



# Engineering Design Process

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Grade: Grade 3

## Part A: Multiple Choice

Circle the best answer for each question.

1. A Grade 3 team builds a popsicle-stick bridge. It breaks at 5 blocks but must hold 10. What should they do next?

- A) Give up and choose a new project
- B) Analyze the break and improve the weak part
- C) Test the same bridge again with no changes
- D) Remove blocks until the bridge stops breaking

2. Which choice best describes an iteration in Grade 3 engineering?

- A) Building one perfect design on the first try
- B) Testing only once and stopping
- C) Repeating steps to make the design better
- D) Skipping the plan step to save time

3. A rainproof backpack cover leaks at the seams. What constraint might matter most?

- A) The color of the cover
- B) The name of the engineer
- C) The waterproofness of the material
- D) The weight of the backpack's books

4. Grade 3 engineers finish testing. What should they share with the class?

- A) Only the parts that worked well
- B) Only the parts that failed
- C) The results, what they learned, and next steps
- D) Nothing until the design is perfect

## Part B: Fill in the Blank

Write the correct answer on each line.

1. Repeating the design cycle many times is called \_\_\_\_\_.
2. A first version of a design made to test ideas is a \_\_\_\_\_.
3. A limit like 'use only 20 sticks' is called a \_\_\_\_\_.
4. A success rule like 'must hold 10 blocks' is a \_\_\_\_\_.
5. When engineers change parts after a test to fix problems, they \_\_\_\_\_ the design.

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**Part B: Fill in the Blank**

Write the correct answer on each line.

1. Repeating the design cycle many times is called iteration .
2. A first version of a design made to test ideas is a prototype .
3. A limit like 'use only 20 sticks' is called a constraint .
4. A success rule like 'must hold 10 blocks' is a criterion .
5. When engineers change parts after a test to fix problems, they improve the design.