Course Syllabus

Cicely Tyson Middle/High School
7th Grade Mathematics
Monday-Friday (2 periods per day)
Full year course

Mr. Jeffrey Kirschenbaum
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Welcome and Introduction

Welcome to the 7th grade mathematics class. I'm your instructor, Mr. Kirschenbaum. We'll be working together throughout the 2019-2020 school year. This course is designed to develop students into confident and proficient problem solvers by translating real life situations to mathematical models.

Course Theme (overarching ideal)

The more you know, the more options you have in life. The less you know, the less options you have in life.

Course Goals

This course will help provide a solid foundation for further study in mathematics by targeting the following learning clusters:

- Number Systems (NS) integers, rational numbers, decimals
- Expressions & Equations (EE) expressions, equations, inequalities
- Ratio & Proportions Relationships (RP) complex fractions, percent, unit rate
- Statistic & Probability (SP) absolute mean deviation, random samples, statistical inferences.
- Geometry (G) angles, circumference, perimeter, volume, scale drawing, surface area

Methods of Instruction

Lessons are presented in various forms that include but not limited to be group discussions, hands on activities, use of technology and learning stations.

Course Component Specifics

Students are expected to be respectful to themselves, their peers, the instructor and the overall classroom environment. With the exception of testing, students generally work in groups. Members of a group are required to be equally participative in all discussions, activities and presentations. Lessons within a group should not fall burden to one or two members of a group. The use of personal gadgets (cell phones, tablets, games, toys) is prohibited. Food, beverages, gum and candy are not allowed in the class. Bathroom and water breaks are not permitted during the first and the last 15 minutes of class.

Attendance and Make-Up Work

An absence does not excuse the student from the work they missed. Students are responsible for any make-up work when they are out of class. If student miss a class, that student must make arrangements with the instructor as soon as possible. Students are responsible for getting class notes from a classmate. The number of days a student was absent is the same number of days that will be allowed to make up that assignment.
Absences are recognized for the following reasons:

1. Absences to participate in official school/district activities (performances, field trips, athletic events, etc.)
2. Absences for medical reasons
3. College Visits
4. Pass indicating with Administrator/Guidance/Nurse/CST/Social Worker/Discipline
5. Passes indicating you are with another teacher must be cleared first by the period teacher if you are planning to be more than 10 min. late (optional wording).

Homework Policy
New lessons are followed up with homework. There are generally 3-4 homework assignments a week. All homework assignments are recorded in the homework binder. A student receives a homework grade every week based on the number of homework assignments they completed for that week. Homework must be done in standard format, with a pencil and fully completed in order to receive full credit. **Work must be shown in order to get full credit**. No credit will be given for homework with just the answers. A parent will be notified, if a student has two or more incomplete assignments in a week.

Grading Policy
Test 30%
Quiz 20%
Project: Project Base Learning 20%
Classwork: 10%
Homework: 15%
Parent Participation: 5%

Test: Tests are given weekly (Friday) and reflect material covered in that week.
Weekly test are comprised of 5 multiple choice, 3 short constructed responses and two extended constructed responses.

Quiz: Quizzes are given once a week (Tuesday - Thursday) and reflect material covered prior to quiz. A quiz contains 5 short-constructed responses.

Project: Project assignment will be ongoing through the school year and based on a theme.

Classwork: Classwork is done independently and completed in standard format.

Homework: See Homework Policy

Grades are updated at a minimum of 3 times a week on Focus (Parent Portal)

Opportunities for Extra Support
Extra help is available during lunch period and after school by appointment only.

How to Reach Me
See information at the top of syllabus. Email responses will be made within 24-28 hours.

Required text/E-book/Online Resources Used
Name of text(s) required and author(s) Go Math Course 2, Houghton, Mifflin Harcourt 2014
Online Resource Used
Go Math Course 2 Web base: www.myhrw.com Math On the Spot, Interactive Student Edition, Animated Math, Personal Math Trainer
MobyMax: www.mobymax.com
Virtual Nerd: http://www.virtualnerd.com/common-core/all/
Math Antics: www.mathantics.com
Educeri: www.educeri.com

Supplies:

- 1 Spiral notebook with 3 holes (No marble notebook or binders with loose leaf paper)
- Pencils (at least 2)

Quarterly/Unit Schedule

Cycle 1/Unit I September 5, 2019 to November 15, 2019

1	Describe and model, on a horizontal and vertical number line, real-world situations in which rational numbers are combined.	**7.NS.1**
2	Apply the additive inverse property to subtraction problems and develop the argument that the distance between two points is the absolute value of the difference between their coordinates.	**7.NS.1**
3	Explain why a divisor cannot be zero and why division of integers results in a rational number.	**7.NS.2**
4	Model the multiplication and division of signed numbers using real-world contexts, such as taking multiple steps backwards.	**7.NS.2**
5	Convert a rational number to a decimal using long division and explain in oral or written language why the decimal is either a terminating or repeating decimal.	**7.NS.2**
6	Apply properties of operations as strategies to add, subtract, multiply, and divide rational numbers.	7.NS.2 7.NS.3
7	Solve mathematical and real-world problems involving addition, subtraction, multiplication, and division of rational numbers.	7.NS.3

Cycle 2 November 18, 2019 to January 31, 2020

#		STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1		Apply the properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients (including additive and multiplicative inverse, distributive, commutative, and associative properties).	7.EE.1 7.EE.2
2		Use equivalent expressions to demonstrate the relationship between quantities and determine simpler solutions to a problem, such as a + 0.05a = 1.05a means that "increase by 5%" is the same as "multiply by 1.05."	7.EE.2
3		Solve multi-step real life and mathematical problems with rational numbers in any form (fractions, decimals, percents) by applying properties of operations and converting rational numbers between forms as needed, and then assess the reasonableness of results using mental computation and estimation strategies.	**7.EE.3**
4		Use variables to represent quantities in a real-world or mathematical problem by constructing simple equations and inequalities to represent problems. *Equations of the form px + q = r and p(x + q) = r and inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers.*	**7.EE.4**
5		Fluently solve equations and inequalities and graph the solution set of the inequality; interpret the solutions in the context of the problem.	**7.EE.4**

Cycle 3 February 3, 2020 to April 3, 2020

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	Calculate and interpret unit rates of various quantities involving ratios of fractions that contain like and different units using real world examples such as speed and unit price. *For example, if a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction 1/2/1/4 miles per hour, equivalently 2 miles per hour.*	7.RP.1
2	Determine if a proportional relationship exists between two quantities e.g. by testing for equivalent ratios in a table or graph on the coordinate plane and observing whether the graph is a straight line through the origin.	7.RP.2
3	Identify the constant of proportionality (unit rate) from tables, graphs, equations, diagrams, and verbal descriptions.	7.RP.2
4	Write equations to model proportional relationships in real world problems. *For example, if a recipe that serves 6 people calls for 2 ½ cups of sugar. How much sugar is needed if you are serving only 2 people?*	7.RP.2
5	Represent real world problems with proportions on a graph and describe how the graph can be used to explain the values of any point (x, y) on the graph including the points (0, 0) and (1, r), recognizing that r is the unit rate.	7.RP.2
6	Solve multi-step ratio and percent problems using proportional relationships, including scale drawings of geometric figures, simple interest, tax, markups and markdowns, gratuities and commissions, and fees.	7.RP.3, 7.G.1
7	Use freehand, mechanical (i.e. ruler, protractor) and technological tools to draw geometric shapes with given conditions (e.g. scale factor), focusing on constructing triangles.	7.G.2

Cycle 4 April 6, 2020 to June 19, 2020

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	Calculate and interpret unit rates of various quantities involving ratios of fractions that contain like and different units using real world examples such as speed and unit price. *For example, if a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction 1/2/1/4 miles per hour, equivalently 2 miles per hour.*	7.RP.1
2	Determine if a proportional relationship exists between two quantities e.g. by testing for equivalent ratios in a table or graph on the coordinate plane and observing whether the graph is a straight line through the origin.	7.RP.2
3	Identify the constant of proportionality (unit rate) from tables, graphs, equations, diagrams, and verbal descriptions.	7.RP.2
4	Write equations to model proportional relationships in real world problems. *For example, if a recipe that serves 6 people calls for 2 ½ cups of sugar. How much sugar is needed if you are serving only 2 people?*	7.RP.2
5	Represent real world problems with proportions on a graph and describe how the graph can be used to explain the values of any point (x, y) on the graph including the points (0, 0) and (1, r), recognizing that r is the unit rate.	7.RP.2
6	Solve multi-step ratio and percent problems using proportional relationships, including scale drawings of geometric figures, simple interest, tax, markups and markdowns, gratuities and commissions, and fees.	7.RP.3, 7.G.1
7	Use freehand, mechanical (i.e. ruler, protractor) and technological tools to draw geometric shapes with given conditions (e.g. scale factor), focusing on constructing triangles.	7.G.2

Cycle 4 Cont'd

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	Use variables to represent quantities in a real-world or mathematical problem; write and fluently solve simple equations and inequalities, interpret the solutions in the context of the problem and graph the solution set on a number line. [Please note this unit addresses standard 7.EE.4 again to assess fluency.]	**7.EE.4**
2	Use tools strategically to solve multi-step real-world and mathematical problems involving positive and negative rational numbers in any form (converting between forms as needed) and determine the reasonableness of the answers. [Please note this unit addresses standard 7.EE.3 again to assess fluency.]	**7.EE.3**
3		7.G.6 **7.EE.3** **7.EE.4**
4	Write and solve simple algebraic equations involving supplementary, complementary, vertical, and adjacent angles for multi-step problems and finding the unknown measure of an angle in a figure.	7.G.5
5	Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.	7.G.4
6	Describe, using drawings or written descriptions, the 2-dimensional figures that result when 3-dimemsional figures (right rectangular prisms and pyramids) are sliced from multiple angles given both concrete models and a written description of the 3-dimensional figure.	7.G.3

Cicely L. Tyson Community School for Performing and Fine Arts Middle/High School where:

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