



**IT Workshops
in a box**
engage. educate. empower.

Workshop: Product Design

Set-up Time: 10 minutes

Activity Time: 1 hour

Estimated Cost: \$15-\$20

Standards Met:

- Indiana's Science, Technology, Engineering, and Mathematics (STEM) Initiative Plan
 - Visual Collaboration Platform
 - High-quality curricula and instruction to all students
 - Connect to Real-World problems
 - Data Rich
 - Scalable
 - Active-engaged learning
 - Cost effective

Workshop Summary

Students will be broken into 2 teams to develop products and then work with “focus groups” to refine those products. Usability and user-centered design is a key consideration in product development and classic innovation games are a fun and easy way to complete this task. Many people do not take into consideration how much thought goes into the creation of a product or the improvements made to enhance each item

Learning Objectives:

After doing this activity, students should be able to:

- See how important customer feedback can be.
- Look at usability in a different way.
- Realize how much thought goes into making a product.
- Come up with better strategy decisions.
- Understand what the customer's needs are.

Supply List:

- Poster Board (4) for each team (\$2.00 per 4)
- Markers
- Easel or white board
- Dry Erase Markers (if white board is used)

Workshop Procedure:

I. Step One

1. Show the participants a programming video so they better understand the process.
2. <https://www.youtube.com/watch?v=0fwQ7SXmV2w>

II. Step Two

1. Divide the girls into two teams.
2. We will provide a box of miscellaneous household items and have the teams choose 1 or more of the products.
3. Each team will then discuss how they could improve those items and share them after 5 minutes of consideration time.
4. They can use the first poster board to write out ideas if need be.
5. Helpful Hints: What don't you like about it? What would make it better?
6. This will help with ideas for the process in step 2.

II. Step Three

1. Give each team 20 minutes to come up with a product.
 1. This product must meet the following criteria:
 1. Personal use item
 2. Upgrades are possible
 3. Ask yourself: what would make this product more useful?
 4. Tip for how to start: think of a personal problem, think of a solution and create a product that could help solve the problem.
2. Team 1 will go first.
 1. They will present their product to the other team in a 5 minute pitch
 2. After the pitch, both teams will play the Speed Boat Game
 3. The Speed Boat Game
 1. Draw a boat on the whiteboard. The boat is representative of the product.
 2. Ask team 2 for feedback on the product.
 3. Things that team 2 does not like gets added to the boat in the form of anchors.
 4. Things that team 2 liked get added to the top of the boat in the sail.
 5. Team 2 will then be asked to work with Team 1 to make improvements to the anchors so they are no longer holding the product down.
3. Team 2 will go next.
 1. They will present their product to the other team in a 5 minute pitch.
 2. Then they will do the Speed Boat Game just like team 1 did.

III. Step Four

1. Show a video about why product design is important and the intentions of the process.

2. <https://www.youtube.com/watch?v=J6LtABooE2c>

IV. Discussion

Discuss with participants how they felt about the activity, what they found challenging, and highlight with them some of the learning objectives covered.

Post-Workshop Discussion:

Use this time to discuss both of the stages with the participants, and pull together the learning objectives, making sure that each participant understands the concepts learned in stage 1, how those concepts were put into practice in stage 2. Discuss how students might use the step-based process in other parts of their life.

Technology Option:

There are these innovation games online so if technology is available, participants could use that instead of writing everything up on the board.

Product Design Workshop

Fun Facts

- Designers work on all sorts of products like fashion, toys, TV-shows, and even skyscrapers!
- You can get into design through engineering, art, computer science, and more! Designers have lots of different backgrounds.
- Designers use many different tools to create new products like art supplies, models, and computer programs!

Career Outlook

- Designers make around \$47,000-\$80,000 per year!
- Most design careers require a Bachelor's degree.
- The number of design jobs is expected to increase around 7% each year.
- To be a designer you need to have artistic, creative, and computer-based skills.

For more information visit:
<http://www.bls.gov/ooh/arts-and-design/home.htm>

Local Universities

- Indiana University: College of Arts and Sciences.
- Ball State University: School of Art, Family and Consumer Sciences.
- Purdue University: Department of Art and Design. College of Engineering.
- Notre Dame University: Department of Art, Art History, and Design. College of Engineering.

Profile of Hannah Chung

Co-Founder & CCO of Sproutel & Jerry the Bear

Hannah Chung is a young graduate of Northwestern University where she received her Bachelor of Science in Mechanical Engineering and Design. Hannah is best known for designing Jerry the Bear, an interactive robotic bear that helps young children with diabetes learn about eating, monitoring glucose levels, and more.

Hannah has won many awards including being one of the "Top 15 Women to Watch in Tech" by Inc. Magazine.

Hannah also co-founded and serves as National Board Advisor for Design for America, an award-winning initiative that aims to teach and use human-centered design to help others.

Find out more about Hannah visit: <http://www.jerrythebear.com>

Hannah Chung is a young IT professional, and you can be too!



<http://www.focaluprightfurniture.com/what-do-you-stand-for-hannah-chung/>