Name:
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District: School District of Bonduel, Bonduel, WI

2017

Career
Academy
Teacher
Externship
Program

BEAR'S Tank
(A student version of
Shark Tank)

Overview:

Students will identify an area of improvement for a product and attempt to sell their idea and/or prototype to potential (mock) buyers.

Featured Externship Business:

[Top Brass, Wittenberg, WI](#)

Subject:

Library Media – International Society for Technology in Education (ISTE) scope of library science.

Grade Level:

High School, but this could be adapted for middle and elementary
(TEACHER CAUTION - "Everything is a Remix" Vimeo has apparent drug use moment by Led Zepplin member – be aware for younger audiences)

Learning objectives:

After doing this activity, students should be able to:
- identify a product or process that needs improvement or redesign
- define the current problem
- research methods to improve the problem
- brainstorm solution/s for the problem
- develop and test prototypes of the solution
- re-design and tweak as necessary
- pitch their ideas to a panel of business and industry leaders

Workplace Readiness Skill:

- ✓ Social Skills
- ✓ Teamwork
- ✓ Attitude and Initiative
- ✓ Professionalism

- ✓ Communication
- ✓ Critical Thinking
- ✓ Planning and Organization
- ● Media Etiquette

Type of Activity:

- ✓ Individual
- ✓ Small Group
- ● Whole Class

Standards - International Society for Technology in Education (ISTE)

- Students know and use a deliberate design process (will use engineering design process) for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.
- Students select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.
- Students develop, test and refine prototypes as part of a cyclical design process.
- Students exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.

Time:

Four weeks if meeting daily, and final presentations will be connected to Bonduel High School's Career Day.

Materials:

- Chart-sized Post-It Notes and chart markers
- Sketch book (one per student)
- Monopoly money (or some way to keep track of 'currency')
- Rejected and accepted toothpicks from "The Toothpick Factory".
- Two packs of Post-It Notes (different colors), 2 reams of paper (different colors) and writing utensils
- Access to streamed video links and Google slide shows (links embedded within lesson plan details)
- Everything is a Remix - Vimeo
- A panel of experts to assess the idea and presentation – thus achieving a winner of the (Shark Tank-like) event
- Product Tank videos
- Access to *Shark Tank* episodes (ABC.go.com or hulu)
- Toothpick Factory Jobs activity
    - Toothpicks
    - Ruler
    - Files
    - Nail clippers
- Optional: Trophies and/or ribbons, cash or other valuable prizes

Directions:

Day 1

1. Participants will watch at least one Shark Tank episode. Students will work in teams or as whole group (their choice) to analyze Shark Tank products and persuasive selling techniques. Which products did the Sharks invest in and why? Which products were rejected and why? Students will record their ideas on chart paper under the headings "Invested" and "Rejected". Display their ideas from this activity when the students meet in the future.

2. Learn how to create a brief for a project. Key idea: Search for ideas to improve a process or solve a problem versus just redesigning something already available. Watch video (use subtitles due to accent) from Product Tank.
   - **Assignment:** Record three things that would either make life easier/better OR things that need improvement.
   o Examples to share with class: 1). Sock Sorting Machine: Some type of coding of socks and machine that could read the code that would auto-sort socks (new product). 2). Where is a convenient place to put a purse for the driver of a car where there are other passengers in it? (improvement of current design)

3. Each student that followed through with the assignment will receive two $500 bills (Monopoly money). This will be used later. Share ideas with class. Each student will use one color of paper for all 'new inventions'. Use a different colored paper for the redesigned items.

Day 2

1. On each paper, the student will put the name of the product (ex. Sock Sorter), the purpose of the product (auto-sort socks), the demographic of who may purchase the product (adults), demographic of who may use the product (youth, adult), why the product was thought of in the first place (too much time is spent finding the matching sock to pairs of socks), and any initial design ideas (optional; ex.: create a patent for a product that can embed some type of scan code within a logo of a sock and create a product that reads the codes as socks pass through some type of tubing. Puts matching socks in same 'chute' or makes the socks somehow magnetic). Collect all papers, and sort papers by topic (color).

2. Start with one color of sheets. Each person has a colored sheet, and if there aren't enough, then work in pairs or small groups. For a short amount of time, students keep passing or shuffling the papers they were given to others. They won't analyze them, but rather engage in way to make this activity random. Once told to stop, the holder/s of the paper read the information contained. Without too much feedback, the students will give a score from 1-5 on the backside of the paper. Then, the students re-engage with the paper shuffling technique. Share with the students that game designers of UW-Madison do this in their brainstorming phases. Repeat this process until there are at least 3 scores on the paper (unless there aren't many ideas or participants to pass the papers to). Have students add the score on the back.

Once a 'high score' is established, share out that idea to critique the elements of that idea that made it earn the top score. Then, owners of other ideas could revise their sheets.

3. Repeat the entire process with the colored-coded (other topic) sheets. If there is not enough time in one session, wait for the following meeting.

   Assignment: revisions if necessary. Let students know that all ideas will be shared in the next meeting, so keep that in mind when creating revisions.

   Closure of lesson: If a student has more than one high-scoring idea, he or she may choose to sell or auction that idea for a different team to pursue. This is where the Monopoly money comes in. The money will be converted to points by the end of the project to help establish winners of the complete event. Have 'change' available ($100 bills).

   Show segment of [Everything is a Remix.](#) (note - show segments of this video each meeting until complete. Allow a few minutes for a discussion of the segment.

Day 3

1. Share out all ideas after revision. Everyone will decide if he/she wants to continue his/her project individually, or if he or she wants to join a team. Teams may be established. This, too, is something that the game designers do at UW-Madison.

2. Watch [ProductTank video #2 from 9:23](#) and forward. Introduce the video as the research phase, which entails talking and observing those that can give you honest feedback about your topic. Use one of your model examples to discuss research avenues for that topic.

   Assignment: each person of your team will research (talk/observe probable audience for the product) with one person. For each additional person that was interviewed, $100 fake money will be given to the student. Questions and answers must be documented and shared with teacher for money.

3. Review research data. Go back to the brief and add insights gained from the research stage to it.

4. [Sketching and Rendering: Episode 3.](#) Students must watch to 2:54 mins., but may watch full video. Model with purse example different solutions – storage area in seat where you sit, hook/s built into back of seat that you lean upon to hang it (opposite side's seat as easier to reach), console between driver and passenger redesigned, etc.

   Assignment: Create at least 3 models that could be solutions to your brief.

5. Share sketches with students. Model with purse option using the part of the seat that you lean against. Using a typically full purse, students will see how mistakes can happen and be remedied.

6. Share all models with at least one other innovator. Innovator will record benefits and possible flaws or challenges to each sketch. Record those ideas on Post-It notes (one color for positive critique and another for challenges). Option: During this process, have a guest customer visit your working area. Allow him or her to distribute some Monopoly $50 based on observable work ethic and collaboration.

7. Revise plans and sketches based on peer input.

Day 4

1. Back to research phase: Take revised sketches back to the potential users/buyers of each product or service. Repeat the process of receiving feedback that is both positive and corrective/directive. The innovator can then revise the sketches. Based on feedback and revisions, students should narrow their ideas down to 3 or fewer choices.

Day 5
1. Time to further narrow down product: Consider cost of manufacturing, safety of the manufacturing process, as that will impact profit.

2. Estimate how much it would cost to manufacture each product.
    - Facility to create the product (warehouse, garage, piggy-back another manufacturing business?!?)
    - Utility costs (heat/electricity/water)
    - Product costs (raw materials, machines needed)
    - Labor (human help – how many people needed to launch business, wages, and possible benefit packages)
    - Advertising (how to persuade people to purchase product)

Students will brainstorm these factors. They can use outside resources. **Note** it would be helpful to have a list of emails to CATE contacts and other manufacturers. This would allow for primary-source researching.

Day 6

1. Guest speaker/consultant – (someone from KI, Top Brass, and/or other CATE affiliate) Guest speaker will be asked to share some manufacturing challenges that were unexpected, and how those challenges were overcome. If comfortable, the guest could bring a current challenge to the students, and the students could brainstorm ideas of how they would solve it.

2. Students will have the opportunity to have 15-minute business meeting with the manufacturing guru/s to help tackle the manufacturing cost considerations.

3. Using their input from the guest speaker/consultant, students will need to select one solution to market at the final competition. Cost is a consideration, but it doesn't need to be a final excluding factor.

Day 7

1. Quality control – Students will analyze multiple toothpicks created in advance from Toothpick Factory Job lesson (credit: www.fl.ate.org). Students will categorize sample picks into one of two categories: "Accepted" and "Rejected". Upon completion, the facilitator will share "the manufacturer's decisions" (educator's discretion) of which were acceptable or rejected…and why.   Follow this activity with the Toothpick Factory Job lesson.

Day 8

1. Design Lessons: Students will transition to creating their selling/persuasion presentation for the Bear's Tank event.

2. Design via CRAP – color, repetition, alignment, and proximity. Introduction resource is found here. https://youtu.be/bUogCQ625Fg Permission for use has been granted by the author.

Lisa Sorlie 23 hours ago
Please may I share this resource with our students at Bonduel High School? Thank you.
Reply

KevinAMedia 22 hours ago
Lisa Sorlie go for it!
Reply · 1

Design lectures and tool exploration was created by Kurt Wismer (edtech sage). The resource is found here.

Lisa Sorlie <bigtigerfanmom@gmail.com>   3:21 PM (50 minutes ago)
to kwismer

Hello Kurt,

Thank you for sharing your passion with others. I am a library media specialist in Bonduel, WI., and I am contacting you to request permission to use your design slideshow with our students. We are looking to incorporate a Bear's Tank (a knock-off of Shark Tank). I would like to use your info with our students for their marketing presentations to our guest panel of judges.

I have the link, but I won't use your resource without your permission.

Thank you again for all you do for educators and students!

Kurt Wismer   4:00 PM (10 minutes ago)
to me

Sure, that is fine! If you make any modifications, just please cite me, and share alike!

Good luck and thank you for asking.

Kurt

This resource covers typography, images, creative commons, logos, and avenues to create the students' pitches (slideshows, video, etc.). This part of the unit will take several sessions to complete.

Wrap-Up:

After these lessons, students will have innovation time to create their pitches to the Bear's Tank event. They may decide to create a prototype in addition to their diagram/sketch of their ideas. Additional engineering videos can be found on YouTube.

Rubric: http://www.rcampus.com/rubricshowc.cfm?code=ZX6W5W9&sp=yes I intend to have the judges use the following criteria from this rubric: Creativity, intended use, visual representation, and presentation of information. I will add points to the rubric based on how much money each innovation team has (I feel I need to see how this plays out to know how many points would be awarded). I also feel that we could have a preliminary round where all projects are presented, and then the top three would go head-to-head the day of the event. Preliminary judges could be our business ed teacher, administrators, art teachers, and such.

Extension Activity:

- Collaborate with CATE business contacts and/or business education teachers to create a formal business plan.
- Create a jingle for your product.
- Design a logo for your company.
- Create a digital advertisement (strictly 30 seconds long).
- Students could research how to launch a product in earnest (and not just for the competition), and they could choose to pursue patents.