

2017-18
Syllabus
8th Grade Mathematics

Teacher: Ms. Wolfe

Cicely Tyson

Middle/High School

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Introduction

Welcome to Grade 8 Mathematics. I'm your instructor, Ms. Wolfe. We'll be together for the 2017-2018 school year. In this course, we'll utilize the Go Math textbook and other resources to help you master the New Jersey Learning Standards (NJSLS). Students are expected to use mathematical practices to demonstrate their learning and understanding of concepts as we cover areas such as the number system, equations and expressions, functions, geometry and statistics and probability

Course Theme

"There is no such thing as a math person. Everyone can do well at math if they practice and study it"- Jo Boaler

Course Goals/Essential Questions

- Connect math to the real world
- Reason abstractly and qualitatively
- Make sense of problems and persevere in solving them
- Formulate and reason about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations
- Grasp the concept of a function and using functions to describe quantitative relationships

- Analyze two--- and three---dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem

Methods of Instruction

Instruction will be differentiated to meet the needs of all students. Students will explore learning through whole group and small groups instruction. Visual, auditory and kinesthetic learning strategies will be used to enhance students level of understanding. Prior knowledge will be activated and scaffolding used to help students meet their goals. Hands on activities and collaboration will take place to help students make real world connections.

Classroom Expectation

Student are expected to:

- Be on time
 - a. Be seated in your assigned seat, start “Do now”
 - b. If you’re late, make sure you have a pass and go to your set silently
- Be prepared for class
 - a. Bring your notebook (one will also be provided), sharpened pencils, folder
 - b. Complete all homework assignments prior to class
 - c. Participate in all class activities and complete all assignments
 - d. Show all work on homework, classwork, quizzes, test, etc.
- Be respectful
 - a. Respect yourself, your classmates, your teacher, and school property
 - b. Pay attention to all lessons
 - c. Follow all school rules (no food, drinks or cellphones should be out)

“If you want a thing done well, do it yourself “ -Napoleon Bonaparte. Do not submit work that is not your own. Plagiarism and cheating will get you a zero and other disciplinary actions may be taken.

Attendance and Make-Up Work

If you are absent, it is your responsibility to make up all missed work. This includes notes, quizzes, tests and homework. Any work not made up by the end of the marking period will become a zero. You may need to ask a classmate for the notes. Homework can only be late if your are absent because we will have gone over it.

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.

Course Requirements and Grading

Grading Policy:

- Homework 15%
 - Classwork 15%
 - Projects 20%
 - Quiz 20%
 - Test 30%
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- Biweekly assessment are given every other Wednesday starting from September 20th
 - Participation (raising your hand, asking and answering

questions, volunteering to show work on board) is expected from every student every day.

- Homework is assigned almost daily and will be collected and graded
- There will be 2 projects. Rubrics for scoring will be provided when given the assignment. The first project (PBL) should be assigned by Nov. 1st for a full year courses.

Opportunities for Extra Support

I am here to help! Extra help will be provided upon request and take place after school.

How to Reach Me

See the information on the top of this syllabus. All email will receive a response within 24-48 hours.

November 1st is the first Parent/Teacher meeting. This will be mandatory for all teachers and fall after report cards are scheduled to go home.

Required text/E-book/Online Resources Used

Name of text(s) required and author(s)

Online Resource Used (Achieve3000, IXL, E-science, etc.)

Supplies:

- Notebook (composition)
- Pencils (I will have extras)
- Pocket folder

Required text/E-book/Online Resources Used

Textbook: Go Math Online: <http://my.hrw.com>

Online Resource Used: www.Virtualnerd.com

www.Mobymax.com

www.khanacademy.org

www.youtube.com
www.learnzillion.com

Quarterly/Unit Schedule

Topics Topics: Exponents, Expressions, and Equations

Quarter/Unit I Dates: 9/7/17 – 10/31/17

- List of Topics/SLOs
 - Apply the properties of integer exponents to write equivalent numerical expressions. 8.EE.A.1
 - Estimate and express the values of very large or very small numbers with numbers expressed in the form of a single digit times an integer power of 10. Compare numbers expressed in this form, expressing how many times larger or smaller one is than the other. 8.EE.A.3
 - Perform operations using numbers expressed in scientific notation, including problems where both decimals and scientific notation are used. In real-world problem-solving situations, choose units of appropriate size for measurement of very small and very large quantities and interpret scientific notation generated when technology has been used for calculations. 8.EE.A.4
 - Graph proportional relationships, interpreting slope as unit rate, and compare two proportional relationships, each represented in different ways. 8.EE.B.5
 - Derive the equation of a line ($y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b) and use similar triangles to explain why the slope (m) is the same between any two points on a non-vertical line in the coordinate plane. 8.EE.B.6

- Model a linear relationship by constructing a function from two (x,y) values. Interpret the rate of change and initial value of the linear function in terms of the situation it models, and in terms of its graph or a table of values. 8.F.B.4
- Represent a rational number with its decimal expansion, showing that it eventually repeats, and convert such decimal expansions into rational numbers. 8.NS.A.1
- Use rational numbers to approximate irrational numbers, locate irrational numbers on a number line, and estimate the value of expressions containing irrational numbers. 8.NS.A.2
- Assignments/projects/Assessments
 - Homework will be assigned almost daily
 - Quiz will be assigned biweekly
 - Additional quizzes will be announced
 - Project as assigned
 - Unit I Test Assigned the week of 11/1/17-11/7/17
 - Performance Task the week of 11/1/17-11/8/17

Topics: Functions, Equations and Solutions

Quarter/Unit II Dates: 11/13/17-1/5/18

- List of Topics/SLOs
 - Compare two functions each represented in a different way (numerically, verbally, graphically, and algebraically) and draw conclusions about their properties (rate of change and intercepts). 8.F.A.2
 - Classify functions as linear or non-linear by analyzing equations, graphs, and tables of values; interpret the equation $y = mx + b$ as defining a linear function. 8.F.A.3

- Model a linear relationship by constructing a function from two (x,y) values. Interpret the rate of change and initial value of the linear function in terms of the situation it models, and in terms of its graph or a table of values. 8.F.B.4
- Derive the equation of a line ($y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b) and use similar triangles to explain why the slope (m) is the same between any two points on a non-vertical line in the coordinate plane. 8.EE.B.6
- Apply the distributive property and collect like terms to solve linear equations in one variable that contain rational numbers as coefficients. Use an equivalent equation of the form $x = a$, $a = a$, or $a = b$ (where a and b are different numbers) to describe the number of solutions. 8.EE.C.7
- Assignments/projects/Assessments
 - Homework will be assigned almost daily
 - Quiz will be assigned biweekly
 - Additional quizzes will be announced
 - Project as assigned
 - Unit I Test Assigned the week of 1/8/18-1/12/18
 - Performance Task the week of 1/8/18-1/16/18

Cicely L. Tyson Community School for Performing and Fine Arts
 Middle/High School where:
 “ We aim high. We soar high.”