

## Foundational Services – Science



**Description/Purpose of Content Area:** *Science Foundational Services will provide district level staff with information and tools as they work to develop, improve and align their science curriculum and increase their knowledge of the new Illinois Learning Standards for Science incorporating the Next Generation Science Standards.*



### PHASE 1 - Next Generation Science Standards Overview

*Next Generation Science Standards Overview* introduces participants to the Next Generation Science Standards through experiential learning of a sample NGSS aligned lesson. As an adult learner, participants analyze the learning experience to build an understanding of Three-Dimensional Learning.

#### Focus Topics:

- Three Dimensions of the Next Generation Science Standards
- Three-Dimensional Learning
- NGSS Performance Expectations

### PHASE 2 - The Tools Needed to Bring NGSS to the Classroom

*The Tools Needed to Bring NGSS to the Classroom* builds on Foundational Services for Science - Phase 1. Participants are immersed in a series of lessons aligned to the NGSS which focus on bringing three-dimensional learning to the classroom. As an adult learner, participants analyze the learning experience in order to create tools necessary to shift learning in an NGSS aligned classroom.

#### Focus Topics:

- Understanding the Role of Phenomena in Three-Dimensional Learning
- Utilizing the Science and Engineering Practices, Crosscutting Concepts, and Disciplinary Core Ideas to create or evaluate Three-Dimensional Learning
- How to use current and available resources including *A K-12 Framework for Science Education*, the *Next Generation Science Standards*, and the *Next Generation Science Standards Appendices*.

### PHASE 3 - Developing and Evaluating Units of Study Aligned to NGSS

*Developing and Evaluating Units of Study Aligned to NGSS* applies the tools from Foundational Services for Science - Phase 2. This enables participants to develop and/or evaluate current materials or units of study for alignment to the Next Generation Science Standards.

#### Focus Topics:

- Storyline Development Process
- Coherence (throughout units of study, as well as within and across grade bands)
- Overview of EQUIP Rubric for Science Lessons and Units

### PHASE 4 - Workshop: Beginning to Build a Unit of Study Aligned to NGSS

*Workshop: Beginning to Build a Unit of Study Aligned to NGSS* builds on the introduction to the Storyline Development Process introduced in Phase 3 by fully engaging participants in the process. Participants begin the process of building a unit of study aligned to the Next Generation Science Standards in a collaborative environment.

#### Focus Topics:

- Bundling NGSS Performance Expectations
- Unpacking the Performance Expectations and associated Disciplinary Core Ideas in the K-12 Framework
- Identifying Phenomena related to the both the Performance Expectations and associated Disciplinary Core Ideas
- Developing a Student Product to be further developing into a summative assessment for the unit of study aligned to NGSS

### Networking for Implementation in Foundational Services Science

Participants will engage in discussion around shared experiences and expertise related to implementation of the NGSS. Each gathering is initiated for a deeper look into a topic included in the currently approved materials.

## Top 5 Reasons Districts Should Participate in NGSS Science Training

5. Participants will gain perspective on the shifts required of the Next Generation Science Standards and be able to explain the differences in a NGSS classroom compared to a traditional science classroom.
4. Participants will be able to describe and explain Three-Dimensional Learning in which students will engage in science and engineering practices, utilize the crosscutting concepts, and summarize the disciplinary core ideas in the four disciplines of science.
3. Participants will be able to read and work with the New Illinois Learning Standards for Science, identify the performance expectations, and utilize other essential resources for NGSS.
2. Participants will be able to utilize multiple tools and methods to make sense of the three dimensions of NGSS and phenomena as they work to bring the Next Generation Science Standards to the classroom.
1. And.... Participants come away with “aha moments!” With only 8% of current American college students currently enrolled in STEM based programs, the time for the New Illinois Learning Standards for Science is **NOW!**”