

# Invention Project



## **Invention Project**

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

Andrews University STEM Division  
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# Goals for Today

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**Collaborate with your team to...**

- Define the problem
- Research the problem

Project: Define & Research the Problem

Read the Logbook for more information (pg. 7-10).

(may need to finish research next time)

# Requirements

## What makes a good requirement?

- **Criteria – What does the solution need to do?**
- **Constraints – What must the solution not do?**
- **Describe the conditions where it should work**
- **Detailed (How will you know you've met it?)**
- **Do not say how it will be solved**

Project: Requirements

What makes a good requirement?

- Criteria – things the solution must meet or do
- Constraints – things the solution must not do (limitations or restrictions for the design)
- Consider the requirements for the solution without choosing a specific solution yet.
- The requirements will be the checklist for the invention.

Read the Logbook for more information (pg. 11).

# Goals for Today

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**Collaborate with your team to...**

- **Finish research**
- **List solution requirements**

Project: Requirements

Show the previous slide and read the Logbook for more information (pg. 11-12).



# Goals for Today

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**Collaborate with your team to...**

- **Brainstorm solutions**
- **Compare solutions**
- **Research originality**
- **Choose the best solution**

Project: Find & Choose a Solution

Read the Logbook for more information (pg. 13-15).

(this step may require extra time)

# Goals for Today

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**Collaborate with your team to...**

- **Create invention design**
- **Build the prototype**

Project: Design & Build the Prototype

Read the Logbook for more information (pg. 16-17).

(this step may require several days)

# Goals for Today

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**Collaborate with your team to...**

- **Continue/finish building the prototype**
- **Test the prototype**

Project: Test the Prototype

Read the Logbook for more information (pg. 16-17).

(this step may require several days)

# Goals for Today

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**Collaborate with your team to...**

- Improve the prototype
- Run new tests
- Finalize the prototype

Project: Improvement

Read the Logbook for more information (pg. 16-17).

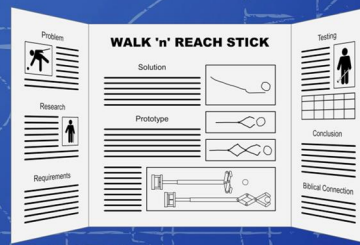
(this step may require several days)



# Goals for Today

**Collaborate with your team to...**

- Write Logbook conclusion
- Prepare for presentation



Project: Wrap-Up

Read the Logbook (pg. 18-19) and the Presentation Guidelines (available on our website, Presentation Resources section in Teacher Resources) for more information.

(additional resources available in the Presentation Resources section)