If At First You Don’t Succeed—Failure

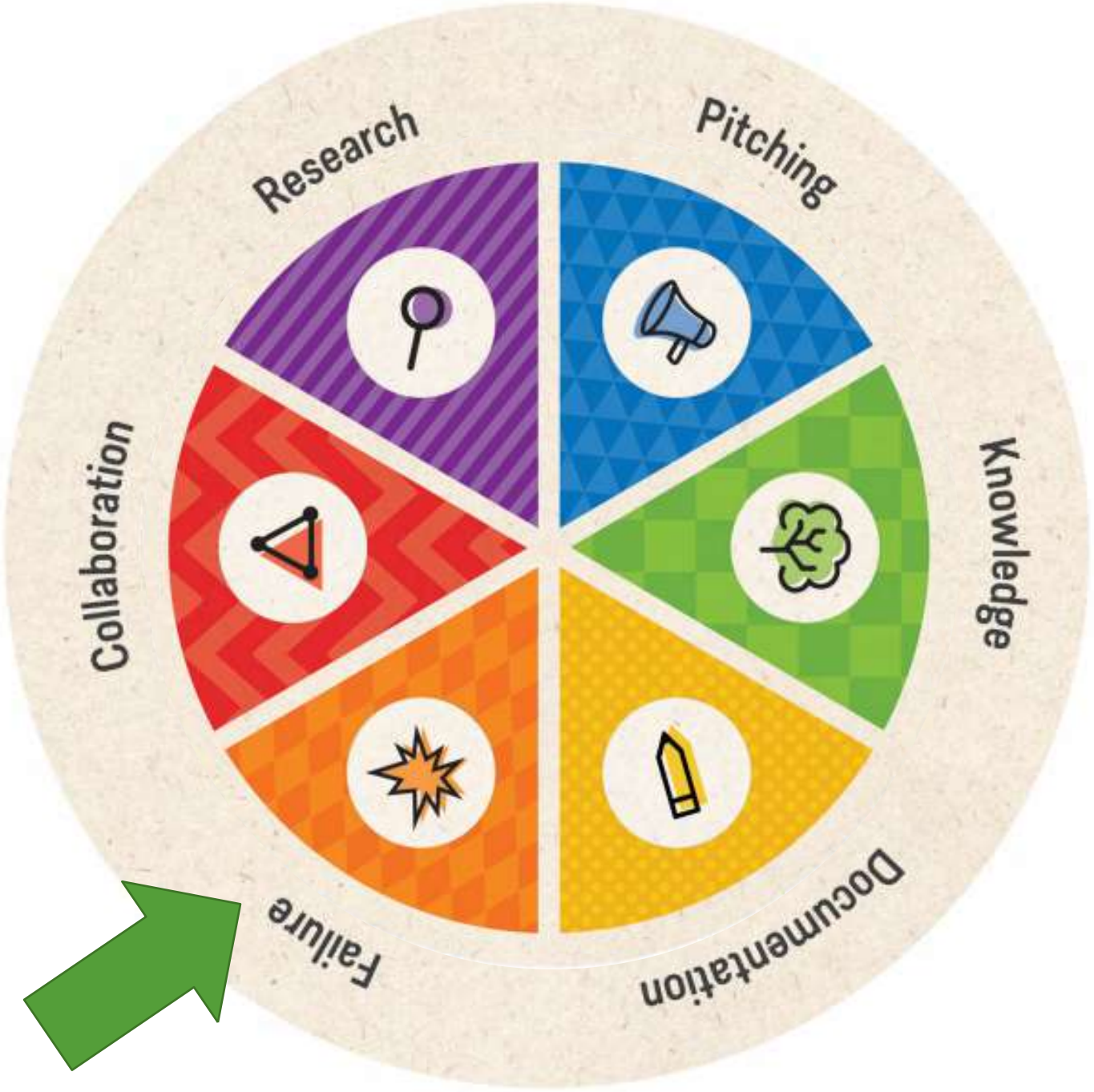
Unit 4 Lesson 7

Standards & Objectives

- **Speaking and Listening –** I can participate in collaborative discussions to evaluate my inventions and offer suggestions for improvement. [SL.4.1c]
- **Writing** Using examples from history and my own experiences, I can write an opinion piece on the usefulness of failure in the inventing process. [W.4.1b]

Welcome to Eureka!

Failure


Research
Pitching
Knowledge
Documentation
Failure
Collaboration

A Note from Thomas Edison:

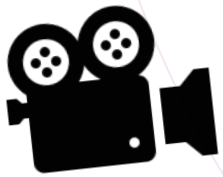
Look, widgets, you know I don't pull punches. But here's the truth: I NEVER fail; I just discover what doesn't work. For true innovation, you must take a true risk and try things that MAY NOT WORK. You never know—because you're the first to try them! Sometimes they WILL NOT WORK—at all. That's OK. Sometimes you succeed in your basic goal, but fail to do it as well as you wanted. Sometimes failure is a matter of perspective: you may have failed to do what you set out to do, but accidentally achieved something else. In any case, it's better to take the risk and fail than not to take the risk at all—especially on TV. Risk is interesting. Here, all the judges have things to tell you about failure. Go to the tape.

Sincerely,

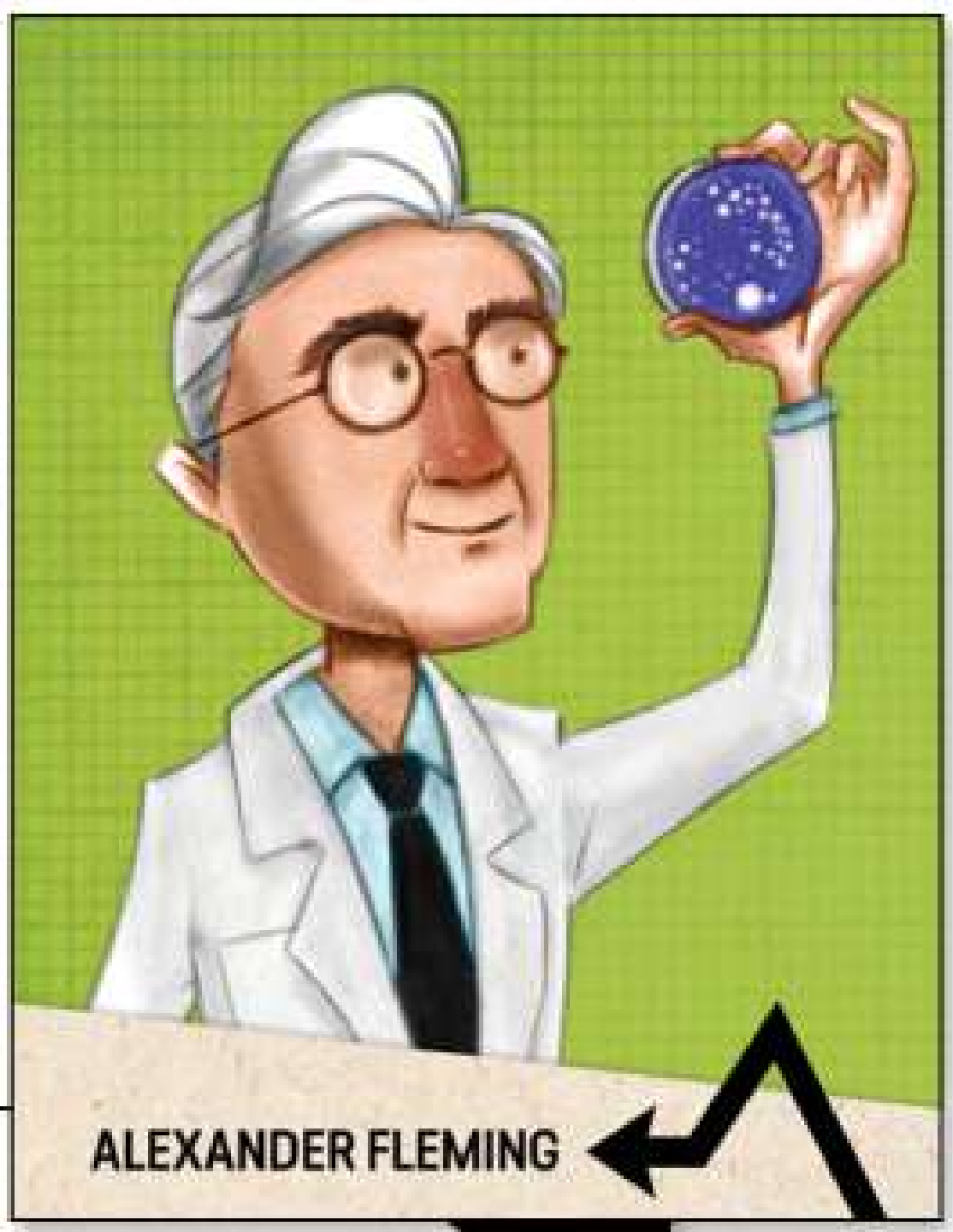
Thomas Edison

FAILURE

—sometimes obvious, sometimes just places to improve.



Play Video: Failure



Name: Alexander Fleming

Birthdate: August 6, 1881

Birthplace: Ayrshire, Scotland

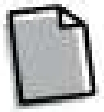
Invention(s):

Penicillin

Describe a challenge or disappointment that this inventor faced.

No one would listen to his concerns about antiseptics. He had trouble keeping penicillin alive in the human body long enough to make the invention practical.

Name one fact about this inventor or the story of his/her invention that you find interesting.



EDISON'S INVENTION EVALUATION

Check two areas where you think your invention failed/ could be improved:

- ☐ **Accuracy**
- ☐ **Easy to build**
- ☐ **Easy to use**
- ☐ **Sturdiness** (how long your invention will last before it falls apart)
- ☐ **Flexibility** (how well your invention could handle ANY trash, not just a wad of paper)

FAILURE WEDGE CHALLENGE: LETTER TO NETWORK EXECUTIVES

Write a letter to the network explaining how failure can be a useful tool in invention.

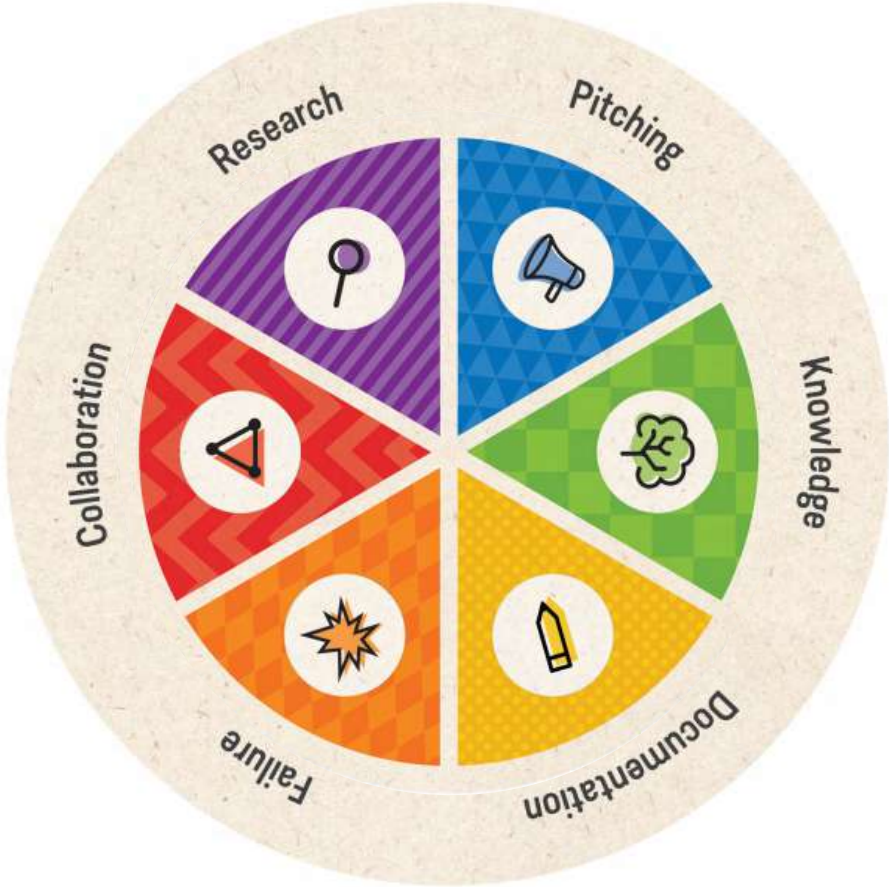
Give two examples of failure in your letter.

First, give an example of a failure you've experienced during the Quest so far. It can be a building failure, a collaboration failure, or any other kind of failure.

1. Explain how you failed.
2. Explain how you would change your actions in the future.

Second, give an example of an inventor's failure you learned about during the Quest from inventor cards or other reading.

3. Explain how the inventor failed.
4. Explain what he or she learned from that failure.



Introspective Inventors

1. How do we learn from our failures? Give us an example of something you learned today.
2. How did your lab collaborate today? What did you do to come up with improvements?
3. What do you think are the most important things to remember in order to be a great inventor?

EXIT TICKET

Is failure important to success? Why or why not?