

### Science Shenanigans at Kids Zone

In the past decade, the subject of science has had new avenues constructed in its academia. These new routes have spread beyond the scope of lecture and text books and are being taught by hands on laboratory experience. These lab experiences are what the students at Kids Zone are obtaining while gaining hands -on working knowledge of 21st Century technology.

This coming year, the science program at Kids Zone will be undertaking new hands on academics that will focus on the STEAM (Science, Technology, Engineering, Arts, and Mathematics) project.

Students will be engaged in engineering and computer programming during various projects with Lego Robotics. They will learn how to design and build their own ROV ( Remote Operated underwater Vehicle). They will learn about Renewable Energy Engineering and then design and build their own portable Wave Energy device and Wind Energy Turbine.

Lastly, students will also be engaged in a biological aspect with rearing salmon from the egg stage to the fry stage. Students will be working on this project to learn about the fragile environment salmon must have in order to survive.

### Neighbors For Kids

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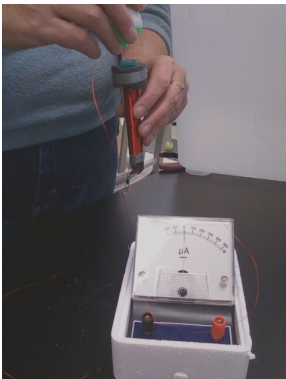


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- **Editor**  
- Jenny Green
- **Reporter**  
- Jeremiah Gower

### Renewable Energy Engineering- Wave Energy & Wind Turbines

On the central Oregon coast, wave energy has become a hot topic and here at Kids Zone we believe it is important for students to learn about this new energy resource. There are a few types of wave energy devices, but the type of device the students will be working with are surface devices. Each student will construct their own mini wave energy turbine and then test their creations with an electrical volt reader.

The second aspect of Renewable Energy Engineering are wind turbines. Students have participated in the construction of mock turbines and have started to learn the mechanical engineering formulas for making these turbines work.



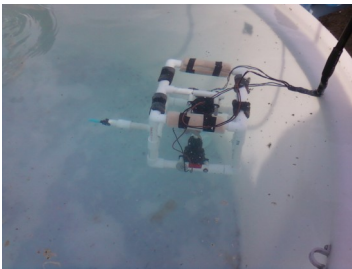
## Lego Robotics

Students will be given the opportunity to work with Lego Robotics in the science and computer lab. Students will be learning and utilizing in conjunction an engineering aspect with a computer programming software to design and program their creations. In the beginning, students will learn how Lego Robotics work. They will be building sumobots, dragsters, stair climbers, catapults, and street sweepers. Once these projects are mastered, students will be challenged to use their imaginations and engineering abilities to come up with their own designs, build them, and then program them to perform various tasks. The software that accompanies these projects will afford students the opportunity to learn about computer programming and coding. Many future careers and job opportunities will require the skills learned during these activities.



## ROV- Remotely Operated Underwater Vehicle

Another exciting venture for the students at Kids Zone this year will be learning how to design, build, and operate a ROV. This is our first experience with this project and students will be using the PufferFish kit from Sea Mate. The kit contains motors, wiring, and a circuit board that students will have to put together. Students will have to design their own ROV creations and will be given PVC piping and joints to make their ROV's. Students must make the ROV's buoyant, be mobile throughout the water column and "sea floor", and have an extension that can pick up items and open containers.



Once their ROV's are constructed, students will be allowed to test their designs in the local stream in Depoe Bay; then they will be allowed to make any corrections needed. Once students have an adequate ROV, they will be given the opportunity to attach a camera with an underwater housing device and explore the bottom of the stream and possibly explore the bottom of the local harbor as well. This technology is commonly used by NOAA and other scientific research organizations. The youth here at Kids Zone are learning valuable skills for a career in science and technology.

## Egg to Fry Program

The Egg to Fry Program is coordinated with the Salmon Trout Enhancement Program through the Oregon Department of Fish and Wildlife. This program is utilized to teach children to observe and participate in the development of fish and understand their habitat needs. Things students will learn about include the amount of limited light required,

temperature needed for egg survival and growth, the amount of oxygen needed, pH balance, the use of gravel, food, and protection needed from predators.

The eggs will be placed in a 10 gallon aquarium with a filter system and cooling system which can easily hold 200 eggs up to the fry stage.

The students at Kids Zone have already learned about the biology of salmon such as habitat needs and biology. This program however, will allow for the students to learn with hands-on experience and see live results of their work put towards the lab. Fisheries education is valuable for the next generation of youth, and Kids Zone is proud to focus on environmental stewardship.

## The Teen Corner

"Hey man, want a smoke or a drink?" This is what I hear all around school, and most the time this comes from the 10th, 11th, and 12th graders. The law states a person has to be at least 18 to smoke or buy any kind of tobacco chew, cigarettes, or hookah. Sadly, 2.8 million teens use drugs, alcohol, and tobacco at school on a daily basis and don't get caught (Health Day). This battle with drugs and alcohol is what 6th -12th graders have to deal with every day because it is all around them. One reason kids succumb to this battle is because of peer pressure saying it's "cool" or we're "just having a good time." It's this peer pressure that has played a big role in the abuse of drugs, tobacco, and alcohol.

A major issue facing teens is Cannabis, which is used by over one million teens a day (Health Day). Most times no one finds out so no repercussions are put toward the kid. Somehow teenagers get ahold of it and peer pressure sets in to smoke it to "fit in". I personally believe that it should only be used for medical reasons and not to have a "good time".

Another issue that occurs behind the wheel is drinking alcohol. Each year, approximately 5,000 young people under the age of 21 die as a result of underage drinking; this includes about 1,900 deaths from motor vehicle crashes (Health Day). There are too many kids that are getting their hands on this so called "party in a can" and what many kids don't understand is how bad alcohol can be for them.

A thought you are probably mulling around in your head is, "Why should I care?" Well, teens are dying every day because of this abuse. It doesn't take place in one certain community, but rather, in everyone's community. We teens have at our disposal not only alcohol, tobacco and "soft drugs", but also many hard drugs such as cocaine, crack, and meth. It seems that no one does anything about these issues because many kids are still abusing. The one thing I don't understand is how teens get their hands on these items. The only option I can see is that older kids are selling them to the younger ones. What I ask, is for more help from the adults in the community to keep kids from succumbing to these issues. I hope one day, parents and teachers can put a stop to this abuse. Jeremiah Gower- 7th Grade Taft High School

Health Day: News for Healthier Living. Amanda Gardner. 22 Aug 2012. "Many Teens Drinking, Taking Drugs during School: Survey." 14 January. 2014. <<http://consumer.healthday.com/kids-health-information-23/kids-and-alcohol-health-news-11/many-teens-drinking-taking-drugs-during-school-survey-667898.html>>

## Kids Zone's Kid of the Month!!

Name: Jordan Ramage

Career: Micro Robotic Engineer or  
Underwater Robotic/Mechanical Engineer

School: Taft Elementary

Grade: 4th



## Kids Zone Neighbors For Kids

Neighbors For Kids  
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Phone: (541)-765-8990

Website: [www.neighborsforkids.org](http://www.neighborsforkids.org)

*Neighbors For Kids is a 501(c)(3) public charity,*

*EIN 93-1262846*

*"Neighbors For Kids is an equal opportunity provider"*



**Mission Statement:** Neighbors For Kids' mission is to provide youth in our region with educational enrichment, positive youth development, and recreational activities; all in a safe environment which focuses them toward healthy lifestyles and leads them to become responsible, contributing adults.

Our staff and volunteers are dedicated to helping kids reach their full potential.

We are always interested in new volunteers, so please give us a call, if you'd like to apply to become a volunteer—working with youth groups is a great way to spend your time!

Neighbors For Kids would like to thank our donors and sponsors for supporting the Kids Zone Program's educational activities. In 2014, NFK's programs have been generously supported by M.J. Murdock Charitable Trust, The Collins Foundation, Fred W. Fields Fund of The Oregon Community Foundation, Trust Management Services, LLC, The Safeway Foundation, LCSD's 21st Century Community Learning Center - O.C.E.A.N. Project, Samaritan Health Services, Lincoln County Community & Economic Development Grant Project and individuals from the community.

## Read and Feed!



### **Please join us for a Stone Soup Read and Feed!**

The kids will be baking bread bowls during Kids Zone that day which will be used to serve our Stone Soup in the evening. In the spirit of this story, we are asking families to bring in a soup item of their choice to contribute to the pot!

**When:** Tuesday January 21<sup>st</sup>, 2014  
6:15 – 7:45 pm

**Where:** Neighbors for Kids, Depoe Bay

**RSVP:** Please call 541-765-8990, or email [amberdawn.nfk@gmail.com](mailto:amberdawn.nfk@gmail.com), to let us know how many will be attending from your family so we can plan for dinner., or sign up at Kids Zone.



**\*\*It is important to notify staff if you plan on attending and your student usually rides the bus home. Without prior notification, staff will be unable to keep your child from boarding the bus home.**

*Please join us!!*