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1. Determine which Performance Expectation(s) will be assessed.
   The first step to developing a 3D assessment is to look at the Performance Expectations. Since the Performance Expectations are specified at the middle and high-school level in the NGSS, there is no significant difference in the approach to developing these assessments at each level. Crosscutting Concepts and Science and Engineering Practices are the same for all grade levels, yet the degree of expected mastery differs. As a result, using the Performance Expectations and resources available at the Next Generation Science Standards website will guide the development of meaningful, higher order assessments.

2. Organize Practices, Core Ideas, and Crosscutting Concepts.
   The next step is to organize the Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts that relate to the targeted Performance Expectation. As stated above, each Performance Expectation has three corresponding dimensions. These three dimensions together are what students are expected to know and do in order to meet standards.

   Prior to the development of the Next Generation Science Standards, teachers typically designed units based on what students should know, which is analogous to using only the DCIs to guide instruction. As a result of NGSS, the Performance Expectations now guide unit development, and learning occurs through the application of Science and Engineering Practices and Crosscutting Concepts.

3. Connect to Phenomena.
   After clearly identifying what students should do in order to meet the Performance Expectations, it is then possible to link the associated learning to phenomena. This can be done either in the form of an essential question or an actual problem-based learning task that requires students to design and build a solution to a specified problem. To answer the question or solve the problem, students are required to apply the previously identified three dimensions. How they answer the question or carry out the learning task that addresses the phenomenon is the assessment piece.

4. Decide how students will meet the assessment goals.

- A guide to phenomena to help educators make appropriate connections
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### David A. Janosz, Jr.

David A. Janosz, Jr. is a supervisor in the Northern Valley Regional High School District in Bergen County, New Jersey and is an author of McGraw-Hill Education's Pre-Engineering program text. He has over twenty years of experience designing and implementing STEM education programs at all grade levels P–12. David is a past President and former Executive Director of the New Jersey Technology and Engineering Educators Association and has presented to various local, national, and international audiences.

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