LESSON 1: What is an Invention?

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| **Lesson Overview** |
| This lesson will introduce students to what makes something an invention. Students will walk around the classroom, school, or home to identify inventions and the problems they solve. Students will put these inventions into categories and explain their favorite inventions and why they chose these inventions. |
| **Objective** |
| Students will be able to:   * Define “invention” and “innovation” and understand the difference between the two terms. * Identify objects within the school/home setting that are inventions. * Understand and describe what makes something an invention. |
| **Materials** |
| * Google Slides: YIP Lit Lesson 1 * Chalkboard/wall space/large sticky notes/online place to record brainstorming * No Pecker Egg Collector Questions worksheet (included in YIP Lit: Inventor’s Journal) * Video: No Pecker Egg Collector (included in Google Slides, Invention Convention Worldwide, 1:27 minutes) * YIP Lit: Inventor’s Journals (for students) |
| **Notes for the Teacher** |
| Teacher may use slides provided or lead instruction and discussion on their own.  Introduce the YIP Lit: Inventor’s Journal to the students. 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. YIP Lit: Inventor’s Journals include all of the worksheets used in the YIP Lit lessons and activities so that they can be kept in one place. You may choose to establish your own requirements for the YIP Lit: 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 YIP Lit: Inventor’s Journals should be used in each YIP Lit lesson. YIP provides hard copies of the YIP Lit: 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>. |

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| **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 from the Google Slides.  ***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 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)***  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). When you return to the class, ask students to put these inventions into categories and then explain their favorite inventions and what makes them an invention or an innovation. You can place large sticky notes around the room with category headings, or have different table groups for each category, or use your white board to record brainstorming ideas.  ***Teacher Instruction:***  Introduce the Invention Process and discuss how identifying the problem is the first step. Then introduce the YIP Lit: Inventor’s Journal and distribute a 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 showing the Invention Process to guide them as they begin their invention journey. It also has the worksheet that they will use in the activity you are about to introduce.  ***Closure Activity: No Pecker Egg Collector (15 minutes)***  Watch video for the No Pecker Egg Collector (included in Google Slides). Have students fill out the No Pecker Egg Collector Questions worksheet (included in the YIP Lit: Inventor’s Journal) to guide them in discussion. Have students share their thoughts. Remind students it’s important to look at how an invention impacts different people differently. |
| **Ideas for Virtual Instruction** |
| ***Brainstorming the definition of invention****:*  *Brainstorm inventions in a class discussion or use a shared document where students can type their thoughts. Students can also share their ideas in the chat. Brainstorm with a partner, using a shared document or Zoom breakout rooms.*  ***Student Inventions “I Spy”****:*  *Students can walk around their homes, writing down inventions that they see, possible problems that these inventions solved, and how life may have changed as a result of these inventions. Students can share their findings on a shared drive and/or as part of an online meeting.*  ​ |