

# GRADE SEVEN

## Turning the Tables End-of-the-Year Math Project 2024

Name \_\_\_\_\_

It's hard to believe the 2021-2022 school year is nearly over. We want to take our last little bit of time together to celebrate all we've learned.

### DAY 1

#### **STEP 1: Choose a topic that you would like to present to the class**

1. INTEGERS: Determine integers given a set of numbers; Find the opposite of a number on a number line; Compare numbers in a given set to determine which is smallest and which is largest;
2. RATIONAL & IRRATIONAL NUMBERS: Distinguish between a rational and irrational number;
3. RATIONAL & IRRATIONAL NUMBERS: Comparing and ordering rational and irrational numbers
4. CONVERTING DECIMALS TO FRACTIONS TO PERCENTS
5. EXPONENTS: Name and label the parts of an exponential expression; Simplify an exponential expression. Evaluate an exponential expression using the rules of exponents with the same base
6. INTRODUCING COORDINATES: Graph and name any ordered pair on a coordinate plane;
7. DISTANCE BETWEEN TWO POINTS: Find the distance between two points that lie on the same horizontal or vertical line graphically
8. WRITING EXPRESSIONS: Write expressions from words and vice versa; Write and evaluate expressions involving real-world situations
9. WRITING EQUATIONS: Write an equation given certain information; Graph an equation using a table and determine specific values on the graph.
10. SOLVING SIMPLE EQUATIONS: Solve equations involving two or three terms, only one of which contains a variable
11. SOLVING MORE COMPLEX EQUATIONS: Solve equations where more than one term involves the same variable
12. INEQUALITIES - ADDITION/SUBTRACTION: State and use symbols of inequality; Represent inequalities on a number line; Solve inequalities that involve addition and subtraction
13. INEQUALITIES - MULTIPLICATION/DIVISION: Solve inequalities that involve mult./div.
14. RATIOS: Express ratios three different ways; Simplify ratios;
15. RATES: Find and compare unit rates
16. PERCENTAGES: Find the percentage, given the percent & the whole
17. PROBABILITY: Rate how likely an event is to occur compared to others; Calculate the probability of an event occurring; Find the probability of an event not occurring
18. ANGLES IN A TRIANGLE: Find the measure of a missing angle in a triangle; Use the measure of interior and exterior angles of a triangle to find the measure of a missing angle
19. CIRCLES: Identify the parts of a circle; Calculate the circumference of a circle, given the radius or diameter; Calculate the area of a circle;
20. VOLUME: Calculate the volume of a rectangular prism, triangular prism, cylinder, cone, and sphere
21. MEAN, MEDIAN, MODE & RANGE: Given a set of data, calculate the mean, median, mode, range, and interquartile range

**STEP 2: Choose how you would like to present your topic (see checklist for guidelines)**

1. Make a poster
2. Teach a lesson to the class
3. Create a test
4. Think of your own idea (needs approval)

**STEP 3: Begin your research on your topic.**

**Find 3 Facts about your Research topic. You must have the following done before you start your presentation. This must be approved by the teacher before moving on:**

**A. Include 3 Facts about the math topic (It can include definitions and procedures with drawings.)**

Fact 1: \_\_\_\_\_

\_\_\_\_\_

Fact 2: \_\_\_\_\_

\_\_\_\_\_

Fact 3: \_\_\_\_\_

\_\_\_\_\_

**B . Include 5 problems solved with neat and accurate work.**

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## **CHOICE CHECKLIST:**

### **A. Poster Checklist**

- Title
- Description of topic
- 3 Facts about topic
- 2 Examples that are accurate and thorough
- Neat, colorful, and organized
- Presentation - practiced and thoughtful

### **B. Teach a Lesson Checklist**

- Introduction - a question or problem for students to explore with the topic
- Direct Instruction - teach the class about your topic, explanation of how to do it
- Guided examples for practice
- Assessment - check for class understanding with problems, exit tickets, checkpoints, or something else
- Presentation - practiced and thoughtful
- 5-10 minutes
- Dress up like a teacher! You do not need to wear your uniform, but you need to dress professionally, like a teacher would.

### **C. Create a Test**

- Create a test with different problems than in step 3
- Minimum 10 questions, 5 graspable (easier) and 5 reach (harder)
- 2-3 different word problems
- 1 multi-step word problem
- Challenge Bonus Question!
- Answer key
- Check for understanding - can a classmate complete your test?

### **D. Your Choice – talk with your teacher**

List any materials needed:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

## **DAY 2**

Begin making a rough draft of the presentation and show this to your teacher.

## **DAY 3**

Begin your good copy of the presentation.

## **DAY 4**

Add the final touches on your good copy

BEGIN PRESENTATIONS!

## **DAY 5**

CONTINUE PRESENTATIONS!

## RUBRIC

1. Your TURNING THE TABLES project shows evidence of accuracy of content

1	2	3	4	5
Little Evidence		Some Evidence		Clearly Evident

2. Your TURNING THE TABLES project shows evidence of thoughtfulness and hard work.

1	2	3	4	5
Little Evidence		Some Evidence		Clearly Evident

3. You used class time wisely to complete your project.

1	2	3	4	5
Little Evidence		Some Evidence		Clearly Evident

4. You are prepared and ready to go on the assigned date.

1	2	3	4	5
Little Evidence		Some Evidence		Clearly Evident

5. Your 5 Facts & 5 Problems are accurate and neatly done.

1	2	3	4	5
Little Evidence		Some Evidence		Clearly Evident

5. Your TURNING THE TABLES project is neatly done and shows effort & care..

1	2	3	4	5
Little Evidence		Some Evidence		Clearly Evident

YOUR TURNING THE TABLES Project grade: \_\_\_\_/30 COMMENTS