



## **Invention Project**

PowerPoint Lesson Slides  
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[www.andrews.edu/go/invent](http://www.andrews.edu/go/invent)

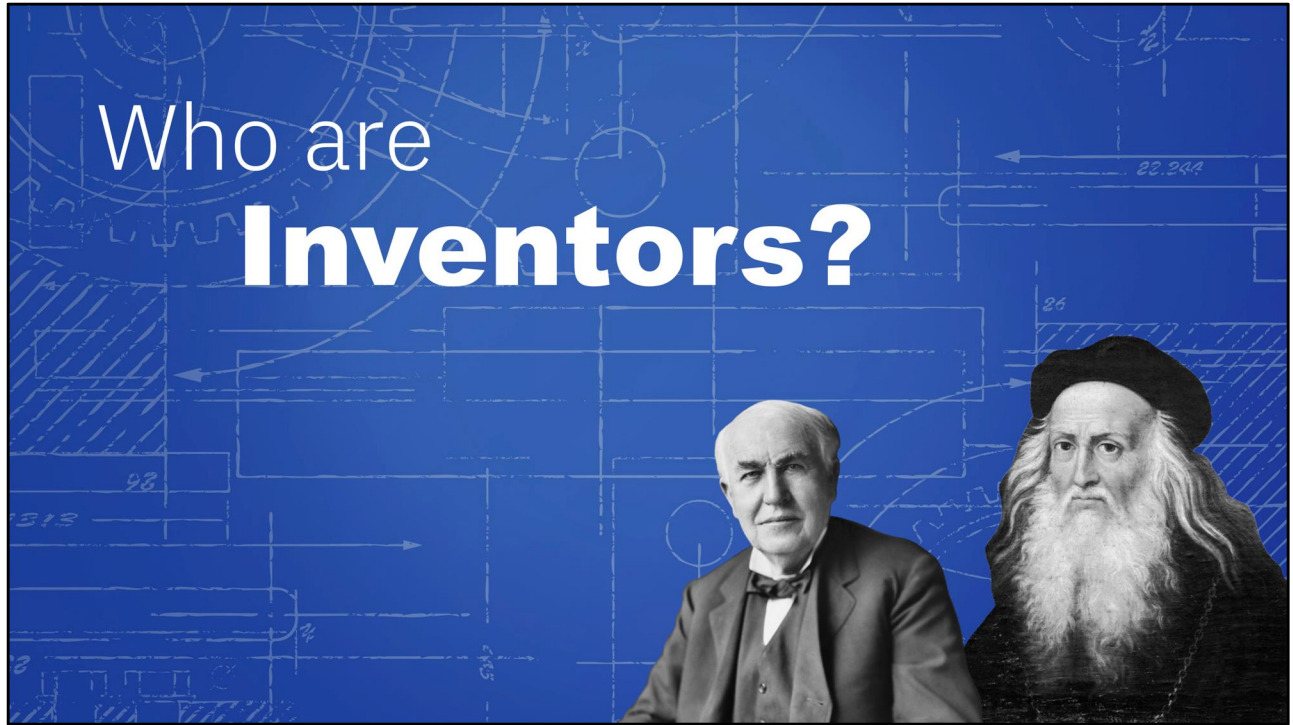
Andrews University STEM Division  
January 2022

### **Note:**

Some slides in the PowerPoint have text or images that appear out of place until full-screen playback. This is because some elements are animated and will not appear in the right place until the slide is played. There are also some animated transitions that require an extra slide to animate properly. These slides were simplified for the notes version to improve readability.

Page numbers in this document do not correspond to slide numbers in the PowerPoint.

# Who are **Inventors?**



Lesson 1: Who Are Inventors?



**Question:**

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**How would you  
describe an  
inventor?**

Discussion Question 1



**Question:**

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**Do you think you  
could become  
an inventor?**

Discussion Question 2





Possible Preconceptions:

- All inventors are adults.
- Inventors are a thing of the past.



Inventors can be YOUNG too! (examples – ages shown)

Benjamin Franklin (11 years old) – Swim Fins (1717) – handheld wooden paddles to swim faster

Louis Braille (12 – 15 years old) – Braille Alphabet (1824) – alphabet for blind people

Peter Chilvers (12 years old) – Windsurfing Sailboard (1958) – a surfboard with sail attached

William Kamkwamba (14 years old) – Makeshift Windmill (2001) – recreated a windmill to power his family home

George Nissen (16 years old) – Trampoline (1930) – fun athletic equipment for gymnasts

# Young Inventors



Young Inventors: (modern examples – ages shown)

- Kids and teens of all ages can be inventors!
- Examples taken from activity (next slide)



# Young Inventors

## Choose an Inventor

1. Name?
2. Age?
3. Problem?
4. Solution?
5. Favorite part?



### Suggested Activity: Young Inventors

- Print activity sheets, browse provided websites, or find other lists of young inventors.
- Choose several young inventors (as a class, in small groups, or individually).
- Identify the inventor's name, age, problem, solution, and your favorite thing about the inventor/invention.
- Talk about the inventors together as a class or extend it into an art prompt, craft, or other hands-on activity.

Handout available on our website: (Activities section in Teacher Resources)

[https://www.andrews.edu/cas/stem/invent/downloads/young-inventors-activity\\_k-2.pdf](https://www.andrews.edu/cas/stem/invent/downloads/young-inventors-activity_k-2.pdf)



# Invention Project

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## Team Project

- Choose a problem
- Invent a solution
- Build the invention



## Presentation

- Tri-fold presentation board
- Present to judges

Invention Project Overview: (notes only - no slide)

- Major components
- Goals & expectations
- Local invention fair

# Logbook

- **Instructions**
- **Write what you did**
- **Do a little each time**
- **1 Logbook per team**



The Logbook form has a red header with the word "Logbook" in white. Below the header, there are several sections for information: "Invention Name:" followed by a line, "Invention Category:" followed by a line, "Inventors:" followed by two columns labeled "Name" and "Grade" with lines for each, "School:" followed by a line, and "State/Province:" followed by a line. At the bottom right, there is a logo for "STEM" with a colorful circular graphic to its left.

Introduce the Logbook: (notes only - no slide)

- Explain its purpose and use
- Fill out over time, not all at once
- Give each team 1 Logbook

Logbook available on our website: (Project Resources section in Teacher Resources)  
[https://www.andrews.edu/cas/stem/invent/downloads/logbook\\_k-2\\_small-group.pdf](https://www.andrews.edu/cas/stem/invent/downloads/logbook_k-2_small-group.pdf)

# Teams

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- **3-4 Students per team**
- **Same members for the entire project**



Form Teams for the Project: (notes only - no slide)

- 3-4 Students per team
- Smaller classes may need a team of 2

# Schedule

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<b>Mar 10</b>	<b>Choose a Problem</b>
<b>Mar 24</b>	<b>Choose a Solution</b>
<b>-</b>	<b>Design, Build, Test, &amp; Improve</b>
<b>May 6</b>	<b>Finalize Invention</b>
<b>May 8</b>	<b>Invention Fair (presentations)</b>

Example Project Schedule: (notes only - no slide)

- Adjust the deadlines to match your schedule



# **Mission: Invent**

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**Date:** July 11, 2022

**Where:** Andrews University, Michigan

**Who:** NAD K-12 Students

**What:** Showcase Inventions  
Awards Ceremony  
Engage with other students

Introduce Mission: Invent 2022 (notes only - no slide)

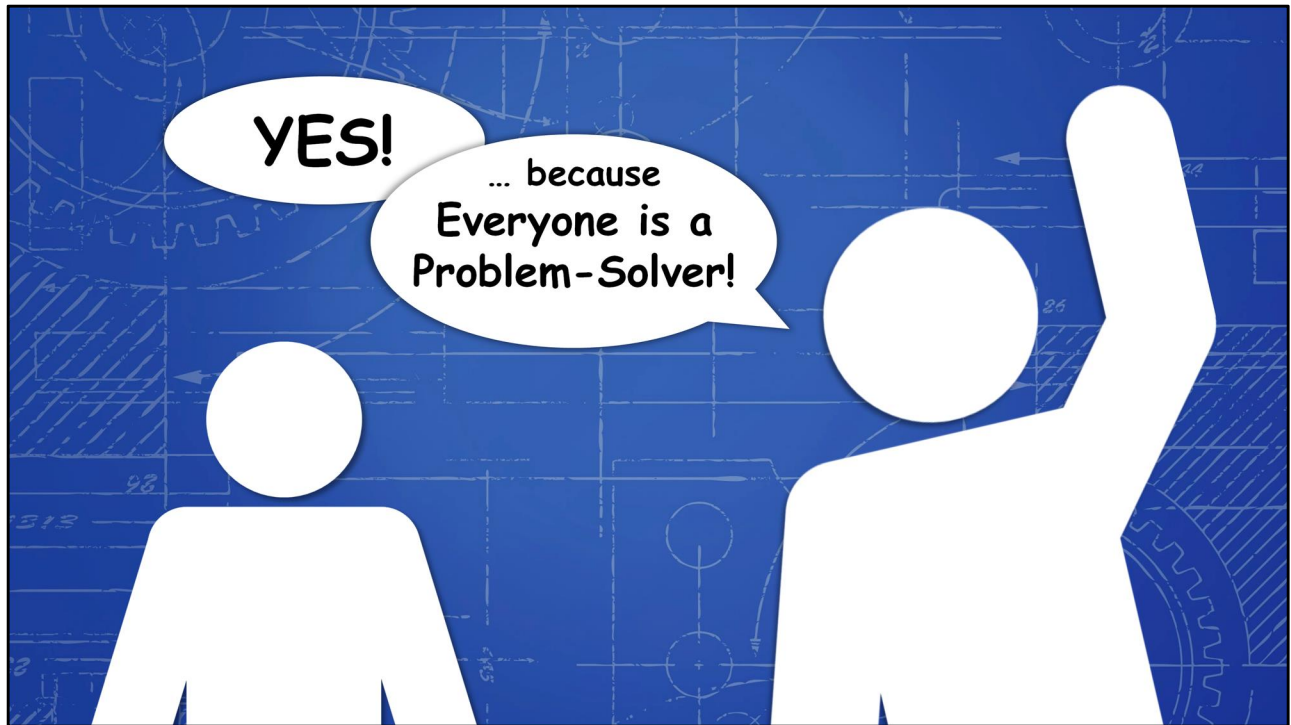
- Annual NAD-wide invention fair
- Top inventions from each school are eligible to enter (small-group option only)



Question:

Can everyone be an inventor?

(answered on next slide)



Answer:

Everyone can be an inventor because everyone is a problem-solver!



Everyone is a Problem Solver!

- Inventors
- Scientists
- Engineers
- Business People
- Construction Workers
- Police Officers
- Farmers
- Doctors
- Athletes
- Artists
- Chefs
- Parents
- Students
- Everyone



# Assignment (due Mar 10)

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## Look for problems to solve:

- Find at least 2 problems to share next time
- Look around your home, school, community, etc.
- Talk to friends and relatives
- Notice things that are challenging

Assignment: (due next class – adjust date accordingly)

Each team will need to choose a problem by the end of next class. To prepare for this, students need to find problems to share with everyone.

Read the Logbook for more information (pg. 6).

Worksheets available on our website: (Project Resources section in Teacher Resources)

[https://www.andrews.edu/cas/stem/invent/downloads/logbook\\_k\\_problem.pdf](https://www.andrews.edu/cas/stem/invent/downloads/logbook_k_problem.pdf)

[https://www.andrews.edu/cas/stem/invent/downloads/logbook\\_1-2\\_problem.pdf](https://www.andrews.edu/cas/stem/invent/downloads/logbook_1-2_problem.pdf)

# Invention Project

