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## Are We Doing a Good Job? Evaluating Iowa Science Standard (NGSS) Implementation with Achieve

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# NGSS Implementation

UNI Update Conference

<https://bit.ly/2lvPETc>

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## The Grant

Arconic Foundation

Work with a school on their implementation.

Improve science education and career readiness by supporting high quality instructional materials.



# NGSS District Implementation Indicators

## Individually

- Review all of the indicators (page 4)
- Select and read an indicator that is most applicable to your work

## Small group Discussion

- How might you measure progress towards this indicator?
- What is going well in your district in relation to this indicator?
- What are the areas for improvement?

Begin [action plan](#) for your district



### NGSS District Implementation Indicators

#### Foundational Strategies

**Indicator #1: Equity and Access**

All K–12 students have adequate opportunities to learn science.

**Indicator #2: Management**

The district carefully and intentionally manages implementation efforts.

#### Essential Strategies

**Indicator #3: Professional Learning for Teachers**

High-quality professional learning opportunities for educators that lead to strong implementation of the NGSS in classrooms are readily available, and educators are consistently participating in these opportunities.

**Indicator #4: Professional Learning for School Leaders**

A high-quality professional learning system is created specifically for K–12 school leaders, and school leaders are consistently participating in these opportunities.

**Indicator #5: Instructional Materials**

Educators use high-quality instructional materials designed for NGSS learning and meet diverse student needs.

**Indicator #6: Assessments**

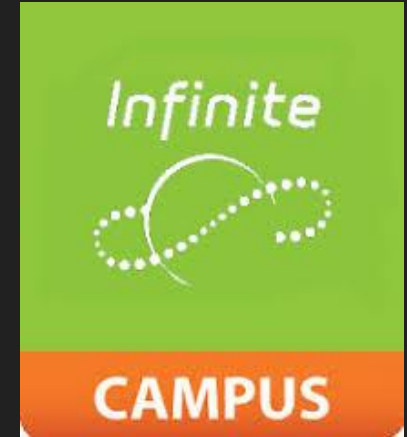
Assessments are designed and used to monitor student progress toward proficiency in the NGSS, and schools are held accountable for science performance.

**Indicator #7: School Structures**

The district develops course scopes and sequences for implementation of NGSS

# Baseline Data

- District data
  - [Grades](#)
  - Elective Participation
    - STEM
  - [Iowa Assessments](#)
- National Student Clearinghouse Data
  - STEM
- College & Career Ready Data and reports
  - IA Assessment Cut Score Data



# Audit Plan

## Achieve Audit Plan



## Iowa District Audit of NGSS Implementation

This is the first of four Iowa district support projects. See the overall project plan for context. This is an initial planning document in the early stages of the project.

Achieve will take stock of the status of NGSS implementation across each of the districts and develop a report noting what is going well and recommendations to address areas of need, using the [NGSS District Implementation Indicators](#) as a guide. Iowa districts have identified priority areas for this audit, including Indicator #3: Professional Learning for Teachers; Indicator #5: Instructional Materials; Indicator #6: Assessments; and Indicator #13: Student Outcomes.

To get this data, this analysis will include

- a survey of district educators,
- classroom observations, and
- a review of publicly available and internal data.

Here's some detail of the goals and structure of each of those pieces.

### Educator Survey

**Audience:** all science educators and school leaders in Bettendorf and Davenport school districts

**Goals:** measure educator knowledge of innovations of the NGSS and how those should be reflected in the classroom; measure high level use of instructional materials and participation with science PD and PLCs.

**Possible surveys to draw from**

**ACESSE.** We'll largely use the [ACESSE survey](#), which measures educator understanding of important aspects of the NGSS:

- Knowledge and practice together
- Learning develops over time

# Stakeholders Survey

## Survey



## Bettendorf Community School District: Iowa Science Standards District Implementation Survey

### Survey Overview

This 20-minute survey is addressed to all K-12 science educators in Bettendorf Community School District, including general education teachers, special education teachers, ELL teachers, gifted and talented teachers, instructional coaches, and building administrators. You will not be able to save the survey and come back later; it must be completed in one sitting.

The purpose of this survey is to learn more about implementation of the Iowa Science Standards. The survey includes questions about:

- Supporting students in the classroom
- Your vision of good science teaching and learning
- Your professional development experiences
- Types of guidance and resources you receive from your school, district, and state to help you teach science
- Education experience and background

Together, the survey results (in combination with classroom observations and other data analysis) will help district leaders determine how to best support educators in establishing high quality science programs in their classrooms.

Your name will not be linked to any data shared with anyone else, including leaders at your school, district, or state. No personal identifying information will be collected in this survey, though we will collect information that will identify the school and/or grade level taught. If you are uncomfortable responding to any question, please indicate so on the available open text field.

The data will only be used to guide the district leaders in planning targeted forms of support to help educators increase their understanding of and capacity to implement the Iowa Science Standards in their classrooms. Please answer all



# Classroom Observation Tools

- Full day of observation
- All levels observed (K-12)
- Full lesson

## [Classroom observation tool](#)

## INSTRUCTIONAL LEADERSHIP FOR SCIENCE PRACTICES

HOME INSTRUCTIONAL LEADERSHIP SCIENCE PRACTICES EXAMPLE LESSONS TOOLS ABOUT

### TOOLS FOR SUPERVISION

#### Science Practices Continuum - Supervision

INSTRUMENTAL LEADERSHIP FOR SCIENCE PRACTICES  
SCIENCE PRACTICES CONTINUUM - SUPERVISION

This continuum is based on the National Science Education Standards and the Science Practices Continuum. It is designed to be used by instructional supervisors to assess the current level of science instruction in a classroom. The continuum is organized into four levels of instruction, from Level 1 (beginning) to Level 4 (advanced). The continuum is organized into four levels of instruction, from Level 1 (beginning) to Level 4 (advanced). The continuum is organized into four levels of instruction, from Level 1 (beginning) to Level 4 (advanced).

	Level 1	Level 2	Level 3	Level 4
<b>1. Asking Questions</b>	Students ask simple, closed-ended questions about objects and events in their immediate environment.	Students ask simple, open-ended questions about objects and events in their immediate environment.	Students ask simple, open-ended questions about objects and events in their immediate environment.	Students ask simple, open-ended questions about objects and events in their immediate environment.
<b>2. Planning and Carrying Out Investigations</b>	Students plan and carry out simple investigations to answer questions.	Students plan and carry out simple investigations to answer questions.	Students plan and carry out simple investigations to answer questions.	Students plan and carry out simple investigations to answer questions.
<b>3. Analyzing and Interpreting Data</b>	Students analyze and interpret data from simple investigations.	Students analyze and interpret data from simple investigations.	Students analyze and interpret data from simple investigations.	Students analyze and interpret data from simple investigations.
<b>4. Using Mathematics and Computational Thinking</b>	Students use simple mathematical and computational thinking skills.	Students use simple mathematical and computational thinking skills.	Students use simple mathematical and computational thinking skills.	Students use simple mathematical and computational thinking skills.

This tool is a continuum for each practice that shows how instruction can progress over time. For each science practice, we focused on one or two elements, which can be challenging for students and are productive levers for shifting classroom culture. An instructional supervisor can use the continuum to identify the current level for a practice in a science lesson. Then the supervisor can provide feedback, such as offering instructional strategies (see Tools for Instruction), to help move future instruction farther along the continuum.

#### Downloadable File:

[Science Practices Continuum - Supervision](#)

#### Observation Form

INSTRUMENTAL LEADERSHIP FOR SCIENCE PRACTICES  
SCIENCE PRACTICES CONTINUUM - SUPERVISION

Observer Name: \_\_\_\_\_  
Observed Teacher Name: \_\_\_\_\_  
Date: \_\_\_\_\_

This observation form is a tool for teachers and supervisors to use as they observe science instruction in the classroom. It includes the 8 practices, room for observers to write notes, and space to indicate where the instruction would fall on the continuum.

# Professional Development by Achieve

**Title:** EQulP Training

**Location:** Mississippi Bend AEA

**Dates:** May 14-15

**Title:** Assessments

**Location:** TBD, Quad Cities

**Dates:** July 30-31

\*Sessions will be made public on the [MBAEA Professional Development website](#) after April 15.

