



Engineering Design Process

Name: _____

Date: _____

Grade: Grade 3

Part A: Multiple Choice

Circle the best answer for each question.

1. The Wright brothers tested many glider shapes before the first powered flight in 1903. In Grade 3 terms, what were they doing?

- A) Skipping the test step to save time
- B) Iterating their design based on each test
- C) Using only their very first sketch
- D) Choosing the cheapest idea without testing

2. Ruth Wakefield ran out of baker's chocolate and used chopped chocolate bar pieces instead. In Grade 3 engineering words, this was an example of:

- A) Ignoring the constraint of missing materials
- B) Creatively solving a problem with available materials
- C) Refusing to bake until supplies arrived
- D) Copying someone else's recipe exactly

3. Thomas Edison tested thousands of filaments before his light bulb worked. What Grade 3 lesson does this show?

- A) One test is always enough to succeed
- B) Many failures can lead to a working design
- C) Engineers should stop after the first failure
- D) Testing with different materials is never useful

4. What do the Wright brothers, Ruth Wakefield, and Edison all share in Grade 3 design process terms?

- A) They all used exactly one prototype and stopped
- B) They all iterated and learned from each test
- C) They all avoided testing their ideas first
- D) They all copied a finished design from a book

Part B: Fill in the Blank

Write the correct answer on each line.

1. The Wright brothers built and tested many _____ before their powered plane flew.
2. Ruth Wakefield used the _____ she had on hand to invent chocolate chip cookies.
3. Edison tested thousands of filaments, which is a clear example of _____ in Grade 3 terms.
4. Each failed test taught real engineers something new, so failure was actually a _____.
5. Real Grade 3 worthy engineers _____ their designs again and again until they work well.

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Part B: Fill in the Blank

Write the correct answer on each line.

1. The Wright brothers built and tested many prototypes before their powered plane flew.
2. Ruth Wakefield used the materials she had on hand to invent chocolate chip cookies.
3. Edison tested thousands of filaments, which is a clear example of iteration in Grade 3 terms.
4. Each failed test taught real engineers something new, so failure was actually a lesson .
5. Real Grade 3 worthy engineers improve their designs again and again until they work well.