

## Learning Performances in Denver 3D Science Teaching and Learning PD

Core Idea from Framework	Teaching Practice	Learning Performance
Focus on a few core ideas	<p>Planning a coherent sequence of instruction anchored in phenomena</p> <p>Analyzing standards and current programs with colleagues across grade levels</p>	<p>Planning a coherent sequence of instruction anchored in phenomena where a understanding of disciplinary core idea can be developed</p> <p>Using the <i>Framework</i> and analysis of current programs to decide how to improve vertical coherence as a school, feeder system</p>
Understanding develops over time	<p>Analyzing content of the standards, <i>Framework</i>, appendices</p> <p>Writing student learning objectives</p> <p>Developing and interpreting evidence from assessments</p>	<p>Analyzing standards, <i>Framework</i>, appendices for expected shifts in understanding across grade level</p> <p>Writing student learning objectives grounded in learning progressions</p> <p>Adapting and designing assessments that can elicit student learning over time in three dimensions</p>
Science and engineering require both knowledge and practice.	<p>Developing lesson objectives</p> <p>Adapting curriculum materials</p> <p>Supporting students in figuring out disciplinary core ideas (without pre-teaching concepts or vocabulary)</p>	<p>Developing lesson-level “learning performances” that integrate the three dimensions</p> <p>Adapting curriculum materials to integrate practices and crosscutting concepts</p> <p>Sequencing a “cascade of practices” over multiple lessons to help students explain a phenomenon using core ideas (storyline development)</p>
Connecting to students’ interests and experiences.	<p>Assessing prior knowledge</p> <p>Selecting phenomena that target disciplinary core ideas</p> <p>Assigning students responsibility for their own learning</p>	<p>Eliciting students’ relevant prior interests and experiences</p> <p>Selecting phenomena that are both personally relevant and engage students with disciplinary core ideas</p> <p>Organizing opportunities for students to contribute to solving engineering problems in the community</p>