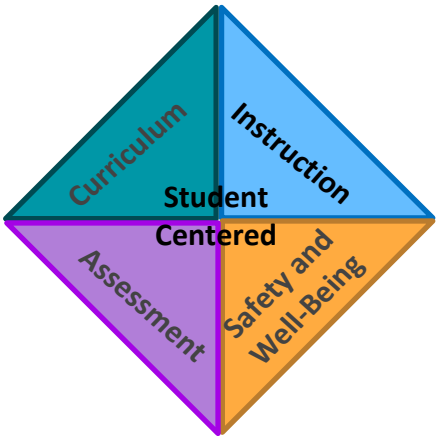
# Key Shifts: In-Person to Distance Learning

Science

**How should schools/districts continue high-quality science instruction through hybrid and/or distance learning modalities?**

Science learning is student-centered and consistently engaging students in the **Science and Engineering Practices**. Instruction facilitates collaborative sensemaking — a critical component of understanding phenomena and solving problems — in ways that honor student interest and identity.




## Considerations

- **Students learn best when they** engage in the practices of science and engineering. Therefore, it is **essential to continue implementing** instructional strategies that provide high-quality, three-dimensional learning.
- This is a moment of opportunity to redesign or replace learning activities that are not standards-aligned in order to create time and space for meaningful student engagement.
- Structure learning with inclusive practices for instruction, such as universal design for learning.
- 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.
  - Explicit engagement strategies.

## What Does This Look Like?

Some schools are already planning to offer students opportunities to engage in blended or distance learning for a semester or the full school year. When planning for long-term blended or distance learning models, instructional planning considerations (see Sample Science Lesson Example) should be leveraged.

For districts using the in-person/hybrid model, schools and teachers should consider developing two week-long distance learning units that can be easily deployed if the need arises.

Focus on instructional materials or instructional approaches used in the distance or hybrid space to provide all students supports for 3-dimensional science learning.

Hybrid and distance learning environments utilize effective instructional routines. **Instructional practices that focus on students as sensemakers and co-constructors of knowledge while engaging in scientific and engineering practices** are key in sustaining student engagement.

NEW MEXICO Public Education Department

# Key Shifts: In-Person to Distance Learning

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

Think about these key shifts in school-based and distance learning as you plan:

| Key Shifts from In-Person to Distance Learning | |
|---|---|
| **In-Person Learning** | **Distance Learning** |
| Learning happens in school with consistent access to resources and materials. | Learning happens in a variety of physical environments with varied access to resources and materials. |
| Explicit instruction, independent and/or group work, and one-on-one support during daily class periods<br><br>**All students** are accessing grade-level standards with just in time supports.<br><br>Instructional practices focus on students as sensemakers and co-constructors of knowledge and students are engaging in scientific and engineering practices. | Explicit instruction, independent and/or group work, and one-on-one support through flexible scheduling of asynchronous and synchronous learning<br><br>Synchronous learning sessions may occur with full groups several times a week, rather than daily, or through some other version of flexible scheduling.<br><br>Asynchronous learning sessions provide opportunities to engage in meaningful, manageable tasks with opportunities to learn without the use of devices or the internet. |
| Evidence of ongoing student learning is readily visible or understood through discussions, student work, and other representation with focus on making sense of phenomenon and problem solving. | Evidence of ongoing student learning is collected in intentional ways through digital tools such as email, Learning Management Systems, video recordings, etc, with focus on making sense of phenomenon and problem solving. |
| Teacher and peer feedback through written feedback on student work, classroom discussions, and conferring | Teacher and peer feedback through comments in collaborative platforms, audio- or video-recorded feedback, using synchronous meeting opportunities to provide complex feedback in real-time |
| Daily interactions with students to understand student progress, struggles, and well-being | Intentionally designed check-ins to understand student progress, struggles and well-being |

# Key Shifts: In-Person to Distance Learning

## Recommended Reflection Questions

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

- What powerful instructional practices promote students as sensemakers and co-constructors of knowledge and skills? How can these practices be adapted for different learning environments?
- What instructional practices might be strengthened to promote a three-dimensional vision of science teaching and learning?
- How will you promote student engagement when modes of delivery are different than students may be used to or may change over time (e.g. rotating schedules, sudden return to online learning)?
- Which students are and are not being served in different modes of delivery?

## 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
- ★ Science Practices Supervision Tools
- ★ K–8 Science During COVID (WestEd)
- ★ SREB Online, Blended, and Hybrid Instruction
- ★ Restart and Recovery (CCSSO)

**Teachers**

Adhere to a three-dimensional vision of science teaching and learning through purposeful selection of teaching strategies and technology tools.

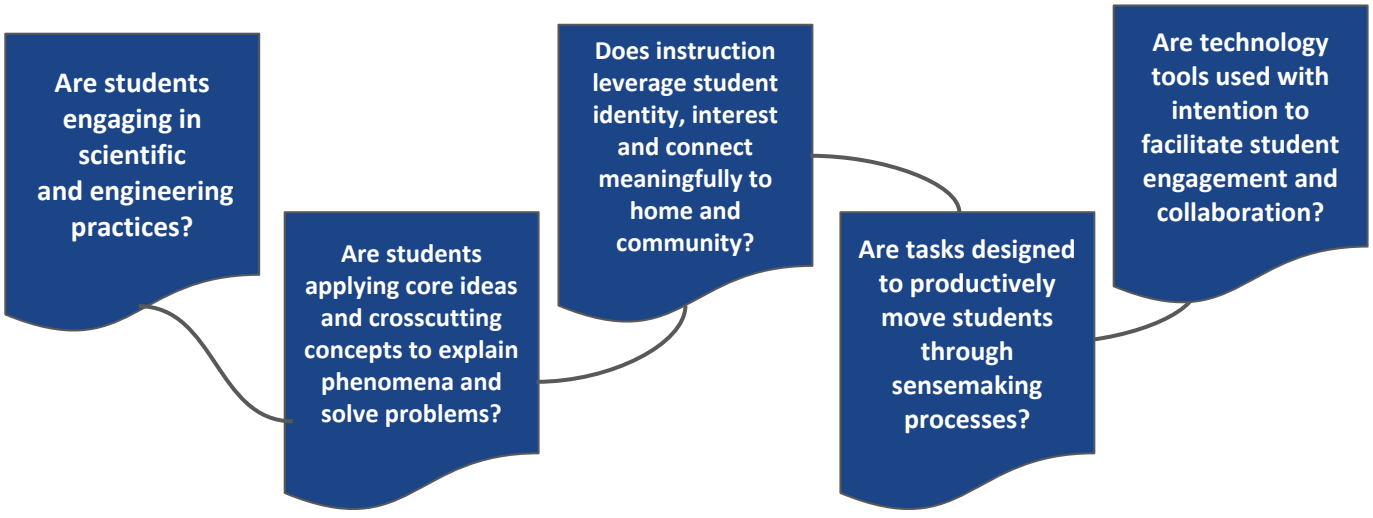
- ★ OpenSciEd Remote Teaching
- ★ inquiryHub Biology
- ★ Role of E-Learning in Science Education
- ★ Designing Productive Uncertainty into Investigations
- ★ Adapting Science for Distance Learning
- ★ National Standards for Quality Online Teaching

**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 Key Shifts of In-Person to Distance Learning




NEW MEXICO Public Education Department