X** | The Illustration of Task Features Informed by The Unpacking and Task Specifications Tool demonstrates the features, components, and characteristics of the Unpacking and the Task Specifications Tools as they appear in the task. | | | | |
| SCILLSS Model Tasks   * 5-PS1-1 * 5-PS1-3 * MS-PS4-1 * MS-PS4-2 * HS-ESS1-5 * HS-ESS2-7 | |  | | **X** | | **X** | The SCILLSS Model Tasks provide educators with example tasks for PEs at grade 5, middle school, and high school. Prior to the development of tasks, facilitators in each group will walk participants through a model SCILLSS task and its accompanying design templates. They will point out how aspects of the unpacking template and task specification template are reflected in the task and rubric. | | | | |
| *Task Review and Evaluation* | | | | | | | | | | | |
| SCILLSS Grade 8 Student Task and Task Administration Guide | |  | |  | | **X** | The SCILLSS Grade 8 Student Task and Task Administration Guide were developed using a principled-design approach. Educators will compare these documents to a Grade 8 Science Unit Quiz to understand the differences between a traditional assessment task and one created for three-dimensional science standards. Educators will document the results of their comparison in the Task Comparison Review Worksheet. | | | | |
| Example Grade 8 Science Unit Quiz | |  | |  | | **X** | The Example Grade 8 Science Unit Quiz provides an example of a traditional end-of-unit assessment. Educators will compare the unit quiz to the SCILLSS Grade 8 Student Task and Task Administration Guide and will document their findings in the Task Comparison Review Worksheet. | | | | |
| *Task Review and Evaluation, Cont.* | | | | | | | | | | | |
| Task Comparison Review Worksheet | |  | |  | | **X** | The Task Comparison Review Worksheet provides participants the opportunity to evaluate, compare, and contrast (i.e., similarities and differences) two science assessments based on the presented criteria for high-quality science assessment. | | | | |
| Task Development and Review Worksheet | |  | |  | | **X** | The Science Classroom Assessment Task Development and Review Worksheet provides a framework for reviewing the quality of a high-quality task designed using a principled-approach. The worksheet draws on key concepts articulated in Achieve’s Task Screener. | | | | |
| Verification of Alignment Tool Template | |  | |  | | **X** | The Verification of Alignment Tool Template allows participants to examine and trace all of the features, components, and characteristics of the task to elicit student evidence back to the Unpacking and the Task Specifications Tools for the selected knowledge and skills. | | | | |

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