Course Overview:

There was a time when people laughed at the thought of most households having a computer. Times have changed you are invited to join the next big thing in technology. 2013 may be the year of 3D printing, when this three-decade-old technology finally becomes accessible and even commonplace. We will focus on how 3D printing can and will change the world. During this course you will learn the basics of 3D design and printing and basic electronics as we build a 3D printed prosthetic for someone in need, as well as a couple of 3D solar cellphone chargers – (one for you and another for a refugee).

What You Can Expect from this Workshop:

* A clear overview about 3D printing and the design process.
* How to create objects in a 3D environment.
* Working with others to solve a real world problem.
* Introduction to soldering and electronics.

What We Will Do Each Day:

**Thursday, August 4, 2016 All Aboard The Z Plane**
I am sure that they talk about the X and Y planes in your math class, but for this workshop it's all about the Z plane and frankly it takes a bit of getting use to. Have no fear though because we going to use TinkerCad’s to create our models. Today we are going to learn basic concepts used in 3D design such as moving, snapping, cruising, grouping objects, edges, faces, and points. Many of the tutorials will be presented with short tutorial clips allowing students to work at their own pace and review topics as need. Each student will be given a 3D printed prosthetic kit to assemble and donate to national charity.

**Friday, August 5, 2016 – Another Day, Another Tool**
We are going to explore the fundamentals of electronics and creating a circuit, soldering, and how to use a multi-meter. We will build and test solar powered cellphone chargers. Lastly you will work in small groups, using the skills that you learned to design the next invention to change the world.

Presented by Ray Kinne, San Diego Unified School District
Ray Kinne has taught various forms of programming for the last 15 years for San Diego City Schools and SDSU. He sees the computer as a way to create and generate art in a modern society. He invites you to join him.

**Prerequisites:**
- Must be a current middle or high school student in grades 7-10.
- Interested in learning the basics of computer coding in creative and fun manner
- Willingness to work in teams
- Eager to ask questions, share ideas, and help others in the class

**Course fee:** $100.00

Registration is open until filled. Register early as space fills quickly. Space is limited.

If you have any questions regarding this workshop or the application process, please contact Ange Mason via phone at 858 534-5064 or via email at amason@ucsd.edu.