Spring 2019 Science Pilot Training

February 2019
Welcome

- Jeremy Heneger, Director of Assessment, NDE
- Sara Cooper, Science Education Specialist, NDE
- Rhonda True, Enhanced Assessment Grant Coordinator, NDE
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Agenda

- NSCAS Summative Science Overview
- Spring Pilot Overview
- Science Pilot Administration
- Science Pilot Preparation
- Resources
- Questions & Answers
Development Timeline

- **Adoption**: Sept. 2017
- **Visioning**: Nov. 2017
- **Task Force**: Jan. 2018
- **Pilot Development**: Summer 2018
- **Pilot**: Spring 2019
- **Operational**: Spring 2021
To remain true to the intent of the *Framework*, indicators are 1 *
EXAMPLE* of how to put the 3 dimensions together.

Students can and should use multiple CCCs and SEPs to engage in *figuring out* phenomena related to any DCI.
3 Prioritized Instructional Shifts

**Shift #1: 3-D Teaching and Learning**

- Instruction should allow students to apply science and content knowledge through three-dimensional learning.
- The Disciplinary Core Ideas are the focused, limited set of scientific ideas necessary for all students to achieve science literacy. The Engineering Practices are used by students to design, test, and evaluate technological solutions.

**Shift #2: Integrated Science**

- Instruction should allow students to connect ideas across science domains by explaining natural phenomena and scientific knowledge.
- The Crosscutting Science Ideas are used to organize and make sense of disciplinary core ideas. They serve as tools that students can use to view various fields through a coherent and connected lens.

**Shift #3: Interdisciplinary Teaching and Learning**

- Instruction should allow students to develop overlapping skills to investigate, evaluate, and reason scientifically.
- The Science and Engineering Practices are used by students to demonstrate understanding of the disciplinary core ideas and scientific knowledge. This approach fosters student success in science, mathematics, English Language Arts, and other disciplines by connecting science with mathematics through meaningful and substantive overhauling of skills and knowledge.

**How will this shift benefit student learning?**
Goals for Student Learning

- Exploring unknown/novel situations
- Science learning in all grades
- Reasoning and evidence in all content areas
- Learning science by doing science
- Transfer of understanding
- Cross-content integration
- Flexible & logical thinkers
- Integrated application of knowledge & skill
- Problem solving & critical thinking

Grade-Appropriate, Progressive Three-Dimensional Learning
Overall Claim
Students can demonstrate the scientific literacy necessary to be civic minded decision makers and demonstrate readiness for college, career, and lifelong learning through application of science and engineering practices and crosscutting concepts within and among the disciplines of science.

Critical Consumers of Information
Students can gather, analyze, and communicate information from multiple sources to use as evidence to make sense of familiar and unfamiliar phenomena and problems.

Interconnectedness of Science
Students can make connections between disciplinary core ideas within the physical science, life science, and Earth and Space sciences domains, across multiple science domains, and across multiple content areas (such as mathematics and English language arts) to make sense of familiar and unfamiliar phenomena and problems.
Features to Maintain Consistency

- Phenomena and Problem-focused
- Engage diverse sense-making
- Require reasoning with evidence
- Grade appropriate 3D targets
- Demonstrate science understanding by doing science
Assessment System Components

*Common Thread: Professional learning for educators*

<table>
<thead>
<tr>
<th>Curriculum Embedded Tasks (K-12)</th>
<th>Task Library (K-12)</th>
<th>Monitoring Tasks (3,4,6,7,9,10)</th>
<th>Statewide Summative (5,8,11**)</th>
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**ACT for 3rd year cohort**
Variable Features
(Adjusted for Purpose and Goals)
Sample Performance Task Map
Development Timeline

- **Adoption**: Sept. 2017
- **Visioning**: Nov. 2017
- **Task Force**: Jan. 2018
- **Pilot Development**: Summer 2018
- **Pilot**: Spring 2019
- **Field Test Development**: Summer 2019
- **Field Test**: Spring 2020
- **Future Field Test Development**: Summer 2020
- **Operational**: Spring 2021
Purpose:

• Gather feedback on the new science tasks with new types of questions
• Inform task development in the Summer of 2019 by evaluating the new style and question types
• **Not** to predict performance on the Nebraska College and Career Ready Standards for Science. As a result, student scores will not be provided.

Participants:

• All districts were encouraged to participate. Participation is voluntary.
• All students in grade 5 and 8 are eligible to participate.

Pilot Test Window: March 4 – March 15, 2019
Administration Platform:

- The science pilot assessment will be administered through Qualtrics, a web-based assessment system
  - Supported browsers include:
    - Apple Safari
    - Google Chrome
    - Microsoft Edge
    - Microsoft Internet Explorer
    - Mozilla Firefox

- For more information on the Qualtrics platform and technical support, please visit: https://www.qualtrics.com/support/survey-platform/getting-started/help-and-feedback/#LoginBrowserCompatibility
Forms:

- There are two forms at each grade level.
  - Grade 5 form A
  - Grade 5 form B
  - Grade 8 form A
  - Grade 8 form B

  Links to the forms will be posted on the NDE Student Assessment website.

- Students should be randomly assigned to a form.
  - Recommendation: For any group of students in either grade 5 or 8, assign half of the students form A and the other half form B.
Forms:

- The first question will require the student enter his/her 10-digit state ID. No additional student information will be required.
- Each form has two tasks, each with one or two scenarios.
- Each task includes from 5 to 8 questions.
- After each task, students will be asked to provide feedback on their interest, the difficulty of the questions, as well as how well they understood the task.

Test Duration and Scheduling:

- The pilot assessment is not timed. The majority of students should complete a form within 45 minutes.
- Students should complete the entire form in one test session.
All students should be provided scratch paper and a calculator.

There are no standard embedded accommodations/accessibility supports provided through the Qualtrics platform.

- Students may use approved non-embedded resources, such as multiplication charts or noise buffers, as specified by NDE policy.

- Zoom/magnifier – students should use the native device zoom feature to magnify the content on the page.

- Text-to-speech – students should use native screen readers or read aloud in accordance with the NDE accessibility manual.

A complete list of non-embedded universal tools, linguistic supports, and accommodations is included in the [NSCAS General Summative & Alternate Accessibility Manual.](#)
Preparation Tips

- Ensure device browsers meet the technical requirements
- Provide students with an opportunity to practice using the sample tasks. This provides students with an opportunity to gain familiarity with the Qualtrics interface and exposes students to the various types of questions on the pilot assessments
- Review the Science Pilot Test Administration Manual
- Determine procedures for student assignments of Form A or Form B
- Ensure students know or have access to their state ID to participate in the pilot
Sample Tasks:

- Two tasks are available for students and districts to review prior to the administering the pilot assessments.

- **Recommendation:** All students participating in the pilot should complete the appropriate practice task prior to participating in the pilot.

Pilot Administration Manual:

- Includes all procedures and proctor script
- Posted to the Assessment Portal
Feedback

- **Embedded Student Feedback Questions**
  - After each task, students will be prompted to provide feedback

- **Cognitive Labs**
  - A subset of districts will be participating in cognitive labs during the administration. This will be used to gather additional student feedback.
• Policy questions: Contact NDE
  – Phone: 402-471-2495
  – Email: nde.stateassessment@nebraska.gov

• Science Pilot inquires or support: Contact NWEA
  – Phone: (855) 225-9926
  – Email: NWEANebraska@nwea.org
  – 7:00 a.m. – 5:00 p.m. Central Time (CT), Monday – Friday
Questions & Answers