



### **1) Brief summary of Summer 2015 programs**

Onward Bound Teen Workshops at Hennepin County Juvenile Detention Center (OB--JDC) and Onward Bound Tween Discovery activity at Science Museum of Minnesota (OB-SMM) brought measureable goals of hope to the lives of disadvantaged North Minneapolis youth. Every one realized potential, became connected, involved and captivated by activities in the projects. Students experienced hands on, gained practical science and engineering skills, reinforced classroom concepts, problem solved, and learned inside tracks to further academic achievement and rewarding careers in STEM related fields Visit [olivinghope.org](http://olivinghope.org) – the gallery and results matter tabs.

### **2) Challenges faced over the period:**

We dealt with two types of challenges:

First were obstacles such as one of our mentor coordinators was only able to secure 3 students of what he anticipated 10 North Mpls students for the OB-SMM experience on June 13 . We overcame that by finding another coordinator who brought a bus load of 17 North Minneapolis students at a different date Aug 29. Another obstacle was toward our 14 student goal at our OB=JDC workshop. One student was detained from attending due to misbehavior the night before.

Second were the positive challenges which all students experienced as they systematically step by step completed their projects.

### **3) Successes achieved over the period**

On June 20, **thirteen** OB ..JDC student inmates partook in a 3.5 hr. experience with the most indispensable tool used by all today's Engineers and Scientists. 3D CADD (Computer Aided Drafting and Design) is the digital bridge between concept and reality and foundational to STEM. During the months of June and August, **thirty nine** OB ..SMM youth drew on their knowledge of science, math, and technology in school class and stepped outside of the formal boundaries of established curriculum, and into the role of a scientific researcher in the museum lab. Substantiated evidence of systematic thinking and resulting behaviors were gathered reflecting acquired knowledge, skills, attitudes, behavior. Our method of Best Practices was through "Stand by Me" friendship building. Students gained positive forward thinking impressions about the worlds of school, work, and life. Students had fun accepting challenges, and were guided step by step to: simulate activities of today's engineers, innovate by using modeling and 3D printing technology, understand basic terms used by engineers, experience on the job practical application, collaborate and engage, design on computer as do today's scientists and engineers, learn by demo welding technology tips, set goals toward further training with help from our sponsoring Mpls. K-12 Stadium View School , pick up language used to enhance interviewing skills, download free 3D CADD apps on home computers