NM STEM Ready! Standards Quick Start Guide 2021

Getting started:

Find the standards for your grade level (K-5) or discipline (middle school and high school). The standards come in two different arrangements, topic or discipline, but they are the exact same performance expectations no matter which arrangement you choose.

Arranged by topic:
https://www.nextgenscience.org/sites/default/files/AllTopic.pdf
Arranged by discipline:
https://www.nextgenscience.org/sites/default/files/AllDCI.pdf

If you teach 1st, 5th, MS, or HS, download the **six NM-specific standards**: https://webnew.ped.state.nm.us/bureaus/math-science/nm-stem-ready-science/nm-stem-ready-science-standards/

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What are the NM STEM Ready! Standards?

The Next Generation Science Standards (NGSS) (https://www.nextgenscience.org) in full plus six NM-specific standards (https://webnew.ped.state.nm.us/wp-content/uploads/2018/05/NM-6-Specific-Standards-Framework.pdf).

When are these standards being implemented?

Now! Standards began being implemented in the 2018-2019 school year. For assessment updates, please visit the Math and Science Bureau at https://webnew.ped.state.nm.us/bureaus/math-science/.

1. Download the NGSS app on your phone http://ngss.nsta.org/ngss-app.aspx (10 min.)
2. Watch two introductory videos http://www.nextgenscience.org/get-to-know (6 min.)
3. View the NGSS Fact Sheet http://www.nextgenscience.org/resources/ngss-fact-sheet (5 min.)
4. Learn how to read and understand the standards http://www.nextgenscience.org/understanding-standards/understanding-standards (6 min.)
1. Watch "First Steps Towards Transitioning to NGSS" https://www.teachingchannel.org/video/transition-to-ngss-achieve (3 min.)
2. Get familiar with the STEM Teaching Tools available on equity: http://stemteachingtools.org/tgs/Equity (10 min.)
3. Reflect on the shift from teacher-centered to student-centered classrooms https://busyteacher.org/14770-move-from-a-teacher-centered-class-to-student.html (10 min.)
4. Get familiar with the NM PED resources for NM STEM Ready! Standards https://webnew.ped.state.nm.us/bureaus/math-science/nm-stem-ready-science/nm-stem-ready-science-standards/ (10 min.)

Begin shifting your practice for NM STEM Ready! Standards in ONE HOUR or less

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Tools for exploring activity alignment with Next Generation Science Standards:

NGSS Lesson Screener: https://www.nextgenscience.org/NGSSLessonScreener

NGSS Card Decks (https://www.amnh.org/learn-teach/curriculum-collections/five-tools-and-processes-for-ngss/tool-1/ngss-card-decks-by-dci) part of the "Five Tools and Processes for Translating the NGSS Into Instruction and Classroom Assessment" (https://www.amnh.org/learn-teach/curriculum-collections/five-tools-and-processes-for-ngss) from the American Museum of Natural History

Interested in a local New Mexico curriculum that has undergone NM STEM Ready! Standards alignment?

Check out the Bosque Education Guide at http://www.nmnaturalhistory.org/educational-resources/sections/bosque-education-guide (as of December 2020, alignment for Chapter 4 had been completed). Appendix K is a great example of describing how activities align with NM STEM Ready! Standards.

Connecting with the Informal Education Community:

During the 2020-2021 School Year: outdoorlearningnm.org (individuals and community-based organizations offering outdoor learning support during the COVID-19 global pandemic)
Statewide Inventory of preK-12th grade Environmental and Outdoor Education Programs (currently being updated): https://eeanm.org/statewide-inventory/

ELEMENTARY SCHOOL NM STEM Ready! Standards Resources:

- LearninginPlaces.org utilizes field based science education in outdoor places for children in Kindergarten to 3rd grade and their families
- https://www.ngssphenomena.com/ is a site that collects and shares intriguing and puzzling things that happen in the world that your students can explore, and has also developed virtual science investigations.
- www.outdoorlearningnm.org has a collection of resources from Environmental Education New Mexico centered on outdoor learning
- USDA Forest Service has a Meet our Scientists video series from the Rocky Mountain Research Station at https://www.fs.usda.gov/rmrs/multimedia-gallery/meet-our-scientists
- The Sandia Mountain Natural History Center has videos about New Mexico ecosystems and activities you can do from home and a Virtual Field Experience program for APS and RRPS 5th graders in Fall 2020 that is also available to non-APS schools and homeschool groups that request it: https://sites.google.com/a/aps.edu/smnhc/home

MIDDLE SCHOOL NM STEM! Ready Standards Resources:

- OpenSciEd.org is an open source NGSS designed curriculum available free by downloading it from the internet. You can find an overview of their normal units here: https://www.openscied.org/access-the-materials/; the units adapted for remote learning units and webinars on using the adapting the instructional model to remote learning here: https://www.openscied.org/remote-learning-adaptations/
- STEM Teaching Tools: These resources for immediate support during school closures provide an overview of how to best support home-based science learning and include documents (in nine languages) geared toward family members and students. Learning menus offer suggestions for different home-based phenomena to investigate: http://stemteachingtools.org/news/2020/guidance-for-supporting-science-learning-during-covid-19
- MyNASAdata has resources organized around Earth System Science phenomena and includes lesson plans for remote learning: https://mynasadata.larc.nasa.gov/
- www.outdoorlearningnm.org has a collection of resources from Environmental Education New Mexico centered on outdoor learning

HIGH SCHOOL NM STEM! Standards Resources:

- iHub Biology: The inquiryHub biology curriculum is an open source, full-year high school biology course anchored in phenomena and aligned to the framework for Next Generation Science Standards (NGSS): https://www.colorado.edu/program/inquiryhub/curricula/inquiryhub-biology
- OpenSciEd.org is an open source NGSS designed curriculum available free by downloading it from the internet. Their high school Covid-19 unit can be found at https://www.openscied.org/covid-19-health-equity and resources on adapting to remote learning can be found here: https://www.openscied.org/remote-learning-adaptations/
- NextGenScience at WestEd Keep Teaching Science! Successful Strategies to Adapt K–12 Science Experiences for Distance Learning can be downloaded for free at https://www.wested.org/resources/keep-teaching-science/
- National Academies Press The Board on Science Education has published Teaching K-12 Science and Engineering During a Crisis can be ordered or downloaded for free at https://www.nap.edu/catalog/25909/teaching-k-12-science-and-engineering-during-a-crisis
- WestEd's Converting in Person Activities to Distance Learning Activities flyer can be found here: https://we-mss.weebly.com/uploads/8/6/4/9/8649828/in-person_to_virtual.pdf
- Other WestEd distance learning resources can be found here: https://www.wested.org/category/wested-insights/

Highlighted Resources for Adapting to Remote Learning:

- STEM Teaching Tools: These resources provide an overview of how to best support home-based science learning and include documents (in nine languages) geared toward family members and students. Learning menus offer suggestions for different home-based phenomena to investigate: http://stemteachingtools.org/news/2020/guidance-for-supporting-science-learning-during-covid-19
- MyNASAdata has resources organized around Earth System Science phenomena and includes lesson plans for remote learning: https://mynasadata.larc.nasa.gov/
- www.outdoorlearningnm.org has a collection of resources from Environmental Education New Mexico centered on outdoor learning
- The Council of State Science Supervisors has developed multiple sets of guidelines and support documents through the Community Projects Initiative to address immediate and long-term needs of the membership and greater science education community. Includes information for parents and educators. http://cosss.org/projects

Highlighted Nature- and Student-Centered Curriculum:

BEETLES (Better Environmental Education, Teaching, Learning & Expertise Sharing) http://beetlesproject.org

The NM STEM READY! Standards Quick Start Guide was developed by

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