Marietta City Schools

District Unit Planner

Everything on the unit planner must be included on the unit curriculum approval statement.

Grade 6 Mathematics

Unit title	Unit 1: Number System Fluency	**MYP year**	1	**Unit duration (hrs)**	25 Hours

Mastering Content and Skills through INQUIRY (Establishing the purpose of the Unit): *What will students learn?*

GSE Standards

Standards

MGSE6.NS.1 Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, including reasoning strategies such as using visual fraction models and equations to represent the problem.
For example:

- How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally?
- *How many 3/4-cup servings are in 2/3 of a cup of yogurt?*
- *How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi?*
- *Three pizzas are cut so each person at the table receives ¼ pizza. How many people are at the table?*
- *Create a story context for* (2/3)÷(3/4) *and use a visual fraction model to show the quotient;*
- *Use the relationship between multiplication and division to explain that* (2/3)÷(3/4)=8/9 *because* 3/4 *of* 8/9 *is* 2/3*. (In general,* $(a/b)÷(c/d)=ad/bc$*.)*

MGSE6.NS.2 Fluently divide multi-digit numbers using the standard algorithm.

MGSE6.NS.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.

Concepts/Skills to be Mastered by Students

- Find the greatest common factor of two whole numbers less than or equal to 100.
- Find the least common multiple of two whole numbers less than or equal to 12.

- Use the distributive property to express a sum of two whole numbers 1-100 with a common factor as a multiple of a sum of two whole numbers with no common factor.
- Interpret and compute quotients of fractions.
- Solve word problems involving division of fractions by fractions using visual fraction models and equations to represent the problem.
- Fluently divide multi-digit numbers using the standard algorithm.
- Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.

Vocabulary

- Algorithm: a step-by-step solution to a problem.
- Difference: The amount left after one number is subtracted from another number.
- Distributive Property: The sum of two addends multiplied by a number equals the sum of the product of each addend and that number.
- Dividend: A number that is divided by another number.
- Divisor: A number by which another number is to be divided.
- Factor: When two or more integers are multiplied, each number is a factor of the product. "To factor" means to write the number or term as a product of its factors.
- Greatest Common Factor: The largest factor that two or more numbers have in common.
- Least Common Multiple: The smallest multiple (other than zero) that two or more numbers have in common.
- Measurement Model of Division: When we know the original amount and the size or measure of ONE part, we use measurement division to find the number of parts. Ex: 20 is how many groups of 4?
- Multiple: The product of a given whole number and an integer.
- Quotient: A number that is the result of division.
- Partitive Model of Division: When we know the original amount and the number of parts, we use partitive division to find the size of each part. Ex: 20 is 4 groups of what unit?
- Reciprocal: Two numbers whose product is 1. The reciprocal of a fraction can be found by inverting that fraction (switching the denominator and numerator).
- Sum: The number you get by adding two or more numbers together.
- Product: A number that is the result of multiplication.

Key concept	Related concept(s)	Global context
Logic	Model Representation	Globalization and Sustainability
Statement of inquiry		
Making decisions can be improved by using a model to represent relationships.		

Inquiry questions		
Factual—How do you add or subtract decimals? How do you divide whole numbers and decimals? How do you divide a fraction by a fraction? **Conceptual—**How do you use decimal operations to solve real-world problems? How are decimal/fraction operations similar to whole number operations? In what situations do we use division in our lives? When is it useful to decompose a number? **Debatable—** Does being fluent in operations with decimal operations make our everyday lives easier?		
MYP Objectives	**Assessment Tasks**	
*What specific MYP **objectives** will be addressed during this unit?*	***Relationship** between summative assessment task(s) and statement of inquiry:*	*List of common formative and summative assessments.*
Criterion A: Knowing and Understanding Criterion D: Applying Mathematics in Real-life Contexts	Students will use models to represent the relationship between whole numbers, fractions and decimals after performing the four basic operations.	**Formative Assessment(s):** Unit 1 Mid-unit Assessment **Summative Assessment(s):** Unit 1 Number System Fluency Topic 1 Performance Assessment Form A
Approaches to learning (ATL)		
Category: Social **Cluster:** Collaboration Skills		

Skill Indicator: Give and receive meaningful feedback

Learning experiences Add additional rows below as needed.		
Objective or Content	**Learning experiences**	**Personalized Learning and Differentiation**
MGSE6.NS.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	Topic 1 Mid Topic Performance Task pg. 26 Savvas Resource	This activity can be implemented using stations and strategically grouped students. Teachers can provide scaffolded questioning to groups needing more support.
MGSE6.NS.1 Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, including reasoning strategies such as using visual fraction models and equations to represent the problem.	Dividing Fractions in Context pg. 78 GaDOE Framework Task Unit 1	Teachers should group students strategically and provide scaffolds through intentional questioning. Allow students the choice to select the problems they want to complete, and allow them to use any strategy to help them reason mathematically to answer the problems.
Content Resources		