MAKERSPACE PROPOSAL

Prepared for: The City of Santa Clarita
Prepared by: Forrest Lucas, Troop 2379
Unofficial Proposal for your Consideration

January, 2015
OVERALL SUMMARY

Definition
When you look up the definition of a Makerspace, it’s not the easiest to find. Wikipedia says it’s a community-operated workspace for people with common interests. That leaves room for a lot of different interpretations of an ever-evolving idea that forms to the need of every community. It can range on interests from electronics and engineering, to painting and designing. The greatest part about creating a Makerspace, is that it has no rules.

Libraries follow the same structure from city to city, where makerspaces shape and grow to what the members of the organization and the community feel. I want to start this one off as a foundation; just enough to start the Maker Revolution, bringing back skills that have been lost in our youth. Connecting the wise, experienced members of Santa Clarita who have the field knowledge from Medical, Engineering, Film, and Design to the young, willing-to-learn youth of the community.

Objective
A public space that enables all ages and budgets to participate in the “Maker Movement”, a revolution bringing fine motor skills and creative, critical thinking back to the new generation. Based on STEAM, or Science, Technology, Engineering, Art, and Math, a Makerspace can introduce a growing industry at an early age. By providing the expensive tools and open space to share to the community of makers in the City of Santa Clarita, professional grade equipment can be provided for the individual, promoting learning and experience of a professional equipment. The Makerspace can be used for learning new tools and programs, providing tooling for an individual's project that cannot be done at home, providing a place for people who share the same passion to meet and work on community projects, and even where schools and teams can meet to practice and learn technology. Spaces like this exist all over the world, yet are lacking in a 45+ mile proximity from our City Hall.

Examples of the most local Makerspace, located in downtown Los Angeles, is community-run organization with it’s own space and promotion; Crash Space can be found at http://blog.crashspace.org/ This particular group has dates were the community meets and not only learns about trade skills from those in the industry, but can actually participate and personally experience these skills by designing and creating their own projects and ideas.

Goals
The major goal of this Makerspace, is to promote STEAM to the newest generation while providing the means of doing so. With an ever-expanding industry, technology is not always the easiest for an individual to keep up with; but with websites like Instructables, or Make:, I have been able to learn. What I, and most people lack, is the experienced professionals, and the tools to complete a project. My personal goal is to provide a space to work and learn as a community as an Eagle Project for the Boy Scouts of America. This is the highest rank, and encourages support to your community. I found technology to be my passion, and want to combine my servitude of the community and my love for technology into my final impression into the Boy Scouting program, and the City of Santa Clarita.

January, 2015
Planning
Creating a Makerspace is not as easy as creating a website; physical tools need to be purchased, computers assembled, funding kickstarted, building space prepared, and community excited. I feel as a teen, on the borderline between childhood and adulthood, I can best create this space; with the leadership skill I have from Scouting, I can make this project into reality. I have the advisory of leaders, those who have experienced life and can force things I could never see, but I have the peer-ship of the generation that will be running our country next. I also have a relatively experienced knowledge in technology as well as management from other projects.

City of Santa Clarita
Where this entire project moves into the relativity of the City, is the promotion of STEAM. A national program, leading to advancements in the Medical field, Technology field, and even Design field, this space can only have a positive and influential part in the growth of the Nation. Santa Clarita, being a suburban, down to earth city, is a perfect fit for a space like this; with the amount of schools and children here, it is hard to spread the tools required to promote STEAM through a community who really can benefit the most. A place where the community is the strongest when working together, a place where it’s citizen’s occupations vary from advanced bionics to film, and a place where a little bit of elbow grease and ingenuity can create the next biggest thing. We have projects ranging from conservation, to the Art Tree, to the Boy Scouts. Santa Clarita is the best fit for a Makerspace.

Down to the Point
The handicap of this idea, even though it can benefit triple its own value, is it’s materialistic presence. A space like this doesn’t come cheap, even when spread communally. In the detailed shadows of its glory, a Makerspace requires sophisticated tools like 3D printers (printers who can print plastic in three dimensional space) and computers (tools to run 3D design and illustration programs), as well as small ones like drills, screwdrivers, and soldering irons. The space can’t provide every single tool, but can provide the one’s people can’t buy. There are two options for a space like this. Community-Run (an organization to it’s self, funded by itself, and managed by itself), or City-Run (much like a library, City’s organization, funded by itself, but managed by the city).

Community-Run
Because of it’s major handicap, it is almost impossible to start an organization like this single-handed. We don’t have a group geared toward technology (unlike art in SC), as this would be the first one. A community-run Makerspace would need a board of directors type management system, and with no way to form an entirely new form of management, the project could stall, like many have. It can only remain open when a keyed member is present. It’s still possible, and with a strong enough community presence, it can still breathe life. This organization would not only have to pay for
rent and power, but also all of the supplies inside. Without a strong investor, this can also stall, and require huge fees which limits idea of community.

City-Run

With a facilitator to provide the only weakening points of a Makerspace, this idea can develop and bloom into one of the best Makerspaces in the nation. Most Makerspaces are community-run, or privately held as a business, but if the Makerspace was to be supported by the base of the City, it is already a step above the others, and can only lead to success. The final confirmation of the last mile, a physical space, either held by the City or immensely decreased would solve any doubt of longevity. The other is the manager or “librarian” of the space, to keep track of tools and machines. this would complete the space, making it impossible to fail.

The benefits of this Makerspace overweigh the inconveniences; not only does it teach children, but it finishes out the concept by allowing them to make the project. It can allow for future inventors or tradesman to exercise their skills with tools unavailable at home. It brings the community together not only for people interested in technology, but everything around it: almost anything requiring critical thinking. As a community group under the City, the members of the Makerspace would attend almost any event to promote not only itself, but the the ones who made it possible. The events planned range from inter-city promotion, to state and even national fairs, competitions, trade shows, and all things tech or building. A good example of this is the Maker Faire, the greatest show and tell ever. This world fair, held in multiple places in the US, to Toronto, to Europe, to everywhere. Maker Faire can be found here, http://makerfaire.com/ and all the projects built by individuals representing their location, and most of them facilitated by a Makerspace. The Makerbot 3D printer was created in a Makerspace. A community board will be available for advertisement of community events and other information.

Funds

No organization in particular can be expected to fund the entire Makerspace forever, so I’ve devised a plan per-situation to develop the makerspace into a self-operational organization. A dues system will be created, but with the City-Run plan, they can be lower than most community programs. Management-wise, a similar computer management system like the City’s library computers can be used. A letter and presentation, much like this one, will be personalized to every vendor including Autodesk, Makerbot, Adobe, Lenovo, Advanced Bionics, etc. and other Community Businesses like Keys, Autonation, Albertsons, Lowes, etc. I will also be working with those who have experience working with Federal Grants, and will be open to any donations.
TIMELINE

With a project like this, a simple stall could jeopardize the entire thing, but for me, I have until the first of November, 2015 to finish this project; an ambitious but possible deadline. My Eagle Project must be done by my 18th birthday, so I will be quite motivated to finish. This will also eliminate the open-ended agreement that might have occurred with some companies. The project will be completed in three phases:

**Phase One: Planning**
This is where I will be asking for donations and fundraising. This period will make/ break the project. I will proceed when The City of Santa Clarita or multiple Community Businesses backing the project. (January-April)

**Phase Two: Purchase & Receive**
This is where I will be purchasing and/or receiving equipment. At this point, the room will be prepped (if paint required) and final processing will happen. This is also when the tables and other equipment will be built. (May-October)

**Phase Three: Install**
This is where the last couple days when the project will be finished; all of the tables and equipment installed. (October-November)

* times approximate; the sooner, the better.
FORREST LUCAS EAGLE PROJECT

BUDGET

As I am currently shopping out the best deals and accepting possible donations, I’ve currently given a huge price guesstimate to aim for. These are very rough, as I’ve added a little bit in each category for unplanned purchases. This list considers that no donations were made, however my goal is to propose to anyone and everyone.

MAJOR CATEGORIES

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Computer Workstations

Computer Workstations are needed for 3D modeling, computer aided design (CAD), graphic arts, and Research and Development. These computers would preferably have Autodesk 3D software and Adobe Arts software managed by a Novell-type program. Workstations built on custom cost effective tables.

Construction Workstations

Construction Workstations are needed for fine, precise work. A toolbox with soldering supplies is provided, built on custom cost effective tables.

Communal Tool Sets

Communal Toolsets will be mainly two items. General Construction tools, like screwdrivers, hammer, etc. Soldering Drawer taken from the toolbox with soldering supplies. Both of these are checked out.

Communal Tools

Major Machinery like A 3D printer, Laser Cutter, and a Community Table, custom built to be cost efficient.
LAST THOUGHTS

I thought it would be important to inform you about who “I” am.

Hello, My name is Forrest, and I am a member of Troop 2379, and working on my Eagle rank, the highest available as a scout. Thanks for reading my proposal, and I hope you liked it. I hope you consider the feasibility of this project, and I would be overjoyed to present this to you (and company). It will make it much less confusing. I’ve been interested in the technology industry since I can remember. When I started working for a design company, RIVA Creative, I’ve had an opportunity as a Production Assistant to work with tools like 3D printers and Autocad this last quarter; this idea of a Makerspace has swam in my mind for months. Now that I can combine my Eagle Project and my passion, I can put forth the best effort onto this project. I also designed a temporary logo (front page) for this project, which can be edited. I’ve created an powerpoint presentation with twice as much detail and would love to show it to you. If you have any questions or just want to hear this from me, contact me. Thanks again for reading, and I hope to work together soon.