



Module 1: The *Kentucky Academic Standards for Science*: An Overview

Design of Module 1

- The *Kentucky Academic Standards (KAS) for Science* were adopted by the Kentucky Board of Education on December 6, 2022. As such, the information within this module provides a general overview of the standards.
- This module is divided into four sessions. Three of these sessions guide participants through an in-depth look into each of the three dimensions of science. It is intended that participants engage with all the sessions to gain an understanding of the complexity and rigor of the *KAS for Science*.
- This module is designed to be administered in 45–60-minute PLC sessions; however, the timeline and work sessions can be adjusted to best fit the systems schools and districts already have in place.
- Module facilitators might be a department chair, teacher leader or curriculum specialist, etc. With that in mind, the facilitator notes include content information and potential talking points intended to provide support to a facilitator who does not have extensive science experience.
- Pre-service teacher faculty may wish to utilize this module as an introduction to the *KAS for Science* or to have deeper discussion regarding the rigor and expectations of these standards.

Goals of Module 1:

- Build a shared understanding of the architecture and components of the *KAS for Science*.
- Strengthen the understanding of the three dimensions of science and recognize how they work together to support highly effective science teaching and learning.
- Identify and prioritize areas where future professional learning will be needed for successful implementation of the *KAS for Science* and develop a plan to address those areas.
- In addition, at the completion of the module participants will be able to develop an argument as to how instruction for the *KAS for Science* is the same/different as is generally observed in their experiences.

Session 1A: Understanding the Architecture and Components

- This session provides an overview of the architecture and components of the *KAS for Science*.

Session 1B: Dimensions of Science: Disciplinary Core Ideas (DCI)

- This session provides an in-depth look at what is meant by a “core idea.” This includes an exploration of the progressions as found in Appendix E.
- Participants will explore the Engineering and Technology Standards, which are core ideas that define the engineering process.

Session 1C: Dimensions of Science: Science and Engineering Practices (SEP)

- This session provides an in-depth look at the science and engineer practices (the “practices”). This includes an exploration of the components and progression of the practices as found in Appendix F.

Session 1D: Dimensions of Science: Crosscutting Concepts (CCC)

- This session provides an in-depth look into the crosscutting concepts. This includes an exploration of the components and progression of the crosscutting concepts as found in Appendix G.