



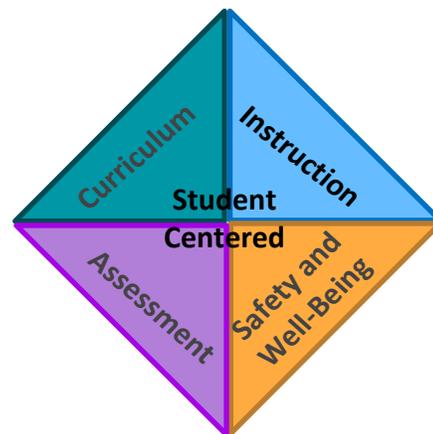
Explore Changing Environment Through Local Phenomena

How do we leverage students' current environment to support grade-level science instruction?

Access to the NM STEM Ready! Science Standards has a focus on students' ability to engage in phenomena-based instruction in order to make sense of the world around them.

Considerations

- By prioritizing a local, place-based phenomenon, students have the opportunity to engage in their local community with the use of little to no technology.
- Ensure each student is fully engaged. [Leverage research-based strategies including:](#)
 - Students feel safe, comfortable, and part of the community.
 - Students know how to engage.
 - Pedagogical strategies support engagement.
 - Offer instruction with several synchronous and asynchronous options for students to become co-creators of knowledge.
- Maintaining a focus on high quality 3-Dimensional science instruction may need to include adaptations and resources outside of your current curriculum.
- Families should be seen as assets and knowledge source that can be leveraged in multiple ways to support the student and the class.



What Does This Look Like?

- Engaging students in place-based phenomena allows for the opportunity to open lines of communication with families to learn about interest and resources available. Consider adapting or choosing phenomena or problems that:
 - make clear connections to students' interest and backgrounds,
 - require students to build toward grade-appropriate learning, and
 - can be investigated [safely with materials](#) that are widely available.
- Begin the planning process by focusing on students' cultures and place, and [inclusive pedagogies](#) to meet the needs of all students by offering specialized plans that include translations, accessible technology and physical and mental health.
- Providing students with several assignment options that meet the targeted Performance Expectation bundle.

Explore Changing Environment Through Local Phenomena

What Does This Look Like? (*cont.*)

Considerations for different approaches as you plan:

Instructional approaches	Description
Thematic Units	A Thematic Unit includes a series of lessons, integrating ELA, math, science and social studies over several days or weeks.
Citizen Science	To participate in the scientific process of addressing a real-world problem by formulating research questions, conducting investigations, collecting and analyzing data, interpreting results, and making new discoveries and solving problems.
Engaging in Place-based Phenomena and Problems.	Students and caregivers have a wealth of knowledge that can be accessed to strengthen student learning. Engaging students and caregivers in making sense of the community around them or working towards a solution to a community or home problem allows students to engage with the NM STEM Ready! Science Standards.

Explore Changing Environment Through Local Phenomena

Recommended Reflection Questions

Use these questions with your PLC to examine current practice and engage in forward planning.

- How do we adapt our current materials to leverage the multiple content areas to provide a holistic learning experience?
- How can we adapt instructional materials to include communities and families knowledge when locating phenomena or problems?
- In what varied ways could families and or caregivers be invited to participate in science learning (keeping in mind current household demands on time)?
- What community partnerships or out of school time networks could be leveraged to provide additional support in providing science instructional materials?

Where can we start?

Administrators

Understand the unique needs of science teaching and learning, and ensure that science is included in discussions and decision-making.

- ★ [NGSS Overview for Principals](#)
- ★ [K–8 Science During COVID \(WestEd\)](#)
- ★ [Restart and Recovery \(CCSSO\)](#)
- ★ [Teaching K-12 Science and Engineering During a Crisis \(2020\)](#)
- ★ [Supporting equitable Home-Based Science Teaching and Learning During COVID-19](#)

Teachers

Adhere to a three-dimensional vision of science teaching and learning by leveraging science at home.

- ★ [Phenomena, Not Just for the Classroom](#)
- ★ [Pass the Science Please: Science Talk Moves](#)
- ★ [Sample Science Menu](#)
- ★ [NSTA's Daily Do](#)
- ★ [Citizen Science](#)
- ★ [How to launch STEM investigations that build on student and community interest and expertise](#)

Students, Families, and Communities

Connect to high-leverage science teaching and learning practices, such as phenomena, science notebooks, and science talk.

- ★ [Phenomena](#)
- ★ [Science Talk Moves](#)
- ★ [Science Notebooks](#)

Big Questions for Adjusting Instruction to Support the Home Environment

