

# Team #187 – Lab Lesson

The group formerly known as **Lewis Dots**

A source for relevant Chemistry lab activities for high school teachers

**108**

**Interviews**

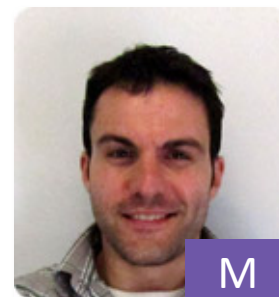
Carlo Yuvienco



Dr. Jin Montclare

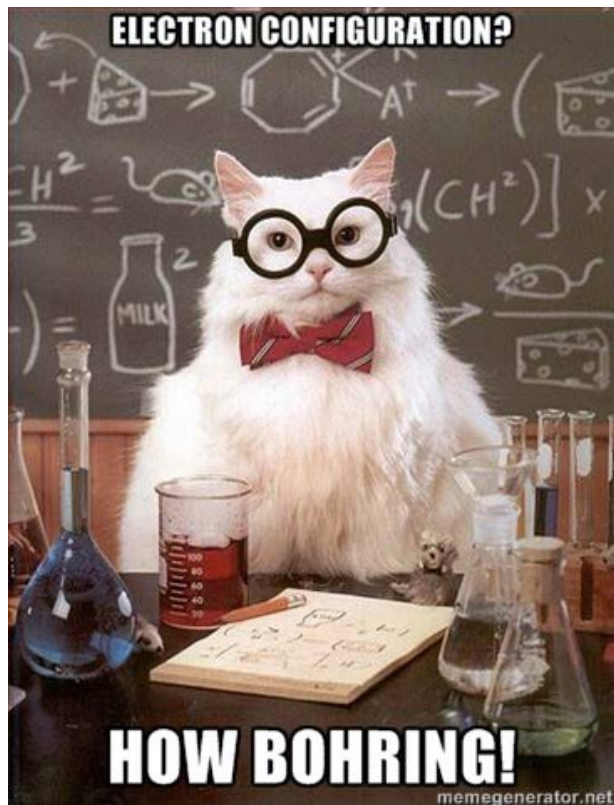


Andrew Cohen



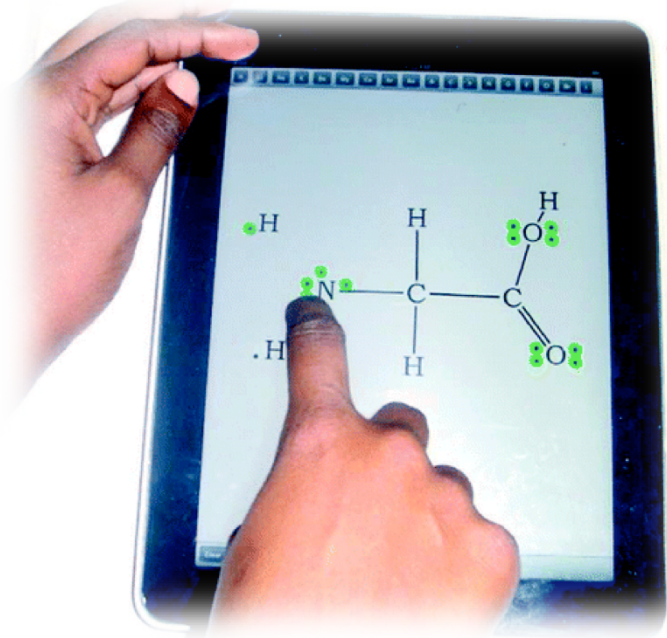
# Mission

To improve interest in Chemistry among the next generation of American students



# Initial Technology

We entered the I-CORPS program with an **iPad app** for exploring **molecular structures**



## Hypotheses:

- High schools have an iPad for *every* student in their Chemistry class
- Allowing students to build virtual molecules would **improve engagement**

# Initial BMC

## 3x VALUE PROPOSITIONS

★ Easily available constructivist methods to learn chemistry other than rote memorization »

★ Sharing of chemistry structure creations will solve the problem of the lack of engagement »

★ Created content is needed as evidence for improvement in STEM-fields in addition to grades »

## 5x CUSTOMER SEGMENTS

★ Public High School Chemistry Teachers »

★ Public High School Chemistry Students »

★ College Chemistry Instructors »

★ College Chemistry Students »

★ Parents of Public High School Chemistry Students »



# Customer Discovery

We interviewed **108** teachers, professors, students, and lab managers, and we got lots of great data

- **5** pizzas purchased
- **3,000** minutes of conversation
- **200** follow-up surveys
- **1000** page visits
- **17,000** steps walked to meetings

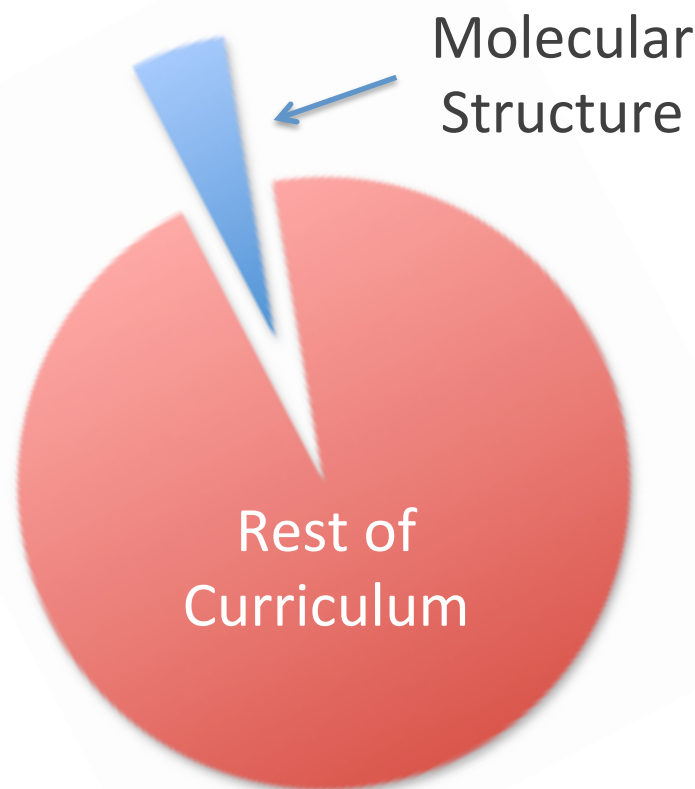


# Who cares?!

Teaching simple molecular structures via iPad turns out to be **too small of an opportunity** to pursue

## Discouraging Findings

- There is usually only *one* iPad per classroom
- A max of 50k teachers in U.S. would pay \$1.99 for this presentation tool
- TAM: \$100k/yr ← **MEH**



# A Hidden Gem



After about **40 interviews**, we realized that teachers were begging for a **better way to find lab activities**



## Sample Quotes

- “My Chemistry students **do not see the relevance** of our existing lab experiments”
- “Teachers are constantly **emailing each other Word docs** with ideas for activities”

# Pivot to a New Product & Business Model

HS teachers confirm that they would pay an **annual subscription** for access to these activities on the web

Free to  
search

Subscribe  
to view

Lab Lesson: Keeping Chemistry in the Lab

<http://www.lablesson.com/activity?id=f94e20d>

**LAB LESSONS**

[Home](#) > [Search Results](#) > Activity #1

What am I doing?  
Why am I doing it?  
How am I doing it?

Slideshow of crowd-sourced photos

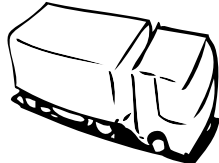
Teacher Prep

Step #1  
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec congue eleifend purus, non ornare tellus laoreet eget. Maecenas lacus diam, elementum sit amet euismod ac, volutpat a mauris. Nulla luctus facilisis nibh, placerat feugiat nulla sollicitudin id.

Step #2  
Nunc eget purus nec nulla lobortis venenatis. Etiam imperdiet dictum ultricies. Pellentesque a orci lectus, vitae euismod lacus. Donec et sem dui, eu semper neque. Cras quis felis arcu, at commodo neque. Maecenas porttitor felis nec dui vehicula nec varius.

Video showing basic technique

Background  
Teacher Prep  
Student Instructions  
Supplies/Equipment





# Customer Relationship Validation

## Acquisition and Activation



We marketed to teachers using the same channel that they would use to search in the real world: **Google ads**

**LAB LESSONS.COM**

**The World's Best Chemistry Lab Activities**

Find the perfect Chemistry experiments for your high school laboratory classrooms. Ensure that your students are *engaged* and that your lab activities are *aligned to curriculum standards*.

*Browse for free. Annual class subscriptions starting at \$199/yr.*

**Improve student engagement**  
Research shows that when students see the real-world relevance of classroom activities, they are 80% more likely to increase their participation. They might even develop a lifelong love of Chemistry!

**Project-based learning**  
Activities include students being presented with a real-world scenario where they are charged with the responsibility of solving an important problem. All that is missing is a key piece of information that can only be solved by the results of their experiment! Students submit their findings as if it were a laboratory report at an actual company or scientific research institution.

**Vetted by progressive educators**  
LabLessons was created by experienced educators, in partnership with chemists from higher education and the corporate world. We've developed the types of lab lessons that we wish we had when we were back in school.

**Sign up for the pre-launch**  
You'll hear from us in the coming weeks

Name \*

Email \*

Company/Institution

Interested in Helping? \*

☐ Yes, I am interested in contributing initial input toward the development of LabLessons.com

☐ No, thanks.

**Sign Up**

We will never sell your email address to any 3rd party or send you nasty spam.

*"Finding great activities shouldn't be like finding needles in haystacks."*

Jin Montclare, PhD  
Associate Professor  
Polytechnic Institute of New York University

## Landing Page results

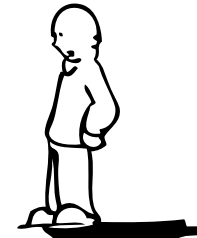
- 1000 page views
- 1.2% signed up at \$200/yr
- 0.6% signed up at \$100/yr
- **Max CAC: \$154**
- **Expected LTV: \$600**

➤ \$200/yr x 3yrs as customer

# Total Addressable Market

Because our main distribution channel is the web, we can equally reach both public and private schools

Metric	Value
# of U.S. High School Chemistry Teachers	40,000
# of U.S. High School Science Teachers	120,000
Annual Website Subscription Price	\$200/yr
Addressable Market	\$24M/yr



Huge  
Opportunity  
It's a **GO**

# Final BMC



## VALUE PROPOSITIONS

✓ A source for high-quality, relevant, ready-to-deploy lab activities »

A source for high-quality, relevant, ready-to-deploy lab activities »

A way for science department heads to justify spending on lab equipment »

## CUSTOMER RELATIONSHIPS



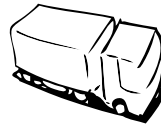
Google AdWords »

Trade Conference Demos »

Training and Professional Development »

LISTSERV »

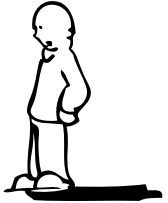
## CHANNELS



✓ Web »

Organization Subscription Bundling »

Textbook Publishers »



## CUSTOMER SEGMENTS

✓ High School Chemistry Teachers »

College course coordinators »

Chemistry Department Heads »

## COST STRUCTURE



Software Development »

Curriculum Development and Integration »

## REVENUE STREAMS



Freemium Subscriptions »

Pay Per Lesson »

# Next Steps

- Continue validating:
  - Product Wireframes
  - Distribution Channels
- Form strategic partnerships
  - Chemistry teacher orgs
  - Textbook publishers
  - Lab supplies distributors
- Secure funding to build the product!



# Competitor Analysis

How do people solve this pain right now?

Benefits	Lab Activities	Materials & Supplies	Shareable & Modifiable	Non-lab Lessons
<a href="#">Lablessons.com</a>	✓	✓	✓	
Khan Academy				✓
Better Lesson			✓	✓
Teacherssource.com	✓	✓		
Sciencepage.org	✓			✓
Stevenspanglerscience.com	✓	✓		
J. Chem. Ed.	✓			