

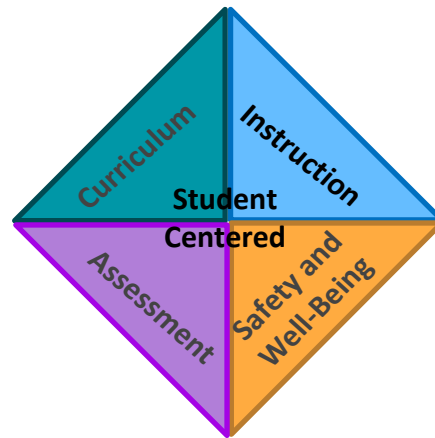
# Explore Changing Environment Through Local Phenomena

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, placed-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

