



LESSON 1: Identifying an Invention

LESSON OVERVIEW

This lesson will introduce students to the world of inventions. They will learn to identify inventions and to distinguish between an invention and an innovation. They will begin to think of themselves as inventors on their own invention journey. Students will be introduced to a YIPLit theme book, the guidepost for their invention journey. After reading the book aloud, the students will identify the inventions in the book.

This lesson may be broken into two sessions depending on time available or you may pick and choose activities to fit into a single class period. This may also be used as a stand-alone lesson or extended to further incorporate Lessons 2, 3, 4, 5, 6, 7, 8.

OBJECTIVE

Students will be able to:

- Define “invention” and “innovation” and understand the difference between the two terms.
- Identify inventions within a school/home setting.
- Identify inventions within a story.

MATERIALS

- Google Slides: YIPLit Lesson 1
- Board/wall space/large sticky notes/online place to record brainstorming
- YIPLit Inventor’s Journals (for students)
- Invention or Innovation? Worksheet (included in YIPLit Inventor Journal)
- 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
- Everyday objects (paper clips, paper cups, paper plates, coffee filters, spoons/utensils, pencils, etc.)
- Paper, pencils, crayons (if illustrating vs. writing)

NOTES FOR THE TEACHER

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

Introduce the YIPLit program to students. Over the next few weeks, the class will embark on an invention journey. Students will learn about the invention process and then will be able to design and build their own unique inventions. In order to facilitate this journey, you will use a book, ***Walrus in the Bathtub*** as your guide/theme. Students will work in groups and/or individually for all or some parts of the unit, based on your preference.

Students will all be provided with Inventor’s Journals. Each student should keep their own invention journal or logbook to record the activities in their invention journey. Talk to them about the importance of writing down all ideas, research, design plans and changes they make along the way. YIPLit Inventor’s Journals include all of the worksheets used in the YIPLit lessons and activities so that they can be kept in one place. You may choose to establish your own requirements for the YIPLit Inventor’s Journals and share those with your students. You should also decide if students can take these journals home or if they will be kept in the classroom. The Inventor’s Journals should be used in each YIPLit lesson. YIP provides hard copies of the YIPLit Inventor’s Journals to all students, or you can download and copy or use the digital version found on the Young Inventor’s Program website: <https://www.unh.edu/leitzel-center/young-inventors-program/teach/curriculum>.

You may wish to divide this lesson into 2 sessions depending on time constraints, or you may also choose omit some of the activities as needed to fit into a single class period.

INSTRUCTION & ACTIVITIES

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

Teacher Instruction:

Ask students, “What is an invention? What makes something an invention?” Have students share their answers with the class and write their ideas on the board for the whole class to see. There is no need at this point to provide a formal definition of ‘invention,’ but consider all answers as possible definitions.

Share the definitions of INVENTION and INNOVATION with the class (see Google Slides: YIPLit Lesson 1).

Activity: An Example of Invention (5 minutes)

Provide students with an example of an invention within the classroom. (You may choose to use the example SmartBoard/computer on the Google Slides: YIPLit Lesson 1 – the pencil/pen) or develop your own example.)

Ask students the following questions:

- What problem does this solve?
- How was this problem addressed before this item existed?
- Is this an invention or an innovation?
- What do you think was the invention that caused what you have to be an innovation (what were the improvements)?
- What else solves this problem?

Activity: Invention “I Spy” (20 minutes)

Distribute the YIPLit Inventor’s Journal to each student (or use digital version). See Notes for the Teacher for suggestions on how to talk to students about the journal and how to use it. Tell students that they will begin to use the journal today. It includes a worksheet they will use for this next activity. Continue to guide them on how to use the journal throughout the curriculum.

Have the class walk around the classroom, school and/or playground, writing down inventions that they see, possible problems that these inventions solved, and how school may have changed as a result of these inventions. You may want to plan a route for your students prior to the activity. Make sure they have a safe place to walk around, free of clutter and personal belongings. The students should work in groups or pairs to find as many inventions as they can (approximately 10 minutes). They can list their findings on the Invention or Innovation? Worksheet (included in the YIPLit Inventor's Journal).

When you return to the class, ask students to categorize their findings into "INVENTIONS" or "INNOVATIONS". Use the Invention or Innovation? Worksheet. Why did they choose to put the item/idea in the category they did? What makes something an invention or an innovation? Discuss opposing views and help guide students to understand concepts.

NOTE: Teacher may choose to end Session 1 of YIPLit Lesson 1 here, or you may move on and select the activities you feel are most appropriate for your students and will fit into the time you have available.



Teacher Instruction:

NOTE: If you divided Lesson 1 into two sessions, take a minute to review the concepts and activity students completed in Session 1 of YIPLit Lesson 1.

Introduce the Invention Process and discuss how identifying the problem is the first step. You may choose to show them the visual resource for the Invention Process included in the Google Slides for YIPLit Lesson 1 and/or the YIPLit Inventor's Journal. Refer to the definitions slide to help explain each term.

Sometimes books show inventions even if the story isn't about inventions. Tell the students you are going to read together a book called **Walrus in the Bathtub** by Deborah Underwood, illustrated by Matt Hunt. This is going to become the foundation of your invention journey. Explain that over the next few sessions, you will read the book several times as you focus on different characters and problems in the book.

Read Aloud (12 minutes):

*Read aloud the book, **Walrus in the Bathtub**, and pause using Think Alouds throughout ("I wonder how the Walrus got there?", "Is there an invention in this room?", "What invention might be needed now?" etc.) (If video book is used, teacher can incorporate Think Alouds by stopping video briefly for questions. A video read aloud of the book is in the Google Slides if you choose to share the video).*

Ask students to list all the inventions they saw in the book or what would likely to be used or needed by each of the characters in the book. Prompt for inventions that ALL of the characters might use (including the minor ones). You may wish to write ideas on a board or on a large sticky note for the class to see.

Activity: Everyday Objects (10 minutes):

Divide students into small groups for this activity.

Give one everyday object to each group (items such as: paperclip, paper cup, paper plate, coffee filter, spoon, etc.) Ask students to think of the question, "What are all of the ways YOU would use these objects to get the walrus out of the bathtub?" Try for 3 ideas per object. Allow time for groups to share at least one of their ideas.

Closure/Check for understanding:

Students will use a Ticket Out the Door or in a Think-Pair-Share answer the prompt: In one sentence, tell me about your ideas/designs from today's lesson.

IDEAS FOR VIRTUAL INSTRUCTION

Video/Digital Reading:

Students may watch a video read aloud of the book, **Walrus in the Bathtub** by Deborah Underwood, illustrated by Matt Hunt; Read-aloud Video: <https://youtu.be/-dIJrpgFoVs> or read a digital version on their own.

Brainstorming the definition of invention:

Ask students to brainstorm inventions in a class discussion or use a shared document where students 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.

Student Inventions "I Spy":

Ask students to walk around their homes, writing down inventions that they see, possible problems that these inventions solved, and determine if these are inventions or innovations. They may complete the *Invention or Innovation? Worksheet* (included in the *YIPLit Inventor's Journal*). Students can share their findings on a shared drive and/or as part of an online meeting.