



Engineering Design Challenges

Name: _____

Date: _____

Grade: Grade 4

Part A: Fix the Sentence

Each sentence has an error. Rewrite it correctly on the line.

1. Fix the sentence: First, engineers builded a model before asking questions.

Rewrite: _____

2. Fix the sentence: After testing, the team don't change their design.

Rewrite: _____

3. Fix the sentence: A constraint are something the design must do well.

Rewrite: _____

Part B: Fill in the Blank

Write the missing word or number on each line.

1. The first step of the engineering design process is _____ .
2. Limits like time, money, or materials are called _____ .
3. Goals that show success, like holding 10 books, are called _____ .
4. Drawing your idea on paper happens during the _____ step.

Part C: Short Answer

Answer each question in one or two complete sentences.

1. Name the five steps of the engineering design process in order.

2. How is a criterion different from a constraint?

Part A: Fix the Sentence

Each sentence has an error. Rewrite it correctly on the line.

1. Fix the sentence: First, engineers builded a model before asking questions.

Rewrite: **First, engineers ask questions before building a model.**

2. Fix the sentence: After testing, the team don't change their design.

Rewrite: **After testing, the team improves their design.**

3. Fix the sentence: A constraint are something the design must do well.

Rewrite: **A criterion is something the design must do well.**

Part B: Fill in the Blank

Write the missing word or number on each line.

1. The first step of the engineering design process is Ask .
2. Limits like time, money, or materials are called constraints .
3. Goals that show success, like holding 10 books, are called criteria .
4. Drawing your idea on paper happens during the Plan step.

Part C: Short Answer

Answer each question in one or two complete sentences.

1. Name the five steps of the engineering design process in order.

Ask, Imagine, Plan, Create, Improve are the five steps engineers follow when solving a design problem.

2. How is a criterion different from a constraint?

A criterion is a goal the design must reach, while a constraint is a limit like time, cost, or available materials.
