

## **READ FIRST RESOURCES**

**Read through this entire document before beginning to complete the assignments.**

**Hello!**

Information in this document will help you complete the business component to the STEM Discovery Camp. During the months before the April 28 STEM Discovery event, you will build a remote controlled vehicle. On April 28, your team will drive this vehicle through a race obstacle challenge course at Louisiana Tech. For the business component for camp, you will develop a plan for holding a race obstacle challenge course event for your school or region. Your team designs the event! This event does not have to be exactly like the one at Louisiana Tech. You need to find out what students/customers in your area would like in order to design a successful event. Read on to find out how to work through the planning process!

Happy Planning!  
Mrs. Inman

Information included in the Business section on the [www.stem-discovery.com](http://www.stem-discovery.com) **DOWNLOADS** page:

- \*The Intro to Business Model Canvas Powerpoint explains how to fill out the canvas.**
- \*The Business Model Pitch Score Sheet (Judges use this form to score your pitch presentation.)**
- \*Schedule of Business events**
- \*READ first RESOURCES**
- \*Business Model Pitch Instructions + Business Model Canvas Questions**
- \*Dr. Shane Puckett “Speaking Dynamically”**
- \*Dr. Doug Amyx “Doing a Market Plan”**



**Assignment: View the \*Intro to Business Model Canvas Powerpoint and \*Dr. Doug Amyx “Doing a Market Plan” and begin to complete the BUSINESS MODEL CANVAS (BMC):**

Complete each section of the Business Model Canvas. The resources listed below will help you reason through this process. You will complete the Value Proposition and the Customer Segments first. Complete the remainder of the sections in this order: Channels, Customer Relationships, Revenue Streams, Key Resources, Key Activities, Key Partners, and Cost Structure.

Link for the Business Model Canvas to print out:

[https://canvanizer.com/downloads/business\\_model\\_canvas\\_poster.pdf](https://canvanizer.com/downloads/business_model_canvas_poster.pdf)

A great site for Business Model Canvas planning and forms: <https://strategyzer.com/>



**What is this Business Model Canvas (BMC) PROCESS we are using?**

**1) Use the questions on the Business Model Canvas Outline to help you develop your hypotheses (guesses) about your event challenge. There is a list of these questions on the document labeled \*Business Model Pitch Instructions + BMC Questions.**

**2) Customer Development helps you test your hypotheses.**



**What is a hypothesis in business startup planning?**

This means that you have educated guesses about your project which require experimentation and insight from potential customers in order to validate or invalidate your guesses. An example for a hypothesis with your project may be: “I think customers for the event are high school students.” You may find out not all high school students are interested in your event. Be sure to read the Jeff Haden article: <http://www.inc.com/jeff-haden/bottom-up-or-top-down-market-analysis-which-should-you-use.html>



**What is customer development?**

The customer development process is a simple way to take your hypotheses and get out of the building to test them. You have a series of questions to ask potential customers. As you gain insights from potential customers, you will make decisions about your project which will help you design a minimum viable product.



**What is a minimum viable product?**

A Minimum Viable Product is the smallest thing you can design that delivers customer value (solves the customer's problem) AND the customer is willing to pay money for this product.

## **How do I find customers?**

Set up a Google Alert or trawl through Twitter or Instagram for mentions of keywords related to your problem/solution. For instance: high school competitions or robot challenge course may give you some results.

Your Facebook, Instagram, etc. friends will be a great source of information. Begin to think about your customer questions.

## **Assignment: Talk to customers**

To help you design the best ROC event possible, your team will gain input from as many potential customers as possible. You will include some of this input in your business model pitch which your team gives. You will report the number of potential customer contacts made and clearly state what you learned from these contacts. Were your assumptions/guesses validated? What changes did your team make after receiving information from contacts?

Process: Learn customer's behavior/mindset about events first. Then you can get product feedback and finally you can test your pricing hypotheses.

### **How do I gather information from customers?**

You want to gain good information about your customer's experience with the problem/pain.

You are being asked to develop plans for a race obstacle challenge event to potentially be held at your school.

So.....Who are your customers and what problem are you solving for your customers?

Some questions you may consider:

- What are some of the complaints students have about activities at school?
- Are all students involved in extracurricular activities at your school? Why/Why not?
- What do you like to do for a fun challenge?
- What problems do you experience when doing this fun challenge?
- What type fun activities are available in your area related to education?
- What type competitions are available in your area?
- What do they like or dislike about the competitions?

How much time or money would they be willing to spend for a solution that made their lives better?

**During this investigation stage, do NOT sell or try to convince your customers that your product/service is wonderful.**

### Tips about Interview Questions

Ask about a situation where they mention/discover the problem you are solving.

For instance, if you were developing a product for people experiencing foot pain:

ASK: "Do you like to hike?" They may respond "Yes.....but I have foot problems."

NOT: "Do you have foot pain?"

ASK: "How are you solving the problem now?" "What are your workarounds?"

(If someone has foot pain, they may describe their workaround as: "I stuff cotton in my shoes to eliminate heel pain.")

Ask open-ended questions and then LISTEN to the responses.



### **What is an open-ended question?**

Open-ended questions help you find out more about customer's problems, needs when dealing with products/services for which you are developing. These questions do not result in a "yes or no" response. These questions ask customers to think and reflect and respond.

Definition clipped from Businessdictionary.com:

"Unstructured question in which (unlike in a multiple choice question) possible answers are not suggested, and the respondent answers it in his or her own words. Such questions usually begin with a how, what, when, where, and why (such as "What factors you take into account when buying a vehicle?" or "In your opinion, what is the reasonable price for this item?") and provide qualitative instead of quantitative information. Open ended questions are asked generally during exploratory research and where statistical validity is not a prime objective."

You should be guided by the stories of your customers as they answer your questions.

To gain more information, you should ask "Why?" Also, a good response is: "That is interesting, tell me more about that experience."

You need to be able to respond to how customers want to interact with your product/service. Therefore, you must prototype and test it frequently.

**REMEMBER:** People are trained NOT to call your baby (event) ugly. When you talk to them to gain feedback about your project, tell them you want honest feedback in order to help you build something people care about.

Your job: NOT to ask people for the solution!

Your job IS to figure out the BEST solution and then validate that your solution is right.

For Startup Tools: (Great Customer Development information)

<http://steveblank.com/tools-and-blogs-for-entrepreneurs/#startup-tools>

<http://giffconstable.com/2012/12/12-tips-for-early-customer-development-interviews-revision-3/>

**BMC Section 1: Your Value Proposition is very important. This is the value your event delivers to your customers. What game challenge are you building, for who, and what problem does it solve?**

**Understand and define Your Market (For BMC this is Section 2 Customer Segments)**

**Research the Total Addressable Market for your project:** Investors typically think of market size as three numbers:

1. Total Addressable Market (TAM) = size of the total market for your project (give numbers)
2. Served Available Market (SAM) = how many can I reach through my sales channel? (give numbers)
3. Target Market = who will be the most likely buyers? (give numbers)

**Example:**

The **TAM** for a developer of a smartphone app might be the 1.75 Billion total smartphone owners worldwide.

**SAM:** If the app is available only in English or works only on the iPhone, SAM is significantly smaller.

**Target Market:** For the iPhone market, the developer is looking at Apple App Store customers. The next step is to estimate what percentage of those shoppers might actually buy the app.

NOTE: You can choose a percentage for this assignment but when you conduct your customer contacts, ask people who buy/use products/services like yours if they would be open to considering a new product. Then assume that one-half of these individuals who indicate they would buy/use your product/service will actually purchase your product/service. Now, you have a rational basis for your target market share estimate.

**For a good explanation with another example of sizing a market read:**

<http://www.inc.com/jeff-haden/bottom-up-or-top-down-market-analysis-which-should-you-use.html>

## RESOURCES to help you understand your market:

U. S. Small Business Administration list of resources:

<http://www.sba.gov/community/blogs/conducting-market-research-here-are-5-official-sources-free-data-can-help>

Clipped from sba.gov: “The U.S. Census Bureau (www.census.gov) maintains a vast repository of information that is quick and easy to navigate, thanks to a variety of Data Access Tools. For example, with The American FactFinder, just enter a city and state and the tool will generate multiple options for viewing social, economic, household and demographic data for your town or future location.

The main site has also been newly re-launched to make it very simple to find the data you need, including a neat interactive map that shows a mash-up of economic and demographic statistics for any town, city, or state in America.

FEDSTATS: To find numbers compiled by over one hundred federal agencies:

<http://fedstats.sites.usa.gov/about/>

This is the US Government's official web portal: <http://www.usa.gov/>

Demographic information: <http://www.census.gov/>

Clipped from <http://smallbusiness.chron.com/demographics-marketing-22008.html>

“Common **demographics** include age, gender, race and ethnic origin. Companies also track demographics like education, household size and occupation. Most demographics are defined or delineated by specific ranges. For example, the age demographic may be divided into ranges such as 18 to 24; 25 to 34; 35 to 54; and 55 years and over. People within these age groups have different values. Their preferences for certain products or services may vary as well. Similarly, statisticians may divide income statistics into groups to differentiate those in the lower middle, middle and upper class. Companies can obtain demographic information from the U.S. Census Bureau.”

Get the facts at American Factfinder for hundreds of demographic, population and labor cost demographics. <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>

State and County quick facts: <https://www.census.gov/quickfacts/fact/table/US/PST045216>

Moody's Analytics: <https://www.economy.com/freelunch/>

Market Segmentation: a Guide to sources of Information:

<http://www.loc.gov/rr/business/marketing/>

**Resources to use to help with Business Model Canvas sections 3-9**

Statistical Abstract of the United States: <https://bhs.econ.census.gov/bhs/>

Industry and Business Statistics: <https://www.census.gov/programs-surveys/economic-census.html>

IISD's Business and Sustainable Development: A Global Guide:

<http://www.iisd.org/business/markets/>

Industry Research: [https://www.bls.gov/iag/tgs/iag\\_index\\_alpha.htm#T](https://www.bls.gov/iag/tgs/iag_index_alpha.htm#T)

Statistics for specific industries: <http://www.sba.gov/content/statistics-specific-industries>

## Steve Blank information and resources

Steve Blank's market research link page:

<http://steveblank.com/tools-and-blogs-for-entrepreneurs/#marketresearch>

"Steve Blank is a seasoned Silicon Valley entrepreneur. Translation: he has failed and--more often--succeeded, in a 21-year career building 8 Valley startups, including several with major IPO's. Along the way, he's learned an incredible amount, and has spent the last decade sharing what he's learned with entrepreneurs all over the world. Author of two famous books on entrepreneurship, [The Four Steps to the Epiphany](#), and [The Startup Owner's Manual](#). Steve teaches entrepreneurship at Udacity, Stanford, Berkeley, Columbia, and other major universities worldwide. He was named "Master of Innovation" by Harvard Business Review and is an advisor to many successful entrepreneurs. He is also an avid conservationist, contributing generously to preserve the California Coast."

**The bio above is from Steve's FREE Lean Launch Pad course. This Udacity course takes you through the Business Model Canvas process. <https://www.udacity.com/course/ep245>**

### Search TIPS and Other resources

Local or University Libraries have business research books and databases

Search for Information about other types of high school events

Does participation in your event give students selling points to put on College Applications?

Also...participation in the STEM Discovery Camp will give YOU selling points to add to your college application. This camp builds technical, design, business model canvas, teamwork, presentation and communication skills.



**\*Listen to Dr. Shane Puckett "Speaking Dynamically" and read \*The Business Model Pitch Score Sheet (judges use this form to score your pitch presentation) and the \*Business Model Pitch Instructions.**



## **Assignment: ROC Business Model Pitch**

**Teams will compete in the ROC Business Model Pitch on April 28.**

Pitch is to be no longer than 10 minutes.

Judges have 5 minutes to ask questions.

Judges will score each pitch based upon the ROC Idea Pitch Score Sheet.

For your ROC Idea Pitch you should include information pertinent to all 9 sections of the Business Model Canvas. Each team has a limit of 10 power point slides for their presentation.

Choose at least 2 team members to present. Not all team members must present.....this is a strategic decision.....the best presenters should pitch and the non-presenting members answer the judge's questions.

**Power Point Business Model canvas template to use with your Pitch Presentation:**

<http://www.free-power-point-templates.com/articles/free-business-model-canvas-template-for-powerpoint-2010/>

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