







## WHAT'S NEW IN November 2021

### Going 3D with GRC Science Investigations with National Presenter Brett Moulding

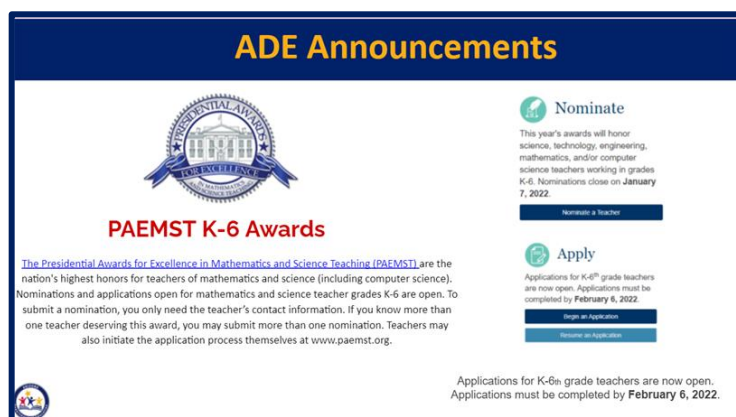
Going 3D with GRC Science Investigations with National Presenter Brett Moulding	
<b>6-12 Educators</b>  <b>March 11 &amp; 12</b>	<b>Science Professional Learning Session Details:</b> <ul style="list-style-type: none"><li>• 2 days- Friday evening virtual session &amp; Saturday in-person session</li><li>• Additional opportunities will be offered to develop lessons aligned to the Arizona Science Standards w/Brett Moulding</li><li>• Engage in 3-dimensional science investigations</li><li>• Materials &amp; texts provide by SRP &amp; Brett Moulding</li><li>• PD clock hours provided</li></ul>
<b>K-5 Educators</b>  <b>March 25 &amp; 26</b>	
<b>REGISTRATION COMING SOON!</b>	
 <b>Sponsored by ADE &amp; SRP</b>  <a href="http://srpnet.com/education">srpnet.com/education</a>	

#### Science Professional Learning Sessions Details **[REGISTRATION COMING SOON!]**

- 2 days - Friday evening virtual session & Saturday in-person session
- Additional opportunities will be offered to develop lessons aligned to the Arizona Science Standards with Brett Moulding
- Engage in 3-dimensional science investigations
- Materials & texts provide by SRP & Brett Moulding
- PD clock hours provided

**6-12 Educators - March 11<sup>th</sup> & 12<sup>th</sup> | K-5 Educators March 25<sup>th</sup> & 26<sup>th</sup>**

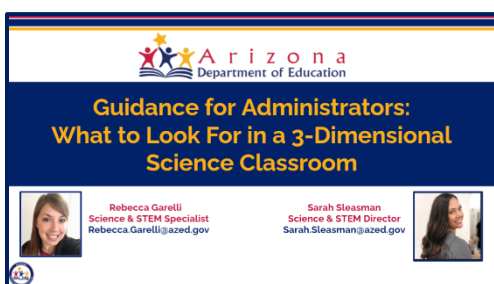
## PAEMST AWARDS



The Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST) are the nation's highest honors for teachers of mathematics and science (including computer science). Nominations and applications open for mathematics and science teacher grades K-6 are open. To submit a nomination, you only need the teacher's contact information. If you know more than one teacher deserving this award, you may submit more

than one nomination. Teachers may also initiate the application process themselves at [www.paemst.org](http://www.paemst.org). Applications for K-6th grade teachers are now open. Applications must be completed by **February 6, 2022**.

## Administrators Webinar & Toolkit



**\*NEW\*** [Guidance for Administrators- What to Look For in a 3-Dimensional Science Classroom PD Video | PDF | Resource](#)

[Page](#) - A webinar for Administrators to help with supporting educators with the transition to the 2018 Science Standards. Additionally, we have an Administrators Toolkit full of resources to help administrators support science educators. Click on our [main science website](#) and scroll down to "Administrators Toolkit."

## Using Models with GRC recorded webinar



We just finished facilitating a new webinar facilitated by Arizona science teacher leader Robyn Yewell, Arizona State Finalist for the Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST)! Robyn will facilitate this interactive professional learning experience using a 5th-grade lesson that incorporates multiple science and engineering practices, but primarily focuses on modeling, the crosscutting concepts of patterns and scale, proportion, and quantity, within the earth science core idea of

E2 (connected standard 5.E2.U1.7). Here are the links to the webinar resources: **\*NEW\*** [Engaging Students in Developing & Using Models Using Digital Tools \(w/a GRC Lesson\) | PDF | Resource Page](#)

## Webinars on the go! Watch a webinar on YOUR TIME!

### PROFESSIONAL DEVELOPMENT VIDEOS

- ▶ Recorded Webinars
- ▶ Science Standards Videos
- ▶ Timeline and Resources

ADE is pleased to announce that we have many newly recorded webinars available for use on our main Science Standards website located [here](#). Scroll down and click on the drop-down menu titled "Recorded Webinars." The webinars are now "packaged" on the website and include the video of the webinar, a PDF of the presentation, and

a resource page with links to all resources used during the live webinar! Are you new to 3-dimensional instruction and don't know what webinar to start with? Or are you ready for instructional practices to support 3-dimensional teaching and learning? ADE has a [Webinar Pathways for 3-Dimensional Science Instruction](#).

Here are the new recorded webinar packages (click links):

- **\*Updated 2/21\*** [A Look At Arizona's New Science Standards Video | Pdf | Resource Page](#)
- [5-E Instructional Model And Science Notebooks Video | Pdf | Resource Page](#)
- **\*Updated 3/31\*** [Phenomenon-Based 3-Dimensional Instruction Video | Pdf | Resource Page](#)
- [Science And Engineering Practices: 1 Of The 3 Dimensions Of The Az Science Standards Video | Pdf | Resource Page](#)
- [Crosscutting Concepts: 1 Of The 3 Dimensions Of The Az Science Standards Video | Pdf | Resource Page](#)
- [Constructing Explanations And Arguing From Evidence Using Claims, Evidence, Reasoning \(Cer\) Video | Pdf | Resource Page](#)
- [Core Ideas: 1 Of The 3 Dimensions Of The Az Science Standards Video | Pdf | Resource Page](#)
- [What Secondary Science Educators Need To Know About Performance Tasks Video | Pdf | Resource Page](#)
- [What Elementary Science Educators Need To Know About Performance Tasks Video | Pdf | Resource Page](#)
- [Sep Asking Questions: Students Drive Instruction With Driving Question Boards! Video | Pdf | Resource Page](#)
- [Transforming Science Learning: Engaging Students In The Science & Engineering Practices Using Digital Tools Video | Pdf | Resource Page](#)
- [Sepcs, Cccs, And Core Ideas: Putting The 3-Dimensions Together Video | Pdf | Resource Page](#)

## Gather, Reason, Communicate (GRC) Lessons



Are you looking for an instructional approach, and resources, that align to 3-Dimensional Instruction? Brett [Moulding's #Going3Dw/GRC website](#) has a

collection of vetted, three-dimensional lessons aligned to the Next Generation Science Standards and state standards developed from the Framework for K-12 Science Education. The lessons were developed by teachers across districts and states utilizing local phenomena. The teachers who developed these lessons participate in professional development with Brett D. Moulding and Kenneth L. Huff over the past five years. Brett was on the committee that wrote the Framework for K-12 Science Education and a lead writer of the NGSS. Kenneth was also on the NGSS writing team and has spent the last 5 years applying these lessons in his classroom. Good news! Arizona educators have written a few Arizona-specific lessons that align to the 2018 AZ Science Standards!

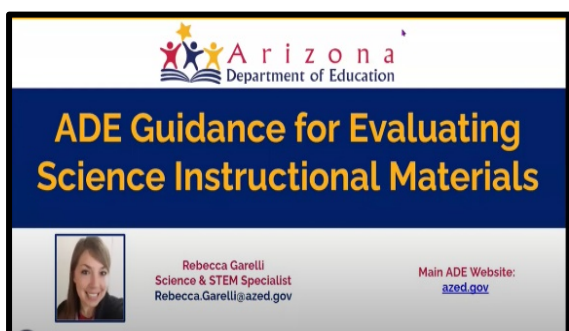
## Disciplinary Literacy & the 2018 AZ Science Standards



Disciplinary literacy in science focuses on how reading, writing, speaking, and listening are used to develop sense-making in science. ADE has created documents that illustrate how disciplinary literacy skills develop in science and possible strategies teachers can use while helping their students deepen their understanding of science content and practices. Here are

links to the ADE Disciplinary Literacy documents by grade-band: [K-2](#), [3-5](#), [6-8](#), [9-12](#).

## \*NEW\* ADE Guidance for Evaluating Science Instructional Materials



Looking for guidance when evaluating science instructional materials? Use this helpful tool, which is full of resources to help educators and district leaders understand how the Arizona Science Standards compare to the Next Generation Science Standards, as well as tools for evaluating instructional. For a quick review of this tool, watching the short video that accompanies it! [ADE Guidance for Evaluating Science Materials Resource Page | Video](#)

## AzSCI – Arizona Science Test



The Arizona Department of Education Assessment team has an [AzSCI Resource Suite](#) that highlights resources, including test blueprints, sample tests, and item specification documents.



## SRP Learning Grant



The Salt River Project (SRP) Learning Grant application process opened on Oct. 1, 2021. Teachers in K-12 can apply for up to \$5000 in funding from SRP. The process closes on February 28, 2022, and funding is given in May.

Information, application, and grant-writing tips are

at <https://www.srpnet.com/education/grants/default.aspx>

All K-12 educators in metropolitan Phoenix, Pinal County, Gila County, Yavapai County, Page, St. Johns, and NGS community chapters are eligible to apply.

- \* Develop projects and programs geared toward state-mandated competencies.
- \* Use funds for innovative teaching strategies that improve student performance objectives in math and science.

## Get SET for STEM Scholarship



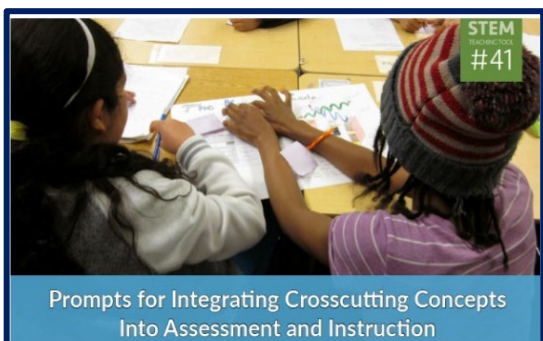
- Develop projects and programs geared toward state-mandated competencies.
- Use funds for innovative teaching strategies that improve student performance objectives in math and science.
- Certified AZ teachers: apply NOW for a \$2,000 professional development (PD) scholarship. Teachers have three years to use the \$2000. Apply at [Arizona Department of Education's website](#).

– Professional development must support a certificated teacher in gaining additional credentials (e.g., qualify to teach dual enrollment physics or chemistry) and/or certifications in math, a science subject, technology, engineering or career & technical education.

Don't delay! Teachers can re-apply EACH year, for the next 1 1/2 year ONLY, for another \$2000.

[Download feedback](#) from 7 teachers who used their \$2000 scholarship from 2017.

## STEM Teaching Tool #41

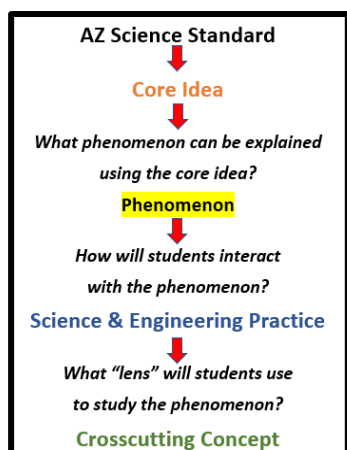


[STEM Teaching Tool #41](#), Prompts for Integrating Crosscutting Concepts Into Assessment and Instruction, is a set of prompts is intended to help teachers elicit student understanding of crosscutting concepts in the context of investigating phenomena or solving problems.

These prompts should be used as part of a multi-component extended task. These prompts were developed using the Framework for K-12 Science Education and Appendix G of the

Next Generation Science Standards, along with relevant learning sciences research.

## Phenomena-Based 3-Dimensional Instruction Resources

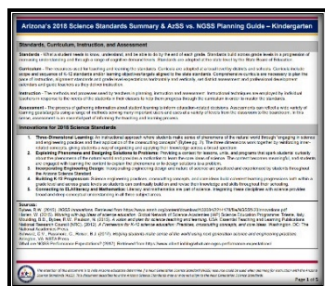


**Phenomena** are observable events that can be explained or explored. ADE developed a [tool](#) to help guide the selection of three dimensions to integrate during instruction and also encourage educators to focus on phenomena. In addition, here are two resources that can also help with selection of phenomena and designing 3-dimensional instruction: [STEM Teaching Tool #42](#) and [STEM Teaching Tool #28](#).

(The department recognizes that the acronym NGSS is consistently used throughout resources provided on our website. To ensure clarity and avoid confusion the new Arizona Science Standards and the National NGSS standards are both designed from the A Framework for K-12 Science Education with a focus on three-dimensional instruction, this includes: Science

and Engineering Practices, Crosscutting Concepts and Core Ideas. Arizona Science standards also used Working with Big Ideas of Science Education when creating the Core Ideas.)

## \*NEW\* Complete Set K-12 Summaries that Compare the AzSS to NGSS



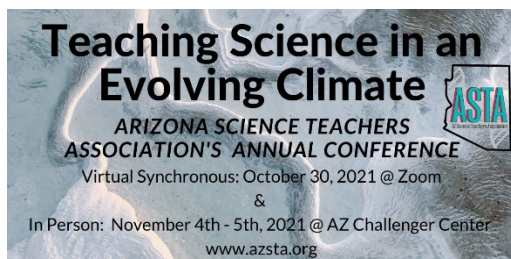
A new addition, a [complete set for K-12](#) combined into one document! Curious to know how each of the new Arizona Science Standards (AzSS) compares to the Next Generation Science Standards (NGSS)? The ADE, with the help of our Educator Leadership Team, created a new document called "Arizona's 2018 Science Standards Summary and AzSS vs. NGSS Planning Guide". These documents describe if the Next Generation Science Standards have a "strong," "partial," or "no correlation" to the Arizona Science

Standards. This planning summary and guide can help districts and educators find resources, plan lessons, and understand more deeply how Arizona Science Standards compare to the national standards. Here are the documents for each grade level, and you can also [visit our website](#) and click "Planning Tools" to find these documents.

[Kindergarten](#) | [First Grade](#) | [Second Grade](#) | [Third Grade](#) | [Fourth Grade](#) | [Fifth Grade](#) | [Sixth Grade](#) | [Seventh Grade](#) | [Eighth Grade](#) | [High School](#)

## LOCAL PARTNERS

### Arizona Science Teachers Association Annual Conference



Everyone can participate in the 2021 Conference! To kick off the conference, on **Saturday, October 30<sup>th</sup>** there will be **virtual synchronous** sessions for those who cannot attend face-to-face AND for those who want to learn more! On **Thursday and Friday, November 4<sup>th</sup> & 5<sup>th</sup>**, science educators will come together **face-to-face** to attend live sessions in Phoenix. Therefore, all PreK-post-secondary science educators and

enthusiasts can participate in this conference for advancing science education! Registration will open in September for this [professional learning event!](#)

Type of Registration	Early Bird Sale through October 15	Regular Registration Rate
2-Day Current ASTA Member Registration (Nov 4 & 5)	\$200	\$240
2-Day Non-Member Registration (Nov 4 & 5)	\$240	\$280
2 Day Pre-Service** Registration (Nov 4 & 5)	\$60	\$60
Virtual DAY ADD-ON for 2 DAY Registration ONLY	\$25	\$25
Virtual ASTA Member Registration (Oct 30)	\$100	\$120
Virtual ASTA Non-Member Registration (Oct 30)	\$120	\$140
1 Day Current ASTA Member Registration (Nov 4 or 5)	\$110	\$140
1 Day Non-Member Registration (Nov 4 or 5)	\$140	\$160
1 Day Pre-Service** Registration (Oct 30, Nov 4 or 5)	\$40	\$40

**NOTE:** District Discount - 10% group discount when at least 5 conference registrations are included in one payment

\*\*Pre-service rate is for current students enrolled in an education program and have NOT taught before. Current teachers who are enrolled in a Master's Education program do NOT qualify for pre-service discount.

## STEMAZING Project- **\*NEW\*** Resources Aligned to Arizona Science Standards!!!

DaNel Hogan from Pima County Superintendent Office has a project called STEMAZing! Her team has tons of resources, professional development opportunities, and digital notebook examples! Look for the AzSS-Aligned Resources by grade level in the [K-2](#), [3-5](#), [6-8](#), [HS](#) grade band folders. Visit the [STEMAZing project](#), [resources](#), or [register for an upcoming event!](#)

**\*NEW\*** and growing [list of AZSS-Aligned Resources](#)

You can also follow the STEMAZing project on social media & sign up for the newsletter:

[Facebook](#) [Twitter](#) [Sign up for The STEMAZing Newsletter!](#)

## Arizona Project WET Professional Development

Arizona Project WET provides real world and relevant resources to engage students' natural curiosity about the world and their place in it. Project WET's academies and workshops activate learning through engagement, exploration, concept invention and reflection. Teachers receive Arizona Science Standards-based lessons that have students doing science rather than learning about science! See opportunities at this link: [Workshops & Academies | Teacher PD \(arizona.edu\)](#)

## National PARTNERS

### National Science Teaching Association (NSTA) Web Seminars



Web Seminars are free, live professional learning experiences that use online learning technologies to allow participants to interact with nationally acclaimed experts, NSTA Press authors, and scientists, engineers, and education specialists from NSTA partner organizations. All web seminars are recorded for watching on-

demand. [Register for upcoming WebSeminars. Check out the NEW NSTA calendar.](#)

**Session Schedule:** (Please note all times reflect Pacific Standard Time)

For more information on the NASA Ames Exploration Encounter, please visit our [website](#).



# Computer Science

## Computer Science Professional Development Fund

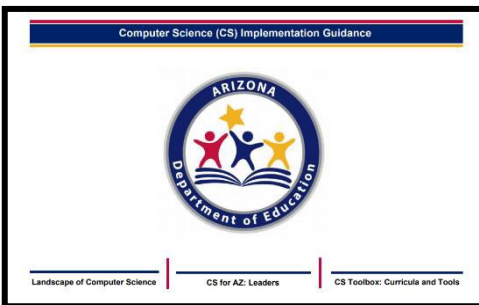


Don't miss the opportunity to receive a grant for up to \$25,000! Public Schools that offer instruction in grades 9 through 12 and seek professional development to train educators to offer a new course(s) in computer science can qualify for up to \$25,000. The [Computer Science Professional Development](#) (CSPD) grant funding is designed to be used to provide professional development for a high school teacher or teachers to **teach a computer science course that is not currently offered at the high school**. For example, if High School J offers a Code.org

class and would like add a new course in Java scripting, it could apply for funding to use to provide professional development to one or more of its teachers to begin offering the Java course. Or, if High School J does not offer any computer science courses, it could apply for funding to use to provide professional development to one or more of its teachers to begin offering a computer science course. Attached are the [Application Rubric](#) and the [Guidance Document](#) to assist you with the application process. Please reach out to [Sarah.Sleasman@azed.gov](mailto:Sarah.Sleasman@azed.gov) if you have any questions.

## Computer Science Implementation Guidance Document and Endorsement

Arizona released K-12 Computer Science Standards in October 2018 and two options for Computer



Science endorsement for K-12 teachers. To support the implementation of these standards, we are excited to present a ***Computer Science Implementation Guidance document***. This document's primary purpose is to introduce LEAs to resources that support the implementation of the new ***Arizona K-12 Computer Science Standards***. Whether integrating C.S. and computational thinking across the curriculum or adopting it as a stand-alone course, there is a need to consider C.S. implementation within the

K-12 system. As such, resources and guidance are outlined in the sections below that address the needs of the following stakeholders: school/LEA leadership, counselors, and educators. An additional section includes considerations when adopting C.S. curricula and tools. In addition, to provide guidance regarding the new options for the Arizona Computer Science endorsement, the link to a one-page document that clearly outlines the requirements for ***PreK-8 CS Endorsement*** and ***6-12 CS Endorsement*** for Arizona educators can be found [here](#).

## Computer Science Webinars and Resources from Gilbert Public Schools

If you are looking for a way to integrate the Computer Science Standards into your classroom, here are some helpful resources! Shawn Abele, an educator from Gilbert Public Schools, has been providing webinars for the agency focused on Computer Science integration. The [Computer Science Video Series](#) is found on the [Computer Science Standards Page](#).

She has also created these resources on **the Practical Application of the Newly Adopted Computer Science Standards** for [Kindergarten | 1st Grade | 2nd Grade | 3rd Grade | 4th Grade | 5th Grade](#).

## Computer Science Teacher's Association | Arizona



The [Computer Science Teachers Association of Arizona \(CSTA-AZ\)](#) is excited to announce a menu of Virtual Professional Development experiences. Many of these sessions are *free* or have scholarships & funding available, such as through the [Arizona Department of Education CSPD Fund](#). All courses apply towards the new Arizona Computer Science Teaching Endorsements for [K-8](#) and [6-12](#).