

Teacher Overview

Mockups is a game created by Dr. Liz Gerber, professor at Northwestern University with the help of her students. Mockups can be implemented quickly to give students practice empathizing, ideating, rapid prototyping and pitching. This game tests the limits of rapid prototyping without allowing students time to overthink the problem. Rapid prototyping develops confidence in generating a quick solution to customer problems. Mockups gives students practice through repetitions to master the skills, knowledge and mindset critical for innovation.

When to Use This Lesson

Mockups can be used at any time during the program and can be repeated. It also can be an alternate for Paper Airplane Factory to discuss rapid prototyping.

Time



BEFORE CLASS PREPARATION

- > Make sure you understand the game. Read the directions below and understand the two approaches that can be used in the game.
- > Before class, you will need to plan logistics of the class period.
 - Choose groups.
 - Decide if you will determine which student in each group will be the customer for each round or if groups will determine this on their own.
 - Decide the exchange rate for the YE Bonds (ie. How many YE dollars will you reward for YE Bonds earned)
 - Decide how many rounds students will play.
- > Place 5 to 6 Mockups cards of each color in separate piles on each team's table.
 - White cards represent the user being designed for.
 - Gray cards represent the customer need being designed for.
 - Black cards represent a barrier or constraint that must be considered in the design.



User



Need



Constraint

MATERIALS

- > 1 deck of [Mockups cards](#)
- > Pipe cleaners or Wikki Stix
- > YE Bonds

KEY TERMS

- > Design Thinking
- > Innovation
- > Prototype
- > Empathy
- > Value Creation
- > Elevator Pitch
- > Subjective Value

LEARNING OBJECTIVES

- > PE1, PE1a, PE1b, PE1c, PE3, PE3a, PE3b, I1, I1a, I1e

FOUNDATIONAL VALUES

- > Passion
- > Sound Judgment
- > Opportunity

ACTIVITY INTRODUCTION

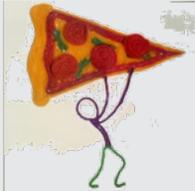
The United States economy is dominated by service businesses. These businesses must demonstrate customer-focus by digging deeply into the needs of the customer by showing empathy for the customer and leveraging design processes. Design Thinking is used to innovate new products and services across our society, as it is extremely difficult for businesses to be successful in the twenty-first century without creating a great user experience; customer experiences that are relevant, work well and that people want to use. By playing Mockups you will get repetitions to master the essential mindset, skills and knowledge critical for innovation.

ACTIVITY DIRECTIONS

- > Organize students into groups of 4-5 students.
- > Have a supply of Wikki Stix or pipe cleaners available on each group's table or space.
 - If you do not have these supplies, ask students to sketch their prototypes on paper.
 - Announce that each group will have 1 student playing the role of the customer, and the other group members will be designers creating the prototypes. Decide who the customer will be in each group.
 - **Protip:** Allow time for the designers to ask questions of the customer (market research), but then have the customer move away from the group as they design. As you have the customers gathered, you could utilize that time to review the FVs, outline important decision criteria for themselves, debrief the process so far, etc.
- > The customer will have two YE Bonds to distribute to the designer(s) of the prototype they like best. They have decision rights on how they will distribute the bonds. They can distribute both to one designer or award one bond to two designers.
 - The teacher should inform students what the exchange rate is for the bonds they earn. For example, the teacher may award five YE dollars for each YE bond earned. The teacher sets the exchange rate for bonds to dollars.
 - **Protip:** Always have students awarding the bonds write their name on them. This will ensure that students cannot award themselves bonds and then try to exchange them for YE dollars (Be Principled).
- > The goal of the game is to rapidly build a prototype using either pipe cleaners or Wikki Stix that meets the needs of the customer (user) given the constraint described on the card.
- > Inform students the game is meant to mix fun and learning. At the end of the round, it is their customer they are trying to satisfy. There are no limitations as to what you can design, as long as it is legal. Encourage your students to let their imagination and creativity run wild for 6 minutes while designing. Remind students: YOU MUST PROTOTYPE RAPIDLY! It is about demonstrating your ideas, not creating a finished product.
- > Inform designers they will give an elevator pitch to sell their idea to the customer after the 6-minute design phase
 - **Protip:** If you are wanting to really focus in on rapid prototyping, consider shortening this design phase. Also, if you play this often, adjust this design time and see how it impacts the designs that are made.
 - **Protip:** Teachers may want to set a time limit for elevator pitches. Typically, they are 30 seconds to 1 minute when creating rapid prototypes.

- > Ask the customer at each table to turn over one card of each color and place them left to right in order - white, gray, black. The cards turned over will represent the design prompt the designers will be ideating on.
- > Have customers at each table read their design prompt aloud to the group. Using the cards shown above as an example, the customer would read the selection above as, ***“Rock Climbers need A Way to Make Friends that is Edible.”***
- > Designers have 6 minutes to use the Wikki Stix or pipe cleaners (whichever resource you are using) to create a prototype or visual representation of their product or service.
- > Examples:

Climbers Pizza Delivery



OR

Portable Bonfire Logs



OR

Chair Party Chairs
Made of Cheese



- > After the 6-minute design phase, instruct designers to pitch their idea to their customer. The designer to the customer's left will go first, then proceed clockwise around the group, giving each designer an opportunity to pitch.
 - **Protip:** Designers not pitching should remain silent while their competing designers are pitching. They cannot add or ask questions. Only the customer can talk to the designer who is pitching.
- > After all designers have pitched, the customer in each group awards their YE bonds to the prototype idea(s) they value the most. Customers have 1 minute to share (pitch) why they selected the prototype(s) they chose.
 - **Protip:** This is a good time to remind students that value is subjective to the customer. Understanding subjective value is important as we seek to design with a customer-focused mindset.
- > If you wish to play additional rounds, select a new customer for each group, then repeat the steps.
- > **Optional:** Have the winner of each group pitch to the full class and have the class vote for their favorite idea using YE bonds.

ACTIVITY DEBRIEF

- > Customer-focused design - empathy for the customer you are designing for, and feedback from users, is fundamental to good design.
 - Ask students, “How did empathy inform your design?”, “Did you ask the customer questions to inform your design?”
 - What product details did you include in your pitch? Did you include a name? Price? Estimated cost to make?
- > How does the practice of empathy correlate to the Foundational Values?
- > How did the time constraint of the design phase impact your prototype?
 - How would your prototype be different if there was no time constraint? What kind of constraints affect entrepreneurs in the real world?
- > Did you demonstrate the Foundational Value of Knowledge, by seeking and using the best knowledge to benefit others (your customer)?

