



LESSON 8: Communicating the Idea

LESSON OVERVIEW

This lesson will introduce students to communication as the final step in the invention process. Students will be able to talk about their invention process and the steps they took from idea conception to making a prototype. Students who have a completed prototype can share with the class how it works and changes they made to their design while they built it. If the prototype is not yet complete, they can present their research and what they need to do to finish their prototype.

This lesson is not designed to be used as a stand-alone lesson. It builds off previous YIPLit Lessons 5- 7. It is the culminating lesson for the unit and the final invention project. This lesson is extended to further incorporate Lessons 1, 2, 3, 4, 5, 6, 7. And for students who wish to present their invention project in competition, there is an optional YIPLit Lesson 9: Preparing for Competition to follow.

OBJECTIVE

Students will be able to:

- Accurately and concisely describe their invention to another person.
- Determine the most important aspects of their invention to share with another person.
- Present a well thought out pitch about their invention.

MATERIALS

- Google Slides: YIPLit Lesson 8
- Book: **Walrus in the Bathtub** by Deborah Underwood, illustrated by Matt Hunt; ISBN-10: 0803741014 OR...
- Read-aloud Video: <https://youtu.be/-dIJrpgFoVs> Reading time- 5:33 (included in Google Slides)
- Video: *An Inventor Presentation: Team Bus Safety Stop*, (optional, included in Google Slides)
Link: <https://youtu.be/EpPKDxBEnw4> (K-12 Inventure, 3:15 minutes)
- Timer (timer countdown included in Google Slides, or use a clock, phone, or other device)
- Invention Name Worksheet (included in YIPLit Inventor's Journal)
- Invention Story Mountain Worksheet (included in YIPLit Inventor's Journal)
- Pencils, pens, markers or crayons for writing and drawing
- YIPLit Inventor's Journals

NOTES FOR THE TEACHER

Teacher may use slides provided or lead instruction and discussion on their own.

Communication is an important part of the invention process. YIP encourages students to present their invention project to develop and practice communication and public speaking skills. A simple classroom showcase is acceptable, but students often enjoy the opportunity to present their projects to a larger audience such as the school community and/or families and friends. Hosting a school invention fair

(competitive or exhibition) is recommended and YIP provides support and resources to assist teachers as needed.

This lesson will help students craft a simple presentation to communicate the ideas for their invention and the activities they completed as part of their invention journey. While there are multiple components of communication (including preparation for presentation at an invention fair or competition), YIPLit Lesson 8 focuses on naming the invention and the oral presentation pitch where students will explain their invention, how they came up with the idea, the problem their invention solves, and how they developed the invention to its final form. If any parts of this lesson (or the additional activities to prepare students for an invention fair in YIPLit Lesson 9: Preparation for Competition) are given to students to take home, be sure to share your expectations with students and also communicate to families so they understand their role and the details of the assignment.

For the Practice Your Presentation activity, you may choose to video the presentations so that students can watch themselves later. The videos are fun to watch but are also valuable teaching tools as students can see themselves presenting and may be able to identify areas for improvement for the future.

NOTE: If students plan to present their invention project as part of a school invention fair, a state/regional invention convention or the Invention Convention US Nationals, they must prepare a trifold visual display board, a presentation pitch and a video of their presentation, in addition to having a detailed drawing or model of the prototype and an invention journal. Preparation of the presentation and the display boards may be completed in class or at home. Instruction and activities to guide students through the processes of making a display board can be found in the optional YIPLit Lesson 9: Preparation for Competition. More details about all competition requirements can be found on the YIP website: <https://www.unh.edu/leitzel-center/young-inventors-program/compete>.

NOTE: Teacher may set the requirements for any class/school invention fair or showcase planned for your students.

INSTRUCTION & ACTIVITIES

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

Teacher Instruction:

Tell students that communication is an essential step in the invention process. They have created brilliant inventions and innovations that will keep their characters dry, but now they need to tell others about it. Being able to talk about their umbrellas and “MARKET” them, is important to the overall process. One important piece of communication is giving the invention a name.

NOTE: If students/teams have already thought of names for their inventions, you may skip or modify the following instruction and activities and move ahead to the presentation/pitch.

Ask students if anyone has come up with a name for their umbrella invention? Just like a product they see in the store, an invention needs a strong, descriptive name. Ask students to think about the names of inventions and/or products they like. Why do they like these names or why do they stand out? Do they tell

you something about the invention/product? (Give examples such as *Bicycle, Printing Press, Rice Krispies, Nintendo Switch, iPhone*, etc.). Tell students that when they name their invention the name should be easy to say and easy to remember. Names should also describe the invention in some way so that others know what it is and/or does.

Activity: Naming the Invention (5 minutes)

NOTE: If students have completed the invention project as a team, each student on the team should contribute by thinking of a name for the invention. In this activity, they will work together to look at the options and decide as a group which invention name they wish to use.

Give students 5 minutes to think of a name for their invention if they have not done so already. (Use a timer if desired). Ask them to think about key words that describe their invention. Then they can think of adjectives or other words that rhyme or begin with the same letter (alliteration) or that sound fun to go with them. Give examples of some good invention/product names if students are feeling stuck. Good invention names to share are: The Lego Lift, Pet Scratcher 2000, Makin' Bacon, Popsicle, Earmuffs, and Crayon Holders.

Students should write all their ideas on the Invention Name Worksheet (included in YIPLit Inventor's Journal). Encourage students to think of at least 2-4 name ideas.

Activity: Invention Name Walk About (5 minutes)

Once students have names for their inventions, ask them to walk around the room to share their ideas with classmates. Ask them to take a poll of their peers and to record the number of votes each of their invention name ideas receive. After about 3-4 minutes of sharing, ask students to choose their final name. Remind students that they do not have to select the name that got the most votes, but that the popular choice may help them as they decide on their own.

NOTE: If students completed an invention project as a team, have members of the team meet after the Walk About to share the final name they have selected. As a group they will need to decide on the name they will use for their invention based on these contributions. This may take a bit more time and may require some facilitation by the teacher.

Teacher Instruction:

Now that the inventions have a name, explain to students that a presentation (or PITCH) is an important, and the final, step in the invention process. Why? It allows the inventor to tell the story of their invention. What is it? How did you make it? What problem does it solve? How does it work? How does it help your character from our book, ***Walrus in the Bathtub***.

NOTE: You may choose to watch the video below or just continue to the next Teacher Instruction.

Activity: Invention Convention Presentation- Team Bus Safety Stop (optional 5 minutes)

NOTE: Watching this video is optional. This video of a team invention project presentation pitch is a strong example of a pitch presented at competitions such as the Northern New England Invention Convention and the Invention Convention US Nationals. YIP recommends that you show this video to any students who may be preparing a presentation for such competition. If students are not planning to compete in any invention

fairs, then you may choose to watch video or move on to the Teacher Instruction. This video is also included in the YIPLit Lesson 9: Preparation for Competition.

Watch video for the Team Bus Safety Stop, (included in Google Slides YIPLit: Lesson 8).

Ask students:

- Was the presenter(s) enthusiastic and passionate about their problem and solution? How so?
- Was it obvious he/she practiced the pitch a great deal before the presentation to an audience? How could you tell?
- Did the pitch grab your attention? What was the “hook”?
- Did they share feedback from the user and explain how they changed their prototype based on what they learned?
- Do you notice anything special about what the students are wearing?

Teacher Instruction:

Tell students to think of their presentation as a story- it is a story about their invention. Stories are a little like mountains. A mountain starts at the bottom (the beginning) where the characters and setting are introduced. Then it builds to the summit, (the middle) where the climax/excitement happens, and then it slowly comes to a close as you walk down the other side (the end). This is called a “story mountain”.

(Show graphic in Google Slides: Lesson 8)

An invention story mountain could be something like:

- Part 1/The Beginning/Introduction- This is the part of the story where the author introduces the reader to the characters and the setting. So, you (the inventor or author) would introduce the problem you are solving (creating a unique umbrella to keep someone dry caused by the walrus in the bathtub) and the person you are trying to help (your character).
- Part 2/The Middle- This will be the main part of a story where all the action happens. This is where the characters encounter challenges and have to work through them. This is where you can talk about how you thought of your design and drew it, how it’s different from other umbrellas, the research you did, and how you built and tested it.
- Part 3/The End- This is where the characters have overcome their obstacles. It is where they “lived happily ever after”. You can talk about any challenges you faced and how you made changes as you went along. And finally, end with why your umbrella is a good idea that will help your character.

Ask students to think about the book ***Walrus in the Bathtub***. How would they describe the story mountain of the book?

*Guide students through a summary of the **Walrus in the Bathtub** as you highlight the story mountain. You may wish to use the graphic in the Google Slides: Lesson 8 as a visual aid.)*

First, we are introduced to the family who is moving to a new house. Then we learn that the house has some cool features like a big yard, and a seagull nest and a giant bathtub. This is the beginning of our story mountain. And then, we find out that there is a Walrus in the bathtub and that the Walrus causes some problems, like clam shells and bathtub tidal waves and loud seagulls, leaky ceilings, and wet towels. The family doesn’t know how to get the Walrus out of the tub and no one seems to be able to help. The family is really frustrated. The family wants to move. This is all the main part of the story. But then, the family realizes that the Walrus is just trying to be friendly. And so they make new family rules to try to keep things cleaner and dryer. In the end the family stays in the house and they are all friends- the end of the story.

To make your presentation, you will write your “Invention Story”. You can use the story mountain strategy to help you.

Activity: Invention Story Mountain (10 minutes)

NOTE: Students may need additional paper to write their story mountain and to refine their presentation. Any written statements can be inserted into the YIPLit Inventor’s Journal.

Ask students to complete the Story Mountain Worksheet (included in YIPLit Inventor’s Journal) for their invention project “story”. What happened on their journey to developing their invention? Students may write responses, key words, draw, or share their ideas with a partner. They can use the following format as you guide them as needed:

1. First, start with the problem statement they developed and wrote in the Problem and Solution Worksheet (in the YIPLit Inventor’s Journal) in Lesson 4. Explain who has the problem and why it is a problem. For all students, the problem everyone solved was to make a new umbrella that helped a specific character from the book, ***Walrus in the Bathtub***.
2. Next, you will explain what you did. You can refer to your Inventor’s Journal to help you remember some of your designs, your research and your other activities. You do not need to talk about them all but think about what are the most important things that would help someone understand the project. Describe your invention process. Share the ideas considered and the final solution idea. Also explain how they made the invention and what they did to test it. Talk about the changes they made for the second iteration.
3. Last, share the solution, the final prototype and explain how this solution will best solve the problem for the user/s. Don’t forget to talk about the challenges faced during the process and how they were overcome.

Allow students time to work and construct an invention story. Students may need additional adult support depending on grade level.

Activity: Practice Your Presentation- Let’s Play TAG (10 minutes)

Now it is time to tell your story. Using your Story Mountain Worksheet (included in YIPLit Inventor’s Journal), practice your presentation pitch.

Assign each student/team a partner/partner team (teams may be paired with individuals). Then ask students to share and practice their story/presentation with their partner. Allow 10 minutes for the activity. Use a timer to make sure each student/team has equal time to practice (5 minutes each. A timer is included in the Google Slides: YIPLit Lesson 8).

Ask partners to share feedback with their peers. Students should use the TAG model for giving feedback.

- **T= Tell one thing** you like about the presentation.
- **A= Ask one question** you have about the presentation or the invention.
- **G= Give one suggestion** of something they can improve for the next time they present.

NOTE: Students may need time to finish their presentations and practice at home. See Notes to Teacher.

Finally, if time allows, have students share their presentations with the entire class or in a larger group.

NOTE: You may choose to video the presentations so that students can watch themselves later. The videos are fun to watch and are also valuable teaching tools as students can see themselves presenting and may be able to identify areas for improvement for the future.

Closure/Check for understanding:

In a Whip Share (each student shares ONE thing to answer the prompt, and then the next student shares ONE thing, and so on) students will share the ONE thing they are most proud of about their invention project.

IDEAS FOR VIRTUAL INSTRUCTION

Naming Your Invention

Ask students to think of a name for their invention. Students should write all their ideas on the Invention Name Worksheet (included in YIPLit Inventor’s Journal). Then, they can share the names with others at home and ask them to take a vote on which one they like best. Or you could host a virtual class discussion or use a shared document where they can type their thoughts. Students can also share their ideas in a chat. Brainstorm with a partner, using a shared document or Zoom breakout rooms. When finished sharing, students will select the name they choose for their invention and write it on their worksheet.

Team Bus Safety Stop (optional)

Have students watch the An Inventor Presentation: Team Bus Safety Stop video .

Link: <https://youtu.be/EpPKDxBEnw4> (K-12 Inventure, 3:15 minutes)

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.

Invention Story Mountain

Ask students to complete the Story Mountain Worksheet (included in YIPLit Inventor’s Journal) for their invention project “story”. What happened on their journey to developing their invention? Students may write responses, key words, draw, or share their ideas with someone at home. Students may submit their presentation by recording themselves and sharing it using the virtual format of choice, or you may host a group meeting and allow students to share virtually.