

DESIGN IT!

MIDDLE SCHOOL



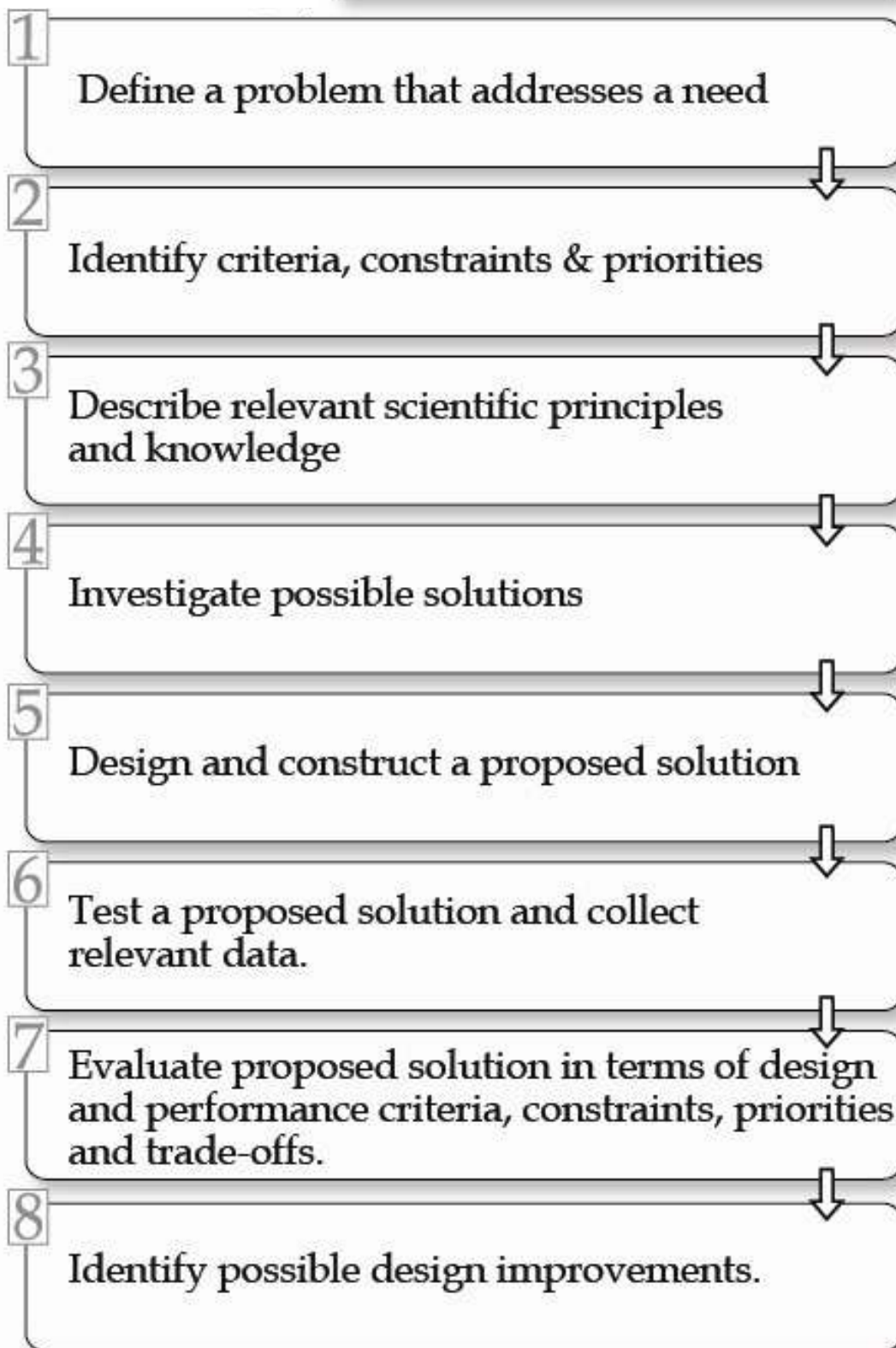
Name: _____

Semester or Trimester: _____

Year: _____

Teacher: _____

Class Section: _____



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Introduction

Engineers use the engineering design process to build things and make changes in the world to meet human needs and fulfill human hopes, similar to the way scientists use the scientific inquiry process to extend human knowledge.

The engineering design process is one way to put science to work to solve problems.

This notebook represents the work of the student named on the front cover during a particular semester or trimester. Students record their work as they proceed through steps of the engineering design process while they explore how science can be used to solve practical problem.

1

The Problem

Define a problem that addresses a need:

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Criteria, Constraints and Priorities

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3 Relevant Principles and Knowledge

3 Relevant Principles and Knowledge

Describe relevant scientific principles and knowledge:

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4

Possible Solutions

Investigate possible solutions:

This image shows a full page of blank graph paper. The grid consists of small, equal-sized squares formed by thin gray lines. There are 20 columns and 20 rows of squares, creating a total area of 400 small squares. The grid covers the entire page except for a narrow white margin at the top.

5

Proposed Solution

Design and construct a proposed solution:

This image shows a full page of blank graph paper. The grid consists of small, equal-sized squares formed by thin gray lines. There are 20 columns and 20 rows of squares, creating a total of 400 square units. The grid covers the entire area of the page, leaving no margins or other markings.

6

Testing the Solution

Test a proposed solution and collect relevant data:

This image shows a full page of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page, providing a template for handwriting practice or general writing. There are no margins, text, or other markings on the page.

7

Evaluation

Evaluate proposed solutions in terms of design and performance criteria, constraints, priorities and trade-offs:

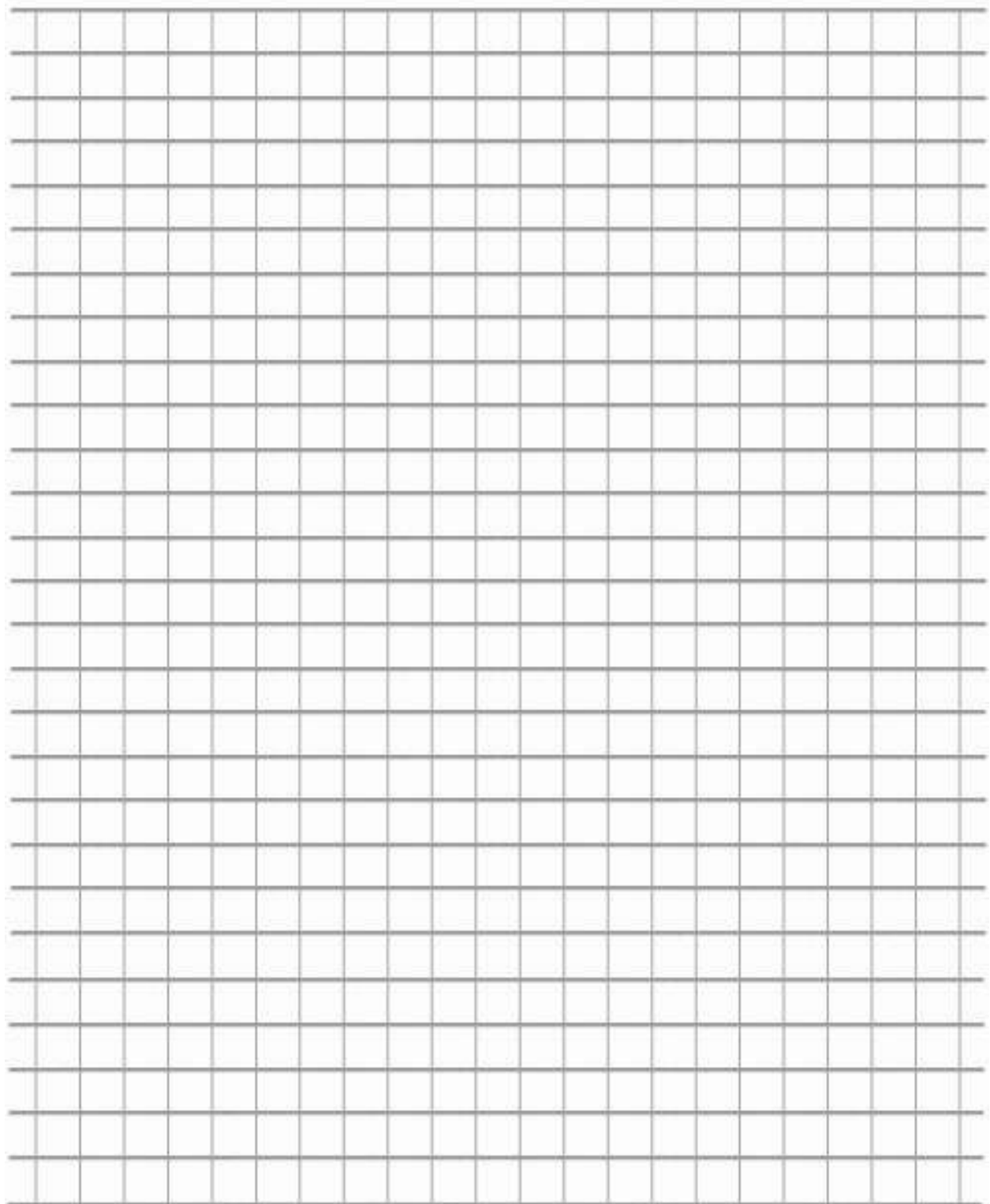
[illegible]

8

Design Improvements

Identify possible design improvements:

This image shows a full page of blank white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page, providing a template for writing or drawing. There are no margins, text, or other markings present.



This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.