Innovative Teaching Grants 2014-2015

Engineering Rendering System (E.R.S.) – *Tualatin High School* - Allows students the ability to take their complex engineering ideas and creations and put them into a computer (E.R.S.) that will create accurate presentations on paper and in 3D. Students are preparing to work on college credit for 3D Graphics and Modeling, and this system will aid them in opening the doors to their creativity, and to producing a final project. The E.R.S. will also provide the computational power to assist students with compiling complex code for programming classes. This project was categorized as being highly innovative in STEM (science, technology, engineering, and math) concepts.

Tooling up to Technology (Laser Cutter and Engraver) – *Hazelbrook Middle School* - For the past 20 years, the Technology Class at Hazelbrook has been able to keep up with technology on the computer side, but the tools that are used every day in the production area are highly outdated (over 35 years old). The purpose of this project is to help students produce the products they design, and to do so using current modern manufacturing tools and in a professional manner. Students will be able to take designs that they create on the computer and have the laser cutter cut the parts for the project to the exact size and dimension of their drawings. This is important to the design process so that students can test their designs, make modifications, and complete their project successfully using creativity and hands on techniques. This projects brings cutting edge technology and real world experience into the classroom focusing on the importance of STEM (science, technology, engineering, and math).

Electronic Vehicle Diagnostic (Oscilloscopes) – *Tigard High School* - Purchase of an Oscilloscope to give students an inside view of how vehicle computers process data. This provides students with a relevant and rigorous real life learning opportunity that they can apply to their post-secondary career plans. Students can collect real meaningful data, process that data, and compare it to good specifications. Students will obtain the diagnostic and problem solving skills/tools to help diagnose today's complex vehicles, along with skills and training that they can use for a lifetime.

Removing All Barriers to Participate – *Tualatin High School/Hazelbrook Middle School* - This program is centered on removing all barriers for participating and getting involved in the after school athletic program of Wrestling. It will provide anyone in need of Wrestling shoes and/or headgear the opportunity to check these items out through the wrestling shoe and headgear "library", thus removing any barriers a student may encounter for socio-economic reasons. Wrestling is a no cut sport, and this program is a "Vehicle of Opportunity", making it possible for anyone to participate regardless of race, gender, size, or financial situation. Most importantly, this program will help build in each Wrestling participate work ethic, sacrifice, dedication, confidence, and true grit.

Maker Space – *Fowler Middle School* - After attending the Maker Fair at OMSI, this teacher was inspired to bring a computer aided design technology to his school. Creating an After School Activity and a summer SEED program so that students will see the value in using

their own creativity and ingenuity to make products using a 3D printer, and a plot cutter. Students will create designs for products such as Legos, guitar picks, gliders, and airplanes and will use the plot cutter to cut out two dimensional objects in cardstock, poster board, or balsa wood to assemble them into the creations they truly envisioned. There are many steps in the process, and this program will teach students the use of 3-D printers, Autodesk Fusion 360 software, and the plot cutter to design and physically produce their own imaginative creations.

Makey Makey Program – *Fowler Middle School* - The Makey Makey is a device designed by two MIT students consisting of a motherboard and a USB connector. Once connected, everyday objects such as bananas, Play Doh, and lemons can become a touch pad with the help of alligator clips that connect the objects to the motherboard. Much of a student's day is structured by standards and learning objectives, and this program will allow students to be imaginative and inventive. The Makey Makey will allow students the opportunity to explore, design, and create. It will create a mindset of curiosity, helping to foster an environment where students are excited about engaging in new ideas. The program will be offered as an after school program, and can be used in the 6th grade Engineer and Design elective.

Innovative Teaching Grants 2013-2014 Winners

Ukuleles for 5th Grade Music Class : Rosalie Brown-Lundh, *Deer Creek Elementary* – Purchase 35 ukuleles to be used in music class for all 5th grade students. This would give Rosalie a great tool to introduce and teach students the ukulele, and also to learn music from another part of the world. Rosalie has already trained herself to play the ukulele, she had a great curriculum plan, and plans to use the ukuleles for years and years to come lending to a very sustainable project.

Innovative iPad STEM Project: Jen Cannon, *CFT Elementary* – Purchase 15 mini iPad's to help foster STEM (Science, Technology, Engineering, Math). It emphasizes the need for more "STEM" in every child's learning as our world changes and technology continues to develop. The iPad's will be used by all 4th grade students who will integrate the subjects of STEM and develop an interactive science/engineering project. The first project planned is creation of a bottle rocket where the students engineer prototypes, test data, modify, and redesign their projects using a highly interactive technology tool. The plan is to incorporate at least one STEM activity using the SAMR (Substitution---Augmentation--- Modification---Redefinition) model on the iPad's each quarter.

Common Core Achievement for All: Jo Barendse, *Mary Woodward* – Purchase a two---year license for new software that will help integrate technology for all grade levels and help ALL students improve/achieve on the new state standards tests (CCSS). The new software "MobyMax" does an initial assessment for each student, creates a learning plan, assesses and diagnoses each student's progress, and motivates students to learn and push themselves more when using the program. They are currently

piloting MobyMax in the 5th grade utilizing a free version, and would like to continue/expand the program to all grade levels. As per the applicant, "It has been very exciting and students are very motivated to use this challenging, rewarding, and motivating resource."

Drumming Up Support for Music**:** Lisa Hauske, *Twality Middle School* – This grant was partially funded to allow for the purchase of marching bass drums and a marimba for an afterschool program called Cadet Drumline. This Drumline will allow ANY student the opportunity to learn about rhythm, memorization of music, poise in performance, ear training practice, and perseverance and dedication. Previously these instruments were borrowed from the high school making it very difficult given schedules, transport, and availability. Lisa was more than willing to run this program on her own, and hopefully will offer it to students at other TTSD middle schools.

LP & R: Listen, Practice, & Read Together**:** DeeAnn Albaugh, Templeton Elementary – Using iPods and CD players to implement a reading program to actively engage English Language Learning students and parents in daily reading. FTTS worked with the district to secure 15 iPod Touches that are no longer being used to supplement this program. The teacher will record proper pronunciation of letter and word sounds, and the student can listen to the iPod to hear and practice them correctly. After an in---home training, DeeAnn would set up a weekly schedule for the iPod to go home with the students with directions for the lessons to be completed. DeeAnn plans to expand the learning plan as the students skills improve, with the goal of increasing early literacy skills.

Innovative Teaching Grants 2011-2012 Winners

Learning Through GPS – David Reines, *Fowler Middle School* – By using GPS systems, social studies and Geo---Cache Club students will learn about basic geography skills, map reading skills and navigational techniques, all while problem solving and working in teams. These skills are not currently taught in middle school.

Lego Robotics Club – Liz Ryan, *Hazelbrook Middle School* – Students will use Lego Robotics kits to create moving Lego robots. This program is proven to spur interest in math, science and engineering. It encourages creative design, critical thinking and team work using a medium popular with kids – Legos! Many students from feeder elementary schools are introduced to this technology and they can build on their knowledge in High School by participating in Robotics clubs. This offering in middle school is a critical bridge to the curriculum.

Proficiency Physics – Chris Murray, *Tualatin High School* – Purchase of Interactive Physics software, the final element in the school's web---based proficiency program for physics. Interactive Physics is modeling software that simulates labs normally too expensive to conduct. For example, students can show a solution to a complex

projectile motion problem and add it to related videos that explain how to do a particular problem.

Wildcat Drum Team – Teresa Sakaguchi, *CF Tigard Elementary* – The Wildcat Drum Team will create an active, self-esteem building activity for at-risk kids. The team will perform for school events and at the Junior Rose Parade Summer 2012. The goal is to increase attendence and lower referral rates of at-risk students.

Innovative Teaching Grants 2010-2011 Winners

SIOP Intervention Classroom Model: Dave Paldino, *Fowler Middle School* - SIOP is a set of teaching strategies that call on all of a student's senses to improve learning. These strategies will be used in students' projects that will be incorporated into a replica of the Boston Red Sox "Green Monster" wall. This model will capture student interest and give them skills that will carry over to other classes.

Nike+ Sports Bands: Jeff Risher, *Metzger Elementary* - Fifth graders will use Nike+ Sports Bands to measure physical activity. By monitoring how their active lives produce results, students will be encouraged to achieve healthy lifestyle goals.

Healthy Kids=Better Students: Connie Jolley, *Tigard High* - New this year, the school's Individual Fitness class serves those who do not succeed in traditional PE settings. Funds will buy heart rate monitors to ensure they are exercising in target heart rate zones while working toward their final 5K walk/run.

THS Ceramic Program Start Up Fund Greg Johnson, *Tigard High* - Ceramics was reintroduced to Tigard High this year with overwhelming popularity. Although 1,000 kids signed for this elective, the program can only support six classes serving 450 students per year. Grant funds will purchase building materials to build an outdoor kiln studio. The studio will house a recently purchased gas kiln that cannot be used until a safe area is constructed.

Innovative Teaching Grants 2009-2010 Winners

Reaching Out With Reading – Cheri Gamache and Sue Scott at Alberta Rider Elementary School understand the need to provide all students with ample reading opportunities. Studies show that students who are reading at grade level by the third grade are much more likely to succeed once they reach adulthood. Gamache and Scott aim to bring a reading program to where a group of students live – Riverwood Heights Apartments. These students have traditionally been unrepresented at school---related literacy functions. The grant money will allow Gamache and Scott to buy a variety of levels of books to create a lending library at the apartment complex. In addition, they will provide a reading outreach program that will include read aloud time and individual reading workshops.

Literally...It's Science! – Kindergarten teacher Diane Bonica is blurring the line between reading and science. With this grant, kindergarteners at Deer Creek Elementary will conduct science experiments directly related to stories they are reading in class. When they read about houses, they will "saw" their own sawdust. When they read about autumn, they will collect their own leaf samples. When their reading word is "oviparous", they will do egg experiments. As soon as the science materials are purchased through this grant, science and reading will come alive at Deer Creek.

Social Studies Alive: Biz Town – Fifth graders at Durham Elementary School are about to have new life breathed into their social studies program. Their teachers, Pam Kenyon, Ronnie Proudfoot, and Stacy Newman, want to provide them with the Jr. Achievement course in economics. The culmination of the program is a full day experience called BizTown. The grant money will allow the students to attend BizTown where they will assume a variety of roles: starting and running businesses, applying for jobs, paying bills, etc. These fifth graders will have a "real world experience" to enhance their understanding of the complex and abstract concepts they are required to learn this year.

Literacy through Photography – Students at all levels struggle with the writing process. They often view it as something disconnected from their own lives. Through this grant, Fowler Language Art Teachers Kristin Sacks and Jill Flores will have students to explore the world as they photograph scenes from their own lives and then use those images as a catalyst for verbal and written expression. Sacks and Flores seek to improve their students' quantity as well as quality of writing.

Cordero Reference Library – The Cordero School is a small alternative high school within the Tigard--- Tualatin School District that serves students in court ordered residential treatment. The students have a small on---site library at the school, however the reference material is sadly out of date. The grant money will allow them to purchase a new set of encyclopedias.