#### Written Report

# Purpose:

A makerspace is a place where students and people within the community can come and use a wide variety of tools to learn more about specific subjects and show their creativity in a safe and controlled environment. The purpose of our makerspace is to provide students with a hands-on environment to learn the fundamentals of chemistry and chemical engineering. In our makerspace, students will be given the resources to experiment with different chemicals and learn how they react with each other and the things around them. They will learn about different fundamental topics within chemistry, and with many different interactive assignments, will be taught to master the art of chemistry. Our goal is to allow students to have the opportunity to explore different aspects of chemistry, such as medicine, biochemistry, and chemical engineering.

### **Educational opportunities:**

Our makerspace provides students with interactive lessons that allow them to grasp the fundamentals of chemistry and learn their chosen aspect of chemistry in a way that any student can understand. We allow students the freedom to experiment with different chemicals in a safe and nurturing environment. We invite schools across the city to come visit and use our building to do projects involving chemistry. Students are given access to a wide variety of tools such as fume hoods, bunsen burners, and centrifuges, and chemicals such as hydrogen peroxide, sodium chloride, and chlorine. Our makerspace employs experts in this field to ensure our

student's safety while also being given the information needed to work the tools and to use chemicals properly.

## Community use:

Our makerspace is not only just for students, but the wider community as well. Our makerspace can be used by experts within our community to run experiments, and by anyone who wishes to begin an education in chemistry. We allow college and university students to volunteer at our lab, giving them the experience needed to learn how to run a chemistry class of their own in the future. Outside of school, every Saturday from 3-6 P.M, we host activities for people who are interested in participating in fun experiments, such as building baking soda and vinegar volcanoes and making elephant toothpaste, among other fun and safe experiments.

#### Adaptations:

We are aware of people with disabilities, physical and mental. We have adaptations for people with physical disabilities, such as ramps for people in wheelchairs, and helpers for people with disabilities that prevent them from being able to carefully hold objects and work tools. We also host classes for people with mental illness and disability to help those in need learn about chemistry in a way they can understand and be safe while doing so. On our signs and instructions for tools, we have the option for the blind to receive an audio or braille version of any written item that they would need to know. We want everyone to be able to learn and use our makerspace, no matter what kind of issues they may be facing in life.

## Green Technologies:

Our makerspace pioneers green technology within our community. We use solar technology to power our makerspace, instead of taking it from environmentally negative power plants. We recycle everything we can and send them to a trusted recycling plant that reuses materials. Our makerspace includes lessons on recycling and its importance, along with how they can make a difference in their own homes. Our mission is to make the world a better, cleaner, more educated place.

# **Group Evolutions:**

**Person 1, Avi:** Schools NEXT has taught me the virtue of patience. While working in groups it can be very challenging. There can be arguments, disagreements, and a lot of not being on the same page. Working in a group and using my patience has helped me with conflicting choices and ideas. Inorder to do this project we had to listen, compromise, and work together which built my patience.

**Person 2, Landon:** Schools NEXT has taught me to not procrastinate and focus on what you have to do as an individual. While working on the project, it was very easy to get distracted and stop focusing on the things that's actually important. Many times instead of focusing on what I had to do, I was being casual and thought it wasn't going to catch up to me in the long run. It took me a long time to finally focus and pay attention to what I have to do to benefit my team.

**Person 3, Noah:** I have learned alot from Schools NEXT. It has taught me not to procrastinate constantly. It has also taught me to focus on my individual performances along with working as

a team. Everyone has something to contribute and Schools NEXT has taught me how to make the most out of that. Teams will often have disagreements and arguments and as long as you are able to sacrifice and compromise.

**Person 4, Lily:** SchoolsNEXT has taught me a lot. It has shown me that it is important to be patient with your progress, and to work together. Though, sometimes working together may be very onerous, it is always better to work as a team and come to an understanding. Having unity working with each other makes it a lot easier to focus, and get things completed.