TESTA Presents: It's All in the Phase  
*Thursday November 7, 8:30 - 9:30 am AND Friday, November 8, 10-11 am*
This workshop is based on the STAAR Objective 8.7(B): Earth, Moon and Sun. This section will engage learners by creating their own lunar phases in relationship to the suns position while incorporating a language arts component into the kinesthetic activities.
*Scheduled Room: GRB 352 C*
Presented by Devalyn Rogers and Nana Baffour

Formative Assessment Strategies for Earth and Space Science  
*Thursday, November 7, 8:30- 9:30 am AND Friday, November 8, 8:30-9:30 am*
Do you know if your students have mastered concepts like lunar phases after the lesson is over but before the test? I will provide you with multiple strategies to assess student understanding during the lessons. You can also use them as test review strategies. While the topics we will use as examples are Earth and Space Science, the strategies themselves can be used for other science content as well.
*Scheduled Room: GRB 322 A*
Presented by Sudeshna Lahiry and Christine Shupla

TESTA Presents: Seasons  
*Thursday, November 7, 12:30 – 1:30 pm*
Do your students struggle with the reason for seasons? In this hands-on, activity-rich workshop, participants use a variety of data sets, observations, and models to develop an inquiry-based understanding of seasons. We will incorporate formative assessments and discuss common misconceptions. Participants will receive resources and hands-on activities.
*Scheduled Room: GRB 342 BE*
Presented by Christine Shupla, Kira Arter, Nana Baffour, and Carrie Stokes

Scaling the Solar System  
*Thursday, November 7, 2 – 3 pm*
Students often have misconceptions about the sizes and scales of the Sun and the planets in the solar system. Come model the sizes of planets and their distances from the Sun using simple activities, with a focus on the Sun, the Earth, and the Moon; learn about the student misconceptions, and hear a variety of memorization strategies to assist with the order of the planets and vocabulary terms such as rotation and revolution. Participants will leave with classroom-ready activities.
*Scheduled Room: GRB 332 AD*
Presented by Sudeshna Lahiry and Jennifer Brian

Understanding the Weather Through Data  
*Thursday, November 7 • 3:30 - 4:30pm*
Are you looking for some hands-on activities that explore the relationship between the Sun and the heating of the oceans to explain the formation of weather? During this workshop, we will use NASA satellite observations of surface temperature to compare land and ocean temperatures, and trace the path of a hurricane to show how it extracts the heat energy from the ocean as it passes through. Participants are encouraged to bring their laptops with them.
*Scheduled Room: GRB 332 AD*
Presented by Sudeshna Lahiry and Jennifer Brian

For more information and resources about workshops at CAST, go to [http://statweb.org/cast/program](http://statweb.org/cast/program).
For more information about STEP, go to [http://www.lpi.usra.edu/education/step2012/](http://www.lpi.usra.edu/education/step2012/)
Workshops planned and organized by the STEP program for CAST 2013

FRIDAY

'Peeling' Back the Layers of Google Earth
Friday November 8, 8:30 - 9:30 am
Come explore the many layers of Google Earth and discover that it is more than mapping your way to Grandma's house! Discover tips and tricks pertaining to a variety of Grades 6, 7, and 8 Science TEKS as you peel back the many hidden layers of Google Earth.
Scheduled Room: GRB 332 AD
Presented by Stephanie Montez, Melissa Ponce Gonzalez, Marlene Portier, and Janie Spies

Formative Assessment Strategies for Earth and Space Science
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Scheduled Room: GRB 322 A
Presented by Sudeshna Lahiry and Christine Shupla

TESTA Presents: Components of the Universe
Friday, November 8, 10 -11 am
Do your students understand the difference between the solar system, galaxy, and universe? Come examine the components of the universe and where they belong through hands-on activities that encourage small group discussion to advance learning, and quick strategies to assess your students' understanding.
Scheduled Room: GRB 342 BE
Presented by Christine Shupla, Jan Grout, and Carol Waters

TESTA Presents: It's All in the Phase
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Scheduled Room: GRB 352 C
Presented by Devalyn Rogers and Nana Baffour

I Feel the Earth Move Under My Feet
Friday, November 8, 11:30 am - 12:30 pm
Engage your students' curiosity with formative assessments that challenge them to explore their thinking as to why volcanoes erupt and Earth's surface sometimes trembles. Have your students participate in the discovery process that led Wegener to his Theory of Continental Drift and build models that illustrate Harry Hess's Seafloor Spreading Theory. Lead students in an inquiry learning experience using the latest geologic data sets that support the current Plate Tectonics Theory.
Scheduled Room: GRB 342 AD
Presented by Carol Waters, Jan Grout, and Angela Ruggeri

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For more information about STEP, go to http://www.lpi.usra.edu/education/step2012/.
Workshops planned and organized by the STEP program for **CAST 2013**

**SATURDAY**

**The Heat is ON: Exploring the Interactions of Sun, Sea, and Sky!**  
*Saturday, November 9, 10 -11 am*  
Do you need a potpourri of tools, tips, and tried and true 5-E lessons used by eighth grade veteran teachers to help teach STAAR testable TEKS related to weather? Come join us to experience hands on learning activities that engage the brain and receive great ideas from new resources for teaching or the review of weather standards. Everybody attending will receive a weather review manipulative for and several door prizes will be awarded for those attending the entire session.  
*Scheduled Room: GRB 332 AD*  
Presented by Jennifer Brian, Sudeshna Lahiry, and Carrie Stokes

**Catch the Wave: Investigating Space with Visible Light**  
*Saturday, November 9, 11:30 AM - 12:30 PM*  
"How can we possibly know what makes up a planet if we've never been near it?" This kind of great skeptical question can be a nightmare when teachers can't explain the answer! Join us for an easy classroom activity to demonstrate properties of visible light and follow it up with a hands-on activity using a spectrometer and rock samples, showing how those properties are applied to understand the composition of foreign bodies. Teachers will receive activity instructions and resources.  
*Scheduled Room: GRB 360 BE*  
Presented by Meredith Harris, Jason Merik, Brandy Laney, and Kim Blain

**The Portable Universe: Modeling Gravity in Your Classroom**  
*Saturday, November 9, 1 - 2 PM*  
Playing with the fabric of space time in your own classroom? It is possible! Learn how to build your own gravity demonstrator device for about $50 in materials. In a session appropriate for middle or high school classes, we will demonstrate concepts concerning gravity including the accretion model of the development of our solar system, why orbits are round, factors affecting gravity, black holes and wormholes, and more. Links to find detailed instructions and online videos will be provided.  
*Scheduled Room: GRB 360 BE*  
Presented by Meredith Harris, Jason Merik, Brandy Laney, and Kim Blain

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