



2019 - 2020 Company Report



**Junior
Achievement[®]**
of Greater Washington

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Executive Summary 2020

Company Name:
Scientists in Training

Logo:



Mission statement:

“ To provide young students with a platform to become involved in Science Technology Engineering Mathematics (STEM) . Our belief is that Early and engaging exposure to STEM, will increase creativity, problem-solving and overall interest in STEM.”

Product Description:

The Wooden Hydraulic Excavator is a do it yourself (DIY) kit that provides elementary to middle school students with many fun-filled hours constructing and playing with their very own excavator. The kit includes all of the necessary parts required to construct the excavator. Our excavator kit comes with all syringes, wooden parts, screws, and miscellaneous parts. To help kids fully enjoy our kits and become immersed in learning STEM, we've included picture and video instructions, and an educational excavator curriculum. The curriculum provides students with extra challenges, fun facts, and real-world connections.



Finance 2020

Overview

As of April 1st, we've sold 34 excavators; generating a total revenue of \$1,004.85. After expenses and the investor return, Scientists In Training's net profit is \$199.18. The revenue and net profit shown does not include the 5 transactions that were not recorded due to a PayPal integration issue (see Alternate payment methods and payment verification discussion under the Lessons Learned section). If these sales would have been recorded our total revenue would have been \$1,104.8 and our profits would have been \$299.13.

Total Income

Units of Excavators (20)	19 (\$380)
Units of Credit Excavators (\$19.99)	15 (\$299.85)
Capitalization	\$325

Total \$1,004.85

Statement of Financial Standing

Net Profit	\$214.18
Investment	\$150
Investor Return	\$165

Total \$199.18

Capitalization

In order to start the company, we relied on a \$150 investment from Lisa Friedlander and \$350 in fundraisers, as well as \$150 in donations. We used this money to purchase and package our excavators, pay for promotion (flyers and stickers), and keep our website running.

Break Even

Prior to the Trade Show on Feb. 2, 2020, we needed to sell about 32 excavators to break even. Selling the excavators for \$20 cash and/or \$19.99 credit, we were able to exceed our sales goal by 6.25%. Due to the high demand for the product, we decided to order 22 more excavators and raise the prices to \$25 cash and/or \$24.99 credit, making our new break even mark 41 units sold, which means selling about another 7 excavators.

Future Income

Our sales were With the additional 22 excavator sales, we should be able to bring in another estimated \$550 of taxed income. This will increase our sales tax by \$31.13; totaling our new Net Profit (post investor return) to \$718.05

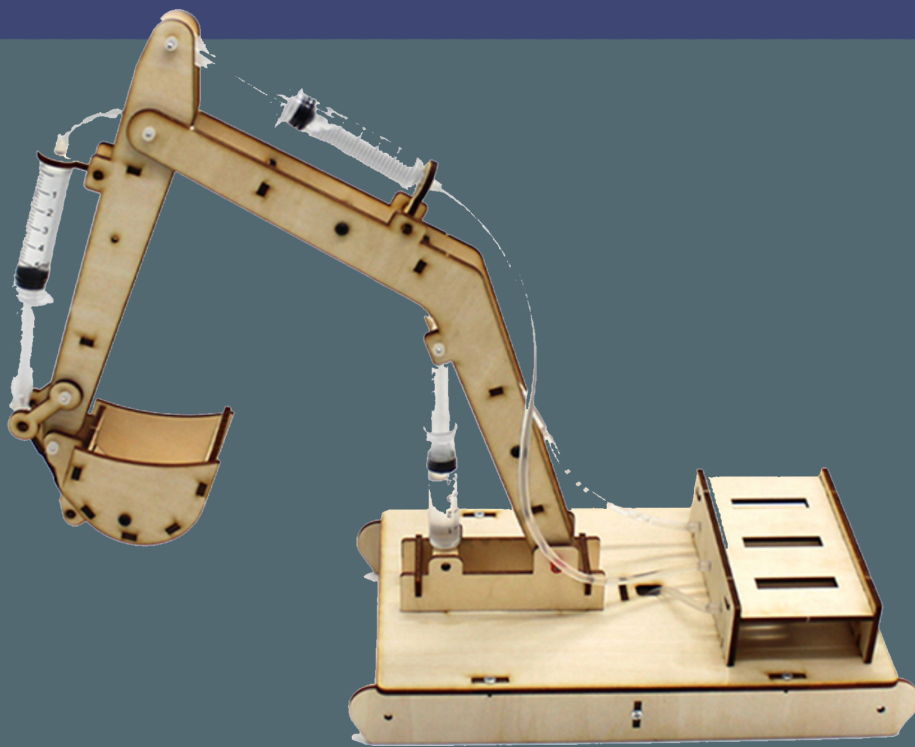
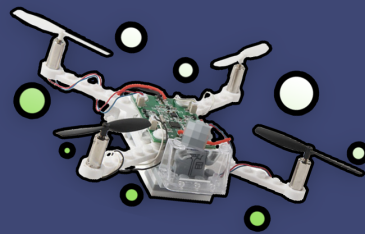
Expenses

Sample Excavator	\$16.45
Excavators (1st Order)	\$282.90
Excavators (2nd Order)	\$172.68
Packing Boxes	\$109.33
Promotion (Flyers and Stickers)	\$99.41
Wix	\$33
Sales Tax (6%)	\$38.42
PayPal/Square Fees	\$38.48

Net Profit \$214.18



Innovation 2020



Scientists in Training as a company is pushing the STEM Kit market forward with our unique offering consisting of STEM kits, engaging curriculum, and interactive videos. As a part of our market research, we found that our competitors often sell their STEM kits with only basic instructions. As a result, students often use these products once, put them down, and never touch them again. Scientists in Training, however, provides the customer with an engaging, multipurpose, and reusable product, as well as a quality curriculum and learning resources to keep students engaged in STEM and with our products for longer periods of time. With our products students are engaged for weeks instead of hours or days, which is a major advantage that we have over our competitors.

Graphic of fully translated Chinese to English instructions showing our approach for assembling the hydraulic excavator Our kits are fun, hands on, and students get to focus on areas that interest them. Our curriculum, which contains multiple activities for students to do with our product, contains links to external websites, and includes fun facts to keep students engaged longer. In an effort to help foster and build interest in pursuing a career in STEM. Moreover, our curriculum contains real-world tie-ins, which will help students connect their experiences and enjoyment of our product with the real-world use of STEM principles.

For example, in our Hydraulic Excavator curriculum, an example of fun fact/real-world tie-in that was included is the fact that some excavators can lift 34,210 pounds or two African bush elephants. This is an attention-grabbing and exciting fact that keeps students interested. Our curriculum also includes fun facts to help inform students about related fields of STEM. We also provide text and video forms of instruction in order to help provide an engaging experience, while also stepping the student through what is needed to independently assemble our product. This gives the best experience and support for a student assembling one of our products. In order to keep the price of the product down for the company, while also increasing the value of the product, we order our products in bulk from a low-cost supplier and package the products ourselves. Additionally we develop the curriculum to add more value to the product than just the parts and packaging.

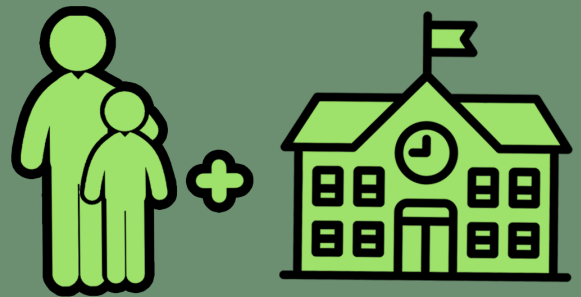


Marketing 2020

Overall Market

Our team's main goal is to increase elementary and middle school student's interest in STEM. Research from Junior Achievement showed a decrease in interest in the STEM field among adolescents. This may be a problem in the future as those jobs as engineers, scientists, or mathematicians may not be filled. Through the use and exposure to our REVOLUTIONARY STEM kits, and engaging exercise guides & videos we intend to raise their creative\hands-on experience they never knew they wanted.

Our team primarily wanted to focus on selling three products: drone kits, hydraulic excavators, and baking soda rocket kits. These kits were chosen because they are based on the different aspects of STEM. Within the DC, Maryland, and Virginia area there are roughly 2,225,200 elementary students enrolled in public school. We wanted to take this opportunity and sell to these public school systems. However, due to COVID-19 the process of reaching out to these marketing and selling to public schools has been put to a halt. Additionally, due to supply chain issues and decreased sales opportunities we decided to focus on the marketing and sales of our primary product, the hydraulic excavator.



Scientists In Training's target audience are parents ranging in age from 30 - 55. The secondary target audience is elementary and middle school students ranging in age from 6-14, after all these were going to be the users of the product.

Marketing Strategies

We developed our marketing approach to introduce our products to the market, generate interest among our customers, and communicate why customers needed our product. Scientists In Training's target user base is elementary and middle school students ranging in age from 6-14. The primary demographic was the DC, Maryland, and Virginia region. A key part of our marketing strategy was to have a memorable presence both in-person and online. In-person and online we mainly advertised how our products engaged and educated users of the product. Gaining support and followers from our social media platforms was useful in selling our product, getting feedback about the product, and spreading our name around the DMV area. We gained followers and support through word-of-mouth and NSBE affiliation. Our slogan, "STEM Kits 4 Students by Students" is a catchy phrase and appealing to consumers. Due to COVID-19 we will now sell our inventory on our website.



Leadership and Organization 2020

Scientists in Training is a company that was created by secondary school Science, Technology, Engineering, Arts, and Mathematics (STEAM) who have significant experience developing STEM solutions, and competing in national competitions under the Future Innovative Rising Engineers (FIRE) National Society of Black Engineers (NSBE) Jr Chapter. As a result, our team is well positioned to help increase the creativity, problem-solving skills, and interest in STEM of younger secondary school students.

Our team elected leadership in early November 2019. Each team member determined which department would best fit their skills. Our diverse group of students ran for different sets of original departments: Supply Chain , Communications , Sales , Marketing , Business Research , Finance and Program Management. Every member was given a chance to pitch themselves for any Department head position. In the pitch they included how their overall skills were beneficial to that specific role. Then, the other members voted on who should be the head of each department. Once the leaders were chosen, the remaining members could join one or more departments where they were most capable.



Highlights and the Future 2020

Highlights:

Selling all of our 1st round inventory - As our team planned for our first public sales opportunity at the JA trade show in Feb we were initially concerned that we would order too many products. The debate was due to our caused by the market our products are meant for, we had to make a ruff estimate of how much was possible to be sold with the fact that most people at the trade show won't be really inclined to buy our products. As the day of the event came we brought the perfect amount of products to sell with the prediction to the market at the event. Additionally, as a back-up, we planned to point customers to our website where they could purchase our products and have them delivered at a later time.

Additional Considerations

Maximizing sales opportunities- Our team concluded that taking advantage of holidays could reduce the sales efforts of our company. During certain holidays the packaging of the products could be styled to fit the theme of the holiday. Our website could also have sales or discounts on products. Our team concluded that understanding and planning around the cultural priorities is critical for having products to meet customer demands. For example, we learned that during the Chinese New Year there may be delays in shipping so the products for our company would need to be ordered in advance.

Minimizing unintended costs-

Our team concluded that we could minimize unintended costs by allowing customers to return unopened items within twenty days. Measuring effectiveness of our solution - Our team concluded that we could measure the magnitude of increased interest in STEM by having customers complete a pre and post survey. Additionally, our customers could also be allowed to leave reviews on our website to show other customers that we are a trustworthy company with effective solutions.

Challenges:

Time management, productivity, and continuous engagement - Since our team only met once a week, it was difficult to know if work was done outside of meetings. To improve productivity we incorporated a weekly call on Wednesday to ensure tasks were completed. That brought growth in productivity but there was a hurdle caused by a lack of knowledge concerning when tasks need to be finished. To fix that we created a schedule for events so everyone knew their duties and how long they have to achieve them. Additionally, as a result of the COVID-19 social distancing guidance, we implemented zoom web meetings to keep the team continuously engaged and focused on our priorities.

Supply chain impacts

Due to the worldwide COVID-19 outbreak, our supply chain was interrupted. Our original manufacturers were in China, so measures were made to find a new manufacturer. As a result, our team researched other suppliers to order new products within schedule and budget constraints with the anticipation of a trade show in March. However, the trade show was later canceled and our team pivoted to focus on selling out of our existing inventory by dividing up the existing inventory and having each team member sell units. Additionally, we communicated our fulfillment delays and mitigations to our customers through our website. The movement of products through shipping came to a halt, this meant no new

