EXTENSION LESSON 7: SHARING MY INVENTION

(Recommended as culmination for project)
Invention Process Step: Communicating
Grade Level: 6-8
Base Time: 40 minutes

Essential Question

What is the important information that should be communicated to tell about my invention and its benefits? How will an effective live presentation make people interested in and understand my invention idea?

Lesson Overview

This lesson is an extension lesson to provide support for students who may present their invention project in competition. The activities included will guide students to complete a live presentation (pitch) to communicate their invention process. They will learn to balance details with brevity and develop public speaking skills as they prepare and deliver a presentation to others.

NOTE: A presentation is required for state, regional and national invention conventions.

*NOTE: This lesson may be completed in class or at home. If asking students to complete their preparation for competition at home, please be sure to clearly explain all rules, requirements, expectations and deadlines to students **and** families so that they are best set up for successful completion of the project.*

Objective

Students will be able to:

- Understand why an audience would feel invested in an invention.
- Analyze the invention process to choose an appropriate focus for communicating the problem and the solution developed in the invention.
- Accurately and concisely describe their invention.
- Present a well thought out presentation to communicate their invention process to others.

Lesson Standards

Common Core ELA Standards:
• CCSS.ELA-LITERACY.SL 6-8.1, 4, 5
• CCSS.ELA-LITERACY.W 6-8.3,4,5
• CCSS.ELA-LITERACY.WHST 6-8.1, 2, 4, 5

Materials

Resources for the Educator

- Invention Presentation Videos:
  Team Bus Safety Stop, *(K-12 Inventure, 3:15 minutes)*
  Link: https://youtu.be/EpPKDxBEnw4
  Insulin Plunger, *(Invention Convention 2019, 3:32 minutes)*
  Link: https://www.youtube.com/watch?v=HwqYjO906-0&feature=youtu.be
  The SipBit, *(Invention Convention 2019, 3:03 minutes)*

Link: https://www.youtube.com/watch?v=V5Wp1qSfziY&feature=youtu.be

- Pitch and Display Information Example

Materials for the Student

- YIP Inventor's Journals
- Worksheet: Presentation Pitch (included in Inventor's Journal)

Notes for the Educator

Educator may lead the following lesson plan with flexibility to adapt as needed to fit technology and class format.

This lesson will guide students in preparing a presentation to share their invention process and invention design with others. A presentation is required for participation in state, regional and national invention conventions such as the Northern New England Invention Convention and the Invention Convention US Nationals.

Talk to students about invention convention competitions. Explain that in addition to the work that they have completed in class through the YIP program, to be eligible for competition they must also prepare several more elements such as display board and an in-person presentation pitch (a video recording of the presentation is also required for state, regional and national competitions which may be done in class or at home.)

In order to compete in state/regional and national invention conventions students must have the following things for their project:

- Invention Prototype (working or non-working)
- Inventor's Journal
- Tri-fold Display Board
- Live Presentation
- Video Presentation

Students have already made a prototype and have their Inventor's Journals. However, they still need to make a display board and they also may need to refine and elaborate on their presentation to make it more detailed and suitable for competition (and for video-recording). The following activities will support them in their preparation.

You may change requirements as needed for the class. However, the following are required components for competition at the Northern New England Invention Convention and the Invention Convention US Nationals.

Presentation Requirements:
All presentations should include the following information and should be no more than 6 minutes long.

Student(s) Name(s)
Student(s) Grade(s)
Student(s) School
School City, State

Name of Invention
Statement of the problem
Explanation of the invention as a solution to the problem

<u>Video Requirements:</u>
All recorded videos of presentations should include the same information above and
*Be filmed **horizontally***
Be recorded continuous- no stopping and restarting during filming
May not be edited
Reading a full script is discouraged
Should show the prototype and display board in the video

Refer to the Educator Resource: Pitch and Display Information Example for an example of information that might be included in an oral presentation or simplified for a display board. Use this as you guide students.

Instruction & Activities

<u>Educator Instruction:</u>
NOTE: Students may have already come up with a name for their invention during their design process. You may wish to skip this part of the lesson or ask those who have yet to decide on a name, to work on this at home.

Explain to students that now that they have developed their invention, they will need to name it and think about how to tell others about it- a skill called communicating. Names should be descriptive of the invention and the problem it solves, but also be appealing to the target audience. What are some product names they can think of? (Rice Krispies, Nike shoes, Nintendo, etc.) Ask students to think about the following:

1. What is their invention and what is its purpose?
2. Who is the target audience? Who will benefit most? Who is the invention made for?

Remind students that a good name is easy to pronounce and easy for others to remember. Invention names can be named using several prompts:

1. Incorporating the inventors' name. Example: Levi Jeans, Kraft Macaroni and Cheese
2. Using the components of the invention. Example: Peanut Butter, Duct Tape
3. Using initials or acronyms. Example: SCUBA (Self Contained Underwater Breathing Apparatus)
4. Using word combinations, rhyming and/or alliteration. Example: Hula Hoop, Pudding Pops, Kit Kat
5. Using the invention's purpose. Example: vacuum cleaner, earmuffs

Next, students will need to develop a presentation to give live and to record on a video (both formats are required for state/regional and national competition). Explain why a presentation is an important step in the invention process and why effective communication about their invention can help others understand and use it.

Ask students to watch these real-life kid inventors from Invention Convention. They should be looking for elements of a good presentation.

Students should watch one or two of the following videos.

Share Video:

- Team Bus Safety Stop, *(K-12 Inventure, 3:15 minutes)*
  Link: https://youtu.be/EpPKDxBEnw4
- Insulin Plunger, *(Invention Convention 2019, 3:32 minutes)*
  Link: https://www.youtube.com/watch?v=HwqYjO906-0&feature=youtu.be
- The SipBit, (Invention Convention 2019, 3:03 minutes)
  Link: https://www.youtube.com/watch?v=V5Wp1qSfziY&feature=youtu.be

After each video, have students discuss the following questions:

1. Was the name/title catchy- does it make you want to buy the product?
2. Do you understand what the problem was and the solution?
3. Does the invention solve the problem?
4. Did the inventor talk about challenges? If yes, how did they overcome them along the way?
5. Did they identify the target audience for the product?

Activity: Creating a Presentation (25 minutes)

If working in a team, students should be together as a team during the development of the presentation. Each team member should have a role in the script and also a speaking part in the actual presentation.

Ask students to complete the Presentation Pitch Worksheet included in Inventor's Journal. This worksheet will help students create an outline for their presentation by having them pick out the most important aspects and features of their invention and how the invention idea is a solution to their original problem.

After students have an outline, they can further develop a script for the presentation, or you can ask them to practice giving their presentation in a peer share. You may also allow time for students to give their presentation to the entire class.

If doing a peer share, ask peers to provide feedback. You can refer to the constructive feedback guidelines in Lesson 5. Students can then make changes to their presentations as needed.

Note: YIP recommends using the following feedback models. You may wish to explain these models and what you expect of students as they give feedback.

- *TAG Model: **T**ell something you like about it, **A**sk a question about it, **G**ive a suggestion to improve it*
- *Hamburger Model: **Top bun** is a positive comment about it; **Hamburger** is the feedback that will be useful to help improve it; **Bottom bun** is another positive comment about it.*

Ideas for Virtual Instruction

Activity: Presentation Examples

Have students watch the An Inventor Presentation: The SipBit, (Invention Convention 2019, 3:03 minutes)
Link: https://www.youtube.com/watch?v=V5Wp1qSfziY&feature=youtu.be

Ask them to discuss how the video relates to the Invention Process. Students can share their ideas in a chat, using a shared document or Zoom breakout rooms. You may also use this as an example of a good presentation as they write their own invention presentations.

Activity: Creating a Presentation

Ask students to complete the Presentation Pitch Worksheet (included in Inventor's Journal). This worksheet will help students create an outline for their presentation by having them pick out the most important aspects and features of their invention and how the invention idea is a solution to their original problem. Once they complete the worksheet, they may either write a script for their presentation and/or record a video of themselves giving the presentation. Students may submit their work using the platform of choice.

Check for Understanding

Educator may wish to do one of the following to check for understanding:

Ask students to share one thing they like about their presentation and one thing they would like to change.

Take Home Assignment

(optional if giving take home work)

Ask students to refine their presentation and then practice presenting it to an audience of family or friends at home.