

Ready!



Implementing the NM STEM Ready! Science Standards

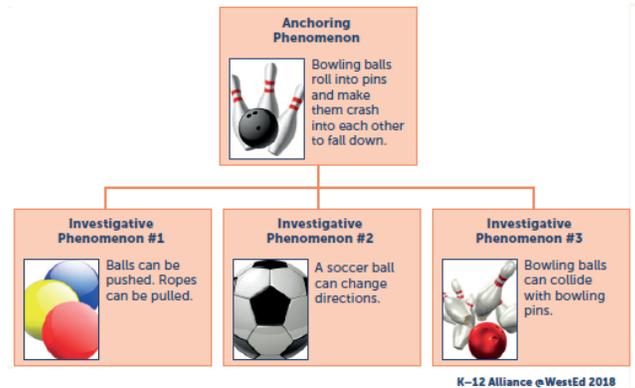
Why are phenomena important?

With the adoption of the NM STEM Ready! Science Standards, phenomena is central to engage students in continually building their science and engineering knowledge towards understanding the physical world or solving an engineering problem.

When investigating phenomena in science, students use the 3-dimensions: the disciplinary core ideas, the science and engineering practices, and the crosscutting concepts, together to explain and make sense of the physical world. When classrooms focus science education on phenomena that students are motivated to explain, instruction shifts from *learning about* a topic to *figuring out* why or how something happens.

What are phenomena?

Phenomena are observable events occurring in the physical world that students can use science or engineering knowledge to connect with what is going on around them. Phenomena can be as simple as figuring out why playing music cause a window nearby to vibrate.



NGSS identifies two main types of phenomena: anchor and investigative. Anchor phenomena are the focus of instruction for a multi-week unit and often require in-depth understanding of several science concepts to explain. Investigative phenomena are foci of shorter learning sequences (multi-day) and build upon one another to support students in developing understanding of scientific concepts related to anchoring phenomena.

Where do I start with phenomena?

The designers of the standards intentionally weaved phenomena as opportunities for students to connect what is learned in science class with the world around them. The progression of the standards start by having students focus on visible phenomena, then shift to macroscopic then microscopic phenomena, as a way to support students' learning.

The Math and Science Bureau [Resources page](#) has information and links on identifying phenomena. Start by using [the checklist](#) on selecting quality phenomena. Search for phenomena related to the unit you are addressing and see if it matches your criteria of quality phenomena. The California NGSS Early Implementers Initiative produced [a list](#) of possible phenomena by grade level.



Reach out to the [Math and Science Bureau staff](#) with questions or for more information.

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