

EQuIP Rubric for Lessons & Units: Science

I. Alignment to the NGSS	II. Instructional Supports	III. Monitoring Student Progress
<p>The lesson or unit aligns with the conceptual shifts of the NGSS:</p> <p>A. Grade-appropriate elements of the science and engineering practice(s), disciplinary core idea(s), and crosscutting concept(s), work together to support students in three-dimensional learning to make sense of phenomena and/or to design solutions to problems.</p> <ol style="list-style-type: none"> Provides opportunities to develop and use specific elements of the practice(s) to make sense of phenomena and/or to design solutions to problems. Provides opportunities to develop and use specific elements of the disciplinary core idea(s) to make sense of phenomena and/or to design solutions to problems. Provides opportunities to develop and use specific elements of the crosscutting concept(s) to make sense of phenomena and/or to design solutions to problems. The three dimensions work together to support students to make sense of phenomena and/or to design solutions to problems. <p>A unit or longer lesson will also:</p> <p>B. Lessons fit together coherently targeting a set of performance expectations.</p> <ol style="list-style-type: none"> Each lesson links to previous lessons and provides a need to engage in the current lesson. The lessons help students develop proficiency on a targeted set of performance expectations. <p>C. Where appropriate, disciplinary core ideas from different disciplines are used together to explain phenomena.</p> <p>D. Where appropriate, crosscutting concepts are used in the explanation of phenomena from a variety of disciplines.</p> <p>E. Provides grade-appropriate connection(s) to the Common Core State Standards in Mathematics and/or English Language Arts & Literacy in History/Social Studies, Science and Technical Subjects.</p>	<p>The lesson or unit supports instruction and learning for all students:</p> <p>A. Engages students in authentic and meaningful scenarios that reflect the practice of science and engineering as experienced in the real world and that provide students with a purpose (e.g., making sense of phenomena and/or designing solutions to problems).</p> <ol style="list-style-type: none"> The context, including phenomena, questions, or problems, motivates students to engage in three-dimensional learning. Provides students with relevant phenomena (either firsthand experiences or through representations) to make sense of and/or relevant problems to solve. Engages students in multiple practices that work together with disciplinary core ideas and crosscutting concepts to support students in making sense of phenomena and/or designing solutions to problems. Provides opportunities for students to connect their explanation of a phenomenon and/or their design solution to a problem to their own experience. When engineering performance expectations are included, they are used along with disciplinary core ideas from physical, life, or earth and space sciences. <p>B. Develops deeper understanding of the practices, disciplinary core ideas, and crosscutting concepts by identifying and building on students' prior knowledge.</p> <p>C. Uses scientifically accurate and grade-appropriate scientific information, phenomena, and representations to support students' three-dimensional learning.</p> <p>D. Provides opportunities for students to express, clarify, justify, interpret, and represent their ideas and respond to peer and teacher feedback orally and/or in written form as appropriate to support student's three-dimensional learning.</p> <p>E. Provides guidance for teachers to support differentiated instruction in the classroom so that every student's needs are addressed by including:</p> <ol style="list-style-type: none"> Suggestions for how to connect instruction to the students' home, neighborhood, community and/or culture as appropriate. Appropriate reading, writing, listening, and/or speaking alternatives (e.g., translations, picture support, graphic organizers) for students who are English language learners, have special needs, or read well below the grade level. Suggested extra support (e.g., phenomena, representations, tasks) for students who are struggling to meet the performance expectations. Extensions for students with high interest or who have already met the performance expectations to develop deeper understanding of the practices, disciplinary core ideas, and crosscutting concepts. <p>A unit or longer lesson will also:</p> <p>F. Provides guidance for teachers throughout the unit for how lessons build on each other to support students developing deeper understanding of the practices, disciplinary core ideas, and crosscutting concepts over the course of the unit.</p> <p>G. Provides supports to help students engage in the practices as needed and gradually adjusts supports over time so that students are increasingly responsible for making sense of phenomena and/or designing solutions to problems.</p>	<p>The lesson or unit supports monitoring student progress:</p> <p>A. Elicits direct, observable evidence of three-dimensional learning by students using practices with core ideas and crosscutting concepts to make sense of phenomena and/or to design solutions.</p> <p>B. Formative assessments of three-dimensional learning are embedded throughout the instruction.</p> <p>C. Includes aligned rubrics and scoring guidelines that provide guidance for interpreting student performance along the three dimensions to support teachers in (a) planning instruction and (b) providing ongoing feedback to students.</p> <p>D. Assessing student proficiency using methods, vocabulary, representations, and examples that are accessible and unbiased for all students.</p> <p>A unit or longer lesson will also:</p> <p>E. Includes pre-, formative, summative, and self-assessment measures that assess three-dimensional learning.</p> <p>F. Provides multiple opportunities for students to demonstrate performance of practices connected with their understanding of disciplinary core ideas and crosscutting concepts and receive feedback.</p>

