

Rising 7th Grade Summer Mathematics Project

The Math Behind My Everyday Life

Welcome to Middle School Mathematics!

Mathematics is much more than solving problems on a worksheet. Every day, people use mathematics to make decisions, solve challenges, plan events, save money, design spaces, and understand the world around them.

This summer project will help you discover how mathematics already exists in your life while preparing you for success in 7th grade.

The project is designed to help your teacher learn:

- How you solve problems
- How you explain your thinking
- What mathematical skills you already have
- What areas may need additional support
- How prepared you are for middle school mathematics

Most importantly, this project is an opportunity to show your thinking, creativity, and curiosity.

Essential Question

How can mathematics help me understand and improve something in my everyday life?

Project Overview

Choose **ONE** topic from your own life that interests you.

Possible topics include:

- Sports
- Video games
- Reading
- Pets
- Cooking
- Music

- Family activities
- Hobbies
- Outdoor activities
- Exercise
- Collecting items
- Shopping
- Another approved topic

You will investigate your topic using mathematics and create a Mathematical Portfolio.

Part 1: Getting to Know Your Topic (10 Points)

Write a short introduction.

Include:

1. What topic did you choose?
 2. Why did you choose it?
 3. What do you already know about it?
 4. What do you hope to learn?
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Part 2: Collecting Real-Life Data (20 Points)

For at least 7 days, collect information related to your topic.

Examples:

Reading

- Pages read each day
- Minutes spent reading

Sports

- Practice time
- Shots made
- Goals scored

Video Games

- Time played
- Scores earned

Pets

- Time spent caring for your pet
- Cost of supplies

Exercise

- Minutes exercised
- Steps taken

Create a table showing your data.

Then answer:

1. What patterns do you notice?
 2. Were any results surprising?
 3. Which day was most successful and why?
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Part 3: Fractions, Decimals, and Percent Thinking (15 Points)

Choose three pieces of information from your data.

For each one:

Step A

Represent the information as:

- A fraction
- A decimal
- A percent

Step B

Explain what each representation means.

Example

If you read 45 pages out of 90 pages:

Fraction: $45/90$

Decimal: 0.50

Percent: 50%

Then explain:

“I completed half of the book because 50% means one-half.”

Written Reflection

Which representation (fraction, decimal, or percent) makes the most sense to you and why?

Part 4: Data and Graphing (15 Points)

Create TWO visual representations of your data.

Choose from:

- Bar graph
- Line graph
- Pictograph
- Frequency table

For each graph, write a paragraph explaining:

- What the graph shows
 - Why you chose that graph
 - What conclusions can be drawn
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Part 5: Geometry Around Me (10 Points)

Find a real object or space connected to your topic.

Examples:

- Bedroom
- Backyard
- Basketball court
- Book shelf
- Gaming area
- Garden

Measure the object or space.

Calculate:

- Perimeter
- Area

Draw a labeled sketch.

Written Response

Explain:

1. Why perimeter is useful.
 2. Why area is useful.
 3. How geometry helps people solve real-world problems.
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Part 6: Problem Solving Challenge (15 Points)

Create your own real-world math problem based on your project.

Examples:

- Saving money
- Planning an event
- Buying supplies
- Improving a skill
- Managing time

Your problem must involve:

- At least two steps
- Mathematical calculations
- Written explanation

Then solve your problem and explain your reasoning.

Written Response

Answer:

- How did you decide on your strategy?
 - Did you make any mistakes?
 - How did you check your work?
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Part 7: Reflection (15 Points)

Me as a Math Learner

Write a reflection essay addressing all questions.

1. What did you learn from this project?
2. What part of the project was easiest?

3. What part was most challenging?
4. What mathematical skills are you most confident about?
5. What skills do you want to improve?
6. How did mathematics help you understand your topic?
7. What are your goals for 6th grade mathematics?

Use specific examples from your project.

Academic Integrity Statement

At the end of your project, write the following statement:

“I certify that this project reflects my own observations, ideas, explanations, and mathematical thinking.”

Student Signature: _____

Parent/Guardian Signature: _____

Date: _____