

Science Ready: Business Model Canvas (Additional Commentary)

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Abstract

Science Ready is a way for k-12 schools to rent lab equipment for use within their science classrooms through an annual subscription service. Science Ready's aim is to decrease the time and money spent sourcing science labs and equipment and increasing students' engagement in hands-on science exploration through experimentation. Science Ready provides teachers with labs aligned with state science standards, Next Generation Science Standards, and Common Core Standards that are tested within classrooms to prove efficacy and are differentiated to meet the needs of various learners that are bundled with all necessary lab equipment and shipped directly to schools. After the lab is completed, teachers will simply return all multi-use materials back to us using the included shipping label and original shipping box. This is truly science made easy!

Specifics

Science Ready offers varying levels of subscription, each at a different price point. All subscriptions offer access to our online catalogue of lab kits, which includes our digital and physical resources. Our digital resources include teacher manuals, differentiated student lab sheets, and a materials guide. Our physical resources include a return shipping label, and all necessary lab equipment to complete the chosen lab, apart from typical school resources like pencils, paper, colored pencils, scissors, etc. As our labs are designed to be rented, subscribers can keep their lab kits for up to one week, included in their subscription. Science Ready labs are technology forward, meaning we focus on creating labs that utilize technology, not consumables, to keep our variable costs low. Our teacher-level 1 subscription, our lowest level, offers limited access to our digital catalogue of labs. Our full-teacher level subscription offers access to a limited lab selection and up to 8 kits ordered at a time. Our school-level subscription offers access to more labs and can rent up to 30 kits at a time. Our highest level of subscription, district-level, offers access to our entire online catalogue and can rent unlimited kits.

Customer Segments

Customer Segment	Examples	Persona Link
K-12 teachers/ science teachers (customers, niche market)	<ul style="list-style-type: none">Elementary school teachersMiddle school science teachersHigh school science teachersSTEM teachers	Middle School Teacher Persona
K-12 schools (customers, niche market)	<ul style="list-style-type: none">Science Department ChairsPrincipals	Principal Persona
School Districts (customers, niche market)	<ul style="list-style-type: none">Middle School Science Programs CoordinatorsHigh School Science Programs CoordinatorsSuperintendents	Superintendent Persona
Science Camps (customers, niche market)	<ul style="list-style-type: none">Science Camp DirectorsSTEM camps like Club ScientificScience Centers/ Museum camps like summer camps offered by the Museum of Life and Sciences	Camp Director Persona
K-12 students (users, niche market)	<ul style="list-style-type: none">Elementary school studentsMiddle school studentsHigh school studentsStudents with IEP, 504 or LEP accommodations	Middle School Student Persona

Value Proposition

K-12 teachers, schools, and districts

K-12 teachers, schools and districts all have a similar goal of increasing student academic achievement. While middle and high school science teachers have a particular goal of increasing academic achievement in science, schools and districts also recognize the importance scientific thinking skills in developing 21st century skills. Science Ready offers a **performance** solution to these desired outcomes by offering labs that have been tested to prove efficacy, differentiated to meet the needs of diverse learners, and all-inclusive to provide everything teachers need to immediately implement labs upon receipt of the kits. This means teachers will spend less time searching for,

creating, and purchasing labs and equipment for use with their students, and will spend more time implementing high quality, hands-on experiments that are proven to improve increase scientific concept knowledge and thinking skills, leading to more proficient students. Additionally, by working through an annual subscription service, Science Ready offers a **cost reduction** solution for schools and districts by offering a way to get lab equipment into the hands of students throughout the year without fear of going over budget restrictions by purchasing equipment.

Science Camps

Science Ready can also be a valuable resource for science camps for similar reasons as teachers, schools, and districts. While science camps are not held to the same achievement standards as schools, parents and other stakeholders are still looking for high **performance** from the camps to send users to. Camps, especially science camps, are places for continued learning, and require proven and engaging ways to keep campers learning new scientific skills. As previously mentioned, our labs being standard aligned and offer a great way to keep students learning all summer long. Science camps also typically have limited budgets, and with them being seasonal, camp directors are looking for **cost reductions** while keeping their campers engaged. With Science Ready being a rental service, this means that camps can set up in most settings, keep limited equipment storage, and easily rotate camp themes based on labs; all of which saves camps money.

Students

Finally, from a user perspective, Science Ready offers a **performance** solution. With our intended users being K-12 students, Science Ready allows for more frequent lab investigations which will increase academic performance by allowing students to actively engage in scientific thinking opportunities.

Channels

All Customer Segments (Teachers, Schools, Districts, Science Camps)

Get- We will use social media campaigns through Instagram, Facebook, LinkedIn and CRM email campaigns that include information about our service from a link to the website, its value propositions, and features to *acquire* teachers. We will also hold booths at educational conferences where teachers can learn about and test some of our labs on sight and take home some Science Ready merchandise. After teachers visit our website, they will get to view previews of our entire catalogue of labs. This will entice them to want to purchase a subscription and *activate* them as customers.

Keep- To keep teachers, Science Ready will share once new labs and new lab kits are created. These *product updates* will be shared via banners and pop ups on our website, social media platforms, and email campaigns.

Grow- To grow our teacher customers, we will primarily utilize an *up-sell* strategy where they will be encouraged to upgrade their service to the next level of subscription service to gain access to labs for rent or more labs within our online catalogue. Additionally, we will utilize a *next-sell* strategy by offering discounts on subscription prices based on years of renewal. Upon first year of renewal, customers will receive 10% off their subscription, 3 years earns 15% off, 5 years earns 20% off, and 10 years of renewal earns 30% off their subscription fee.

K-12 Districts/ Science Camps Only

Keep- To keep district revenue, Science Ready will offer strategies and professional development sessions for schools so they can learn how to best utilize our services in addition to our digital badges and product upgrades.

Additional Information

Teachers within schools already receive a specific science budget to purchase science materials for use with students. Due to this, and that they will be the ones first-hand utilizing these services, we will primarily target our social media ads, CRM email campaigns and mailers to target customers at this level. From there, our intent is to utilize positive word of mouth to expand to more teachers and secure upgrades to the school level. Once at the school level, further school and district funding can be utilized to purchase subscriptions from Science Ready. However, since districts and science camps will potentially bring in the highest revenue, personalized assistance will be targeted to this customer segment.

Customer Relationships

All Customer Segments (Teachers, Schools, Districts, Science Camps)

Get- Self-Service through the form of our website that customers can utilize to purchase and ship by entering personal information themselves.

Keep- Automated Service- customer profiles used when signing up for their subscription will allow for recommendations on labs to explore. *Personal Assistance-* customers will gain access to a customer support phone number and email address for any specific questions or service concerns.

Grow- Co-Create- feedback surveys will be sent to customers when rental period ends to gain insights into user experience, suggestions for updates, and any technical issues that may have occurred so they can be remedied and prevented for future service.

School District Level/ Science Camps Only

Get/Keep/Grow- dedicated personal assistance- personal assistants will negotiate subscription rates, support with implementation, and be available for tailored support.

Revenue Streams

	Unit Subscription Cost	Q1	Q2	Q3	Q4
Teacher-Level 1 Subscription	\$100	40 subscribers	80 subscribers	160 subscribers	320 subscribers
<i>Total</i>		\$4,000	\$8,000	\$16,000	\$32,000
Full Teacher-Level Subscription	\$600	20 subscribers	50 subscribers	100 subscribers	200 subscribers
<i>Total</i>		\$12,000	\$30,000	\$60,000	\$120,000
School-Level Subscription	\$2,000	2 subscribers	4 subscribers	8 subscribers	16 subscribers
<i>Total</i>		\$4,000	\$8,000	\$16,000	\$32,000
District-Level Subscription (also include Summer Camps)	Avg. (negotiated based on district size) \$30,000	1 subscriber	2 subscribers	3 subscribers	4 subscribers
<i>Total</i>		\$30,000	\$60,000	\$90,000	\$120,000
Grand Total		\$50,000	\$106,000	\$182,000	\$304,000

Key Resources

Physical- Warehouse for storing lab equipment for use in kits, and shipping materials to send kits to customers.

Human- For launch and to keep human costs at a minimum, I will be Science Ready’s only human resource.

Intellectual- digital lab sheets that are shared to customers through our website built from wix.com, logo

Financial- personal savings of \$50,000 and a SBA-backed 504 loan of \$500,000 will be secured to purchase lab equipment and shipping materials, grant funding/resourcing from Building Reuse Program will be used to acquire a vacant building in North Carolina to be utilized as our warehouse.

Key Activities

To get Science Ready prepared for its MVP launch, the following must occur in the order shown below:

1. A warehouse must be secured using the Building Reuse Program (Est. 6 months)
2. Our initial catalogue of labs must be designed, tested, and iterated upon using local schools and UNC Chapel Hill connections (Est. 1-2 years of development)
3. Our initial inventory of lab equipment, shipping materials, and other office requirements must be secured (Est. 6-8 months to secure all equipment from Flinn Scientific/ Carolina.com/ Educational Innovations/Amazon Wholesale/ULINE/Qualitylogoproducts.com)
4. Website is designed with initial online lab catalogue, rental fulfillment procedures, and customer profile pages using wix.com (Est. 1-2 years to iterate on the design)
5. Create and secure promotional materials using qualitylogoproducts.com (Est. 1 month)
6. Send out mailers, emails, and social media ad campaigns to initiate customer relationships; cold calls are made to local school districts (Est. 1-2 months to initiate customer relationships)
7. Organize, manage and activate customers with the help of Zendesk, a CRM software (Est. 2-3 months)
8. Fulfill initial orders (Est. 1-2 weeks depending on rental dates of customers)

9. Send feedback surveys to customers after rental period ends-one week- to get information about desired updates, upgrades, maintenance issues and resolve any issues (Est. 2-3 months to gain feedback results and make service adjustments)

Key Partnerships

Optimization & Economies of Scale- Science Ready has a list of preferred suppliers:

- Flinn Scientific/Carolina.com/Educational Innovations- Accessed through their online platforms, these partners will be used for purchasing multi-use lab equipment
- ULINE- Accessed through their online catalogue, they will be used for purchasing shipping and packing materials
- Amazon wholesale- Accessed online, this partner will be used for purchasing paper, most single-use materials to be included in labs, and other office supplies
- Qualitylogoproducts.com- Accessed through their online platform, used for purchasing promotional items
- Wix.com- Accessed online, this partner will be used to build and launch our website
- Zendesk CRM software- Accessed online, they are used to help organize and manage customer relationships

All funding to secure equipment and materials at launch will come from personal savings and the SBA-backed 504 loan that I take out.

Reduction of Risk & Uncertainty- these partners will be utilized to test labs and ensure they are user ready

- Connections with local schools (e.g. Wake Forest Elementary, Middle, & High School) through teaching experience will be utilized to test labs and receive user feedback to iterate on designs
- Connections within UNC Chapel Hill (e.g. Dr. Kelly Ryoo) to further assist with lab testing and development

Cost Structure

Fixed Startup Costs	Costs
Initial Lab Materials	\$ 100,000
Initial Shipping Materials	\$ 10,000
Promotional Items (mailers, pencils, business cards, sticky notes, rulers)	\$ 1,400
Fixed Costs	
Utilities to maintain warehouse (average per year)	\$ 6,000
Website (Wix.com annual subscription & private domain name)	\$ 57
Variable Costs for first year	
Replenishing single-use items in lab kits	\$ 1,000
Increase lab material inventory	\$ 100,000
Total	\$ 436,914

The Unanswered

The main challenge that Science Ready faces especially within its first 2 years of the venture are the high overhead that is required for launch. As seen in our cost structure and revenue streams, after the first year of our venture, we have a deficit of \$132,914. As Science Ready builds its customer database, we will need a wider inventory and continued updates which will continue this deficit trend. A potential way to counteract this challenge is to utilize higher subscription rates however this will potentially lessen our appeal as we will lose our cost reduction value proposition. Another potential solution to this challenge is also develop virtual labs as an additional subscription level or up-charge that our customers can subscribe to. Since virtual labs do not require physical resources and can be used by infinite users at a time, this offers a great alternative to our hands-on labs. However, these labs will require a great deal of time to develop. A final option for a solution is to this is to secure investment deals. As many investors are looking for philanthropic avenues, the fact that Science Ready is targeted to assist students, this could make us an ideal candidate to make a deal.