

Fall 2012 TSAAPT WORKSHOPS
Texas Tech University - Lubbock
October 26 – 27, 2012

FRIDAY A.M.

W1 **“Relativity”**, presented by David Lamp, Texas Tech University and Karen Jo Matsler,
HS UT-Arlington
 Special and General Relativity both play a role in how GPS systems work. Join us in some content on relativity and for a learning cycle in helping your students understand why relativity is important.
Limited to 24 participants – 1.5 hours – Cost \$4.00

W2 **“Penguin Race”**, presented by Trina Cannon, Highland Park High School, Dallas
E/MS Energy conservation is on everyone’s mind these days. But just where does it go and what is its source? Here’s another toy that will help us trace electrical energy to kinetic energy as the penguins march on.
Limited to 24 participants – 1.5 hours – Cost \$4.00

FRIDAY P.M.

W3 **“What IS a Higgs and where did it come from?”**, presented Evelyn Restivo, Waxahachie
HS Early College High School
 A look at LHC, CERN, the HIGGS. Background information on what they were looking for and how they found it and what it means for you and your students.
Limited to 24 participants – 1.5 hours – Cost \$4.00

W4 **“Science in Literature”**, presented by Karen Jo Matsler, UT-Arlington
E/MS We are never too young or too old to enjoy a good piece of literature. Integrating science and literature results in the development of reading skills while helping students discover the wonders of science. This session will focus on learning activities for *The Very Lonely Firefly* and *Why Mosquitoes Buzz in Your Ear*. The lessons are designed for upper elementary but could be adapted for any grade level.
Limited to 24 participants – 1.5 hours – Cost \$4.00

W5 **“If Pigs Could Fly”**, presented by Trina Cannon, Highland Park High School, Dallas
HS Centripetal force seems to be a challenge for students and we are typically using stoppers, string, tubes and slotted masses (that always crash to the floor). But if we use a toy that reminds them of an amusement park ride, we can get the message across and have some fun. Come and see if pigs can fly!
Limited to 24 participants – 1.5 hours – Cost \$4.00

W6 “Alternate Forms of Energy”, presented by Joel Palmer,
E/MS Build Toys! Learn Science! Is your science program preparing students for success on the Grade 5 and 8 STARR? Put the fun back in physical science and find the “E” in STEM with TeacherGeek! Explore a K-12 vertical alignment of physics concepts in energy & motion integrated with engineering practices. Participants design, build and test a Wind Turbine, they will experience engaging, hands-on lessons that can be used in their classroom to teach important physics concepts aligned with the TEKS. FREE materials to take back to your classroom!
Limited to 24 participants – 1.5 hours – Cost \$4.00

SATURDAY A.M.

W7 “Optics Made Easy”, presented by Leslie Richburg, Plainview HS
HS Optics Made Easy! Whether you are teaching optics in elementary or for the high school Physics EOC, this workshop will break down the concepts for you, give you a hands on understanding of how to conduct optic labs, and brush you up on making lens calculations.
Limited to 24 participants – 1.5 hours – Cost \$4.00

W8 “Physics of Toys”, presented by Evelyn Restivo, Waxahachie Early College High School
E/MS Come and join the fun: Learn how to use toys that bounce collide, fly, jump, move, pop, roll, rotate, spin, and methods designed to use them to teach physics in your classroom as demonstrations and activities. Appropriate for all grade levels..
Limited to 24 participants – 1.5 hours – Cost \$4.00

W9 “Conservation of Energy and Momentum”, presented by Chad Hawkins, LISD and David Lamp, TTU
HS Students often struggle with the concepts associated with the conservation of energy and momentum. This session focuses on the use of computer simulations and a capstone project to help students learn concepts and calculations associated with these concepts.
TEKS addressed: P.6BCD
Limited to 24 participants – 1.5 hours – Cost \$4.00

W10 “Magnets Playing the Field and Shocked Electrons as Witnesses”, presented by Jess Dowdy,
E/MS Abilene Christian University
A shocking experience, for electrons, will develop, as you investigate basic circuit components, interactions and designs. You will also experiment with magnets and magnetic fields. You will build a flashlight, motor, compass, and several other simple electromagnetic devices that demonstrate basic electromagnetic properties and interactions. The equipment kits, and curriculum you will use, are yours to take back to the classroom. This workshop is aimed at the novice in electricity and magnetism.
Limited to 24 participants – 1.5 hours – Cost \$4.00