



Astronomical Society of the Pacific

Advancing science literacy through astronomy

Centaurus

NGSS Earth and Space Science Professional Development Opportunities for K-12 Teachers

The Teacher Learning Center at the Astronomical Society of the Pacific delivers NGSS-aligned professional development to help meet your district's needs. These hands-on workshops will delight and motivate your teachers to deliver three-dimensional instruction actively engaging and inspiring learners of all ages in space and earth science related phenomena.

"This was fabulous! The content was engaging and scaffolded in a way that helped it make sense and was enjoyable to learn."



Workshops cover topics using **hands on** activities such as:

- Pinhole viewers and lenses to discover how telescopes work
- Light and color explorations and the use of spectroscopy to study planets and stars
- The life cycle of the stars and how to use the H-R diagram
- Evidence-based exploration and classification of objects in the solar system
- The evidence for life, defining a habitable planet, and astrobiology
- Finding your way around the night sky with star finders
- Discovering the how and when of eclipses, both lunar and solar
- And More!

"I appreciated the predictions before observations. It allowed all of us to have those "aha" moments and ponder more about what we were seeing."

All ASP workshops incorporate the following elements:

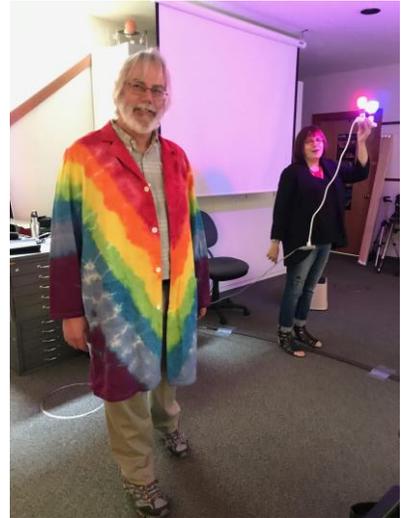


- Classroom tested, inquiry-rich activities designed to help students learn the processes of science through the study of space science.
 - Explicit alignment to the three dimensions of the Next Generation Science Standards.
 - Connections to literacy and the Common Core.
 - Astronomy connections for teachers of biology, chemistry, and physics.
- Pedagogical considerations for instruction.
 - Identifying learner misconceptions through formative assessment strategies, and addressing them utilizing guided inquiry investigations.

- Time for educators to reflect on their practice and how to adapt their instruction to integrate and incorporate space themes and content.

The Teacher Learning Center staff brings over 75 years of experience in education as they design and facilitate in-depth, engaging professional development for K-12 teachers.

- **Linda Shore, EdD: ASP CEO**, and former Director of the Teacher Institute at the Exploratorium; she also played an important role in the development of Project STAR, and production of the film *A Private Universe*.
- **Brian Kruse, MS; ASP Director of the Teacher Learning Center**, former field center coordinator for the NASA Explorer School project, Regional Director for the National Science Education Leadership Association, and middle and high school science teacher
- **Theresa Summer, BS; ASP Astronomy Educator**, former high school teacher, planetarium presenter at the California Academy of Science, and educator at the Exploration Encounter at NASA Ames Research Center.



Brian Kruse and Linda Shore

“It was interesting and being able to actually do the activities made it memorable and easier to teach to my students.”

Duration

Professional Development is customizable for your district’s particular needs. Possible professional development scenarios include:

- Half-day single topic session.
- Full-day in-depth integration.
- Multi-day immersion in space science including learning progressions.

For more information, contact:

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