

# **Why We Invent— Identifying Challenges**

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Unit 4 Lesson 8

# Standards & Objectives

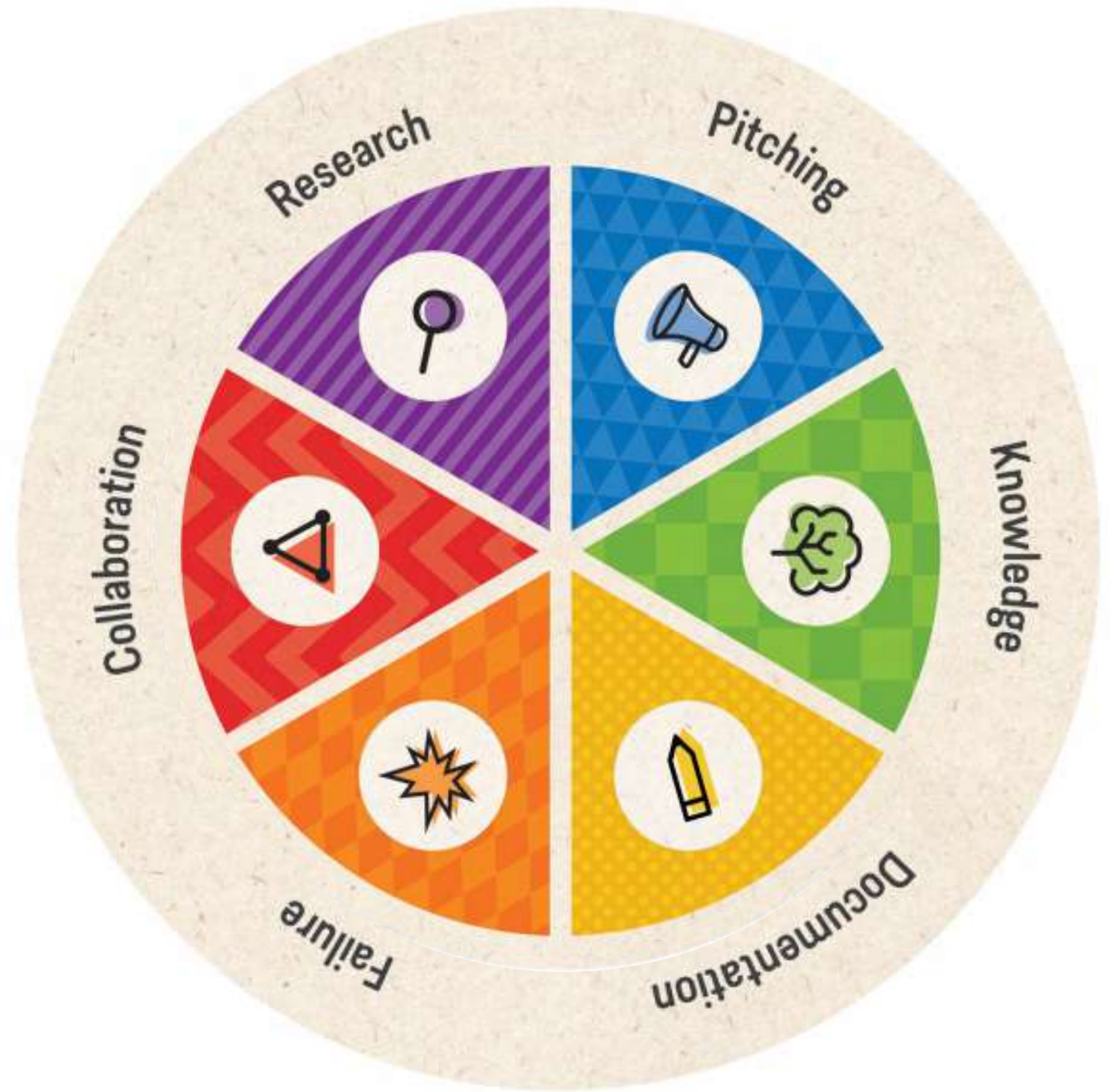
- **Writing – I** can revise or complete writing challenges from previous lessons. [W.4.10]
- **– I** can write two short, informative pieces describing my own invention idea, the problem it solves, including its purpose and function. [W.4.2]
- **Speaking and Listening – I** can share my ideas about inventions through paired interviews, sharing my ideas, and taking notes. [SL.4.1b]



# Welcome to Eureka!



# Invention Wheel COMPLETE



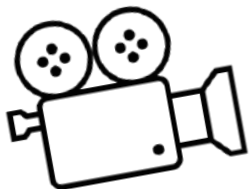
# Round 2

**CONGRATULATIONS!**

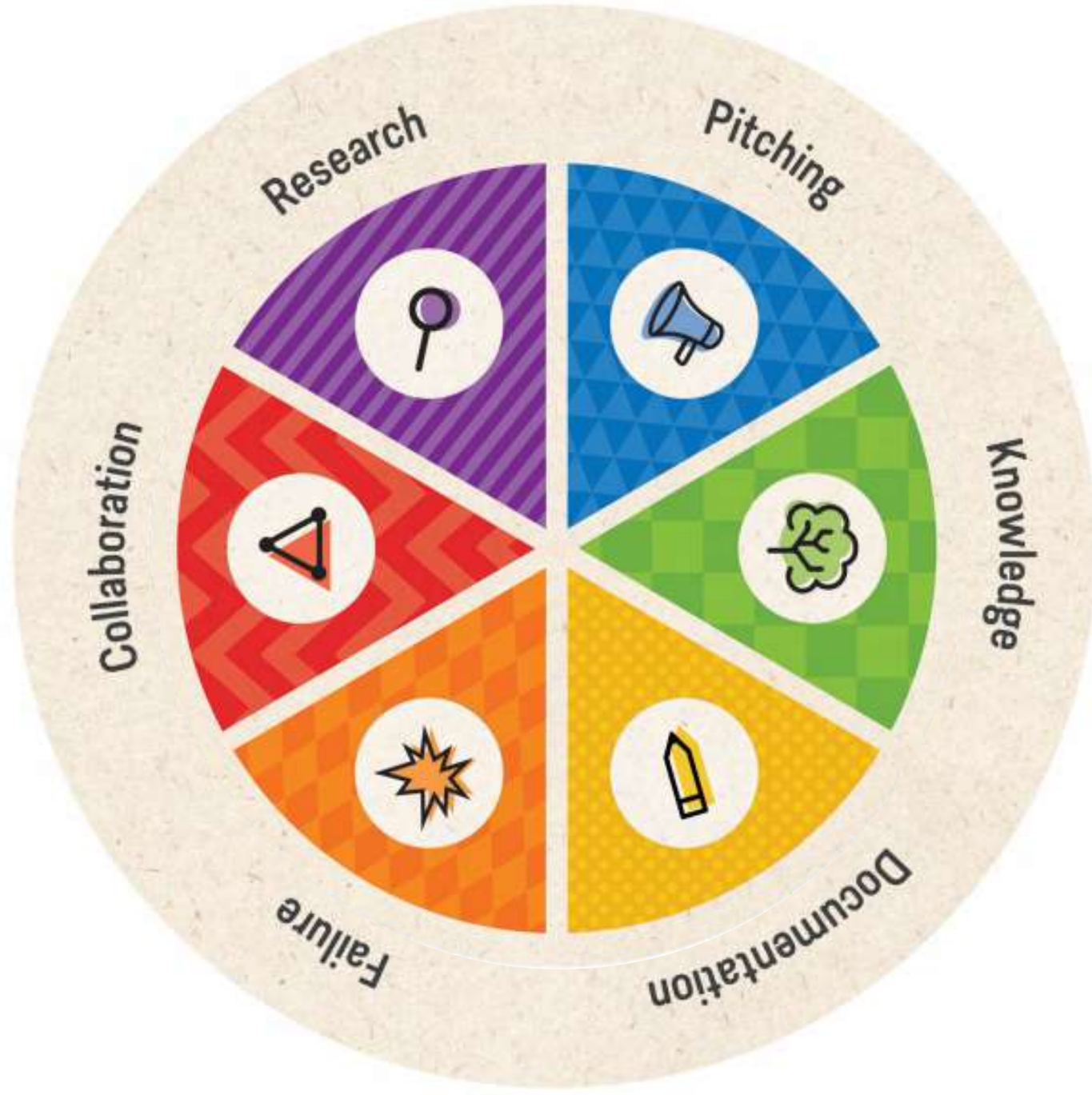
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## Round 2 – **Invention**

1. Identify the problem.
2. Invent a solution.



Play video: Why We Invent.



# Inventor Questions

1. When is a time you were frustrated this week at home? At school?
2. What is something you wish you could do faster?
3. What is something you find boring that you wish someone else would just do for you?
4. What is something you find fun that you would like to do more of?
5. What is something you saw someone else having trouble with today?
6. What is a problem you would like to tell the president about? The mayor of your town? The principal of your school?





# Pick-a- Problem Challenge

- Do a lot of people deal with this problem?
- Is it a big or a small problem?
- Is it an interesting problem?
- Is it a problem you care passionately about?
- Is it a problem you think you can invent a solution to (maybe only a
- partial solution, of course) in three episodes?
- Is it something you can build a solution to with the resources available?



## PICK A PROBLEM CHALLENGE

1. What problem will you solve with your invention?

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2. Why did you choose that problem?

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3. What criteria does it meet?

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4. How does it meet those criteria?

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## Introduction to Professor Carver's Inventing-from-scratch Tips:



Inventing is fun, but inventing is also hard work. Sometimes you have more ideas than you can write down. This note is not about those times.

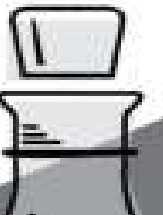
This is for those days when you are stuck. We have all had those days. All two hundred uses for the peanut did not come to me in a burst of lightning inspiration from on high. Neither did all hundred-plus uses for the sweet potato! (Why does no one care about the sweet potato? Please, I beg of you, ask your cafeteria workers to see if they can provide you with some nutritious and delicious sweet potatoes!)

I know that it can be very scary to be brainstorming and find yourself out of ideas. When you are stuck, think back to Round 1.

*George Washington Carver*



- ☐ Think about the inventors you read about—where did their inspirations come from?
- ☐ Think about the inventions you studied and how invention breeds invention—is there an invention that already exists that could solve your problem if you built on it or changed it?
- ☐ Think about simple machines and give yourself a challenge: if you were going to solve your problem using one of the simple machines, how could you do it?





# Introspective Inventors

1. How is choosing a problem you want to solve different from solving a problem you're given?
2. What are you most excited about for tomorrow?

# EXIT TICKET

Why did you choose the invention that you chose?