



Three-Dimensional Science Tasks—Analysis and Development

Module Design:

- This module is designed to provide educators with tools towards furthering their understanding of dimensionality through the analysis and development of tasks used for instruction and assessment.
- This module is divided into two sessions. These may be utilized independent of one another.
- Module facilitators might be a department chair, teacher leader, 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 components of this module to have deeper discussions in regards to the rigor and expectations of the Kentucky Academic Standards for Science.

Goals of this Module:

- Build a shared understanding of the criteria for three-dimensional tasks.
- Experience how the development of tasks are dependent upon identified learning goals explicitly connected to the Kentucky Academic Standards for Science.
- Understand the connection between the criteria for three-dimensional tasks and their development.

Session A: Using Task Analysis to Understand Dimensionality

- This session may be divided into two separate components.
- Participants first clarify beliefs about three-dimensional performances.
- Participants use screening tools to analyze tasks, looking at key components.
- This session has been modified from a professional learning workshop developed by Achieve for the [Task Annotation Project in Science](#).

Session B: Developing Three-Dimensional Tasks

- Participants will develop 3D learning performances as lesson-level goals related to unit-level bundles of performance expectations.
- Participants will craft 3D classroom assessment focused on a specific 3D learning performance for formative use.
- Participants will engage in peer review to study and refine “3dness” of their drafted assessments.
- This session B has been modified from [ACESSE Resource D](#) and is provided through OER (Open Educational Resources) Commons Platform and provided through a Creative Commons license (CC BY-SA). Funding for this resource is by the National Science Foundation (NSF) through Award DRL-156 1300.