

**Algebra 1 /Algebra 1 Lab  
Syllabus 2019-2020**

Cicely Tyson Middle/High School  
Full Year  
Algebra1 /Algebra 1 Lab  
5 credits each

Mrs. Meliani  
(973) 414-8600 ext. 53323  
d.meliani@eastorange.k12.nj.us  
Room 323

**Course Theme**

Welcome to Algebra 1 and Algebra 1 Lab. My name is Mrs. Meliani and I will be your child's teacher this year.

Algebra 1 is the first in the sequence of courses offered in the high school mathematics program. It is a prerequisite for all the higher-level mathematics core courses. It exposes the student to a wide array of skills including abstract thinking interpreting, applying and formulating mathematical rules and logic, and problem solving. Algebra 1 covers a wide range of topics. These include but are not limited to: use of variables, properties of and operations with real umbers, evaluating and simplifying expressions, solving writing and graphing linear equations and inequalities, factoring polynomials, solving quadratic equations, solving systems of linear equations in 2 variables, writing and interpreting exponential functions. This year the Algebra 1 NJSLA is a graduation requirement for all 9<sup>th</sup> graders.

**Course Goals/Essential Questions**

This Algebra course will follow the New Jersey Student Learning Standards based on the nationwide Common Core Standards. Topics covered include but are not limited to solving writing and graphing linear and quadratic equations,; writing and graphing exponential equations, and developing procedural fluency in solving equations and manipulating algebraic expressions. The Algebra 1 Lab course accompanies the Algebra 1 class with reinforcement and enrichment of the topics being taught in Algebra as well as preparing for the Algebra 1 NJSLA, a graduation requirement.

**1<sup>st</sup> quarter Unit 1 topics** (about 9 weeks) Modeling with linear equations and inequalities)\*\*

- Review 8tb grade Algebra skills
- Solving and Writing linear equations and inequalities
- Interpreting expressions /equations given a context
- Graphing linear and exponential equations
- Understanding the definition of a function
- Representing functions multiple ways

**\*\* This section will be updated each quarter**

### **Methods of Instruction**

Instruction in the Algebra class will mostly be through lectures when introducing a new topic. Students will also work in small groups when they are ready, based on their maturity and **mastery** of the concepts. Each student is also assigned to a Algebra Lab class where the emphasis will be more on practicing and applying the skills learned in the Algebra class each day and addressing skill deficiencies.. In the Algebra Lab class students will work in small groups (stations), on the computers, or in teacher led groups.

### **Course Component Specifics**

This is a mathematics classroom. The focus is on understanding and mastering the concepts. This requires a positive attitude on the part of the students combined with the desire to learn. I expect the students to be on time, in their seats working on the “do now” when the late bell rings. They must be prepared for class each day, with at least 2 sharpened pencils, their notebook and the required text. Homework assignments for the week will be posted in the Google classroom. If students need assistance with the homework there is plenty of time to ask for help before the due date. Students are expected to listen, take notes and concentrate well during instruction. I expect them to be polite and respectful, as this is how they will be treated by me. Their responsibility is to make their very best effort to understand the concept I am teaching. Disruptive behavior and off task conversations will not be tolerated, as these actions have a very negative impact on the learning environment.

### **Homework:**

**Some homework will be assigned through IXL. All students have an account and the assignments are posted in the google classroom. If students answer a question incorrectly, the IXL program explains how to do the problem, and keeps track of their progress. Students will also have online homework through their Big Ideas textbook. All students will have an account.**

### **Attendance and Make-Up Work**

We will follow the attendance policy of the school. Please refer to the student handbook for the details. Generally, 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 3 min. late.
6. If you miss class, make arrangements with me as soon as possible to arrange time for your make-up assignments. You are responsible for getting class notes from a classmate.

**Course Requirements and Grading**

The approximate weights will be:

30% tests

20% quizzes

20% class participation

20% projects

10% homework

**Important Assessments**

4 Unit tests (after each 6 -8 week unit)

**Projects:**

Students will work on projects at various times during the year, with a final project assigned in May.

**Opportunities for Extra Support**

If you need extra help, see me briefly after class or at the end of the day to set up a time. The small group setting of the Algebra 1 Lab class creates a more relaxed environment for extra help in small groups.

**Required text/E-book/Online Resources Used**

Textbook: Big Ideas Algebra 1

Online Resources Used : IXL.com , bigideasmath.com,

**Supplies: Notebook, pencils, folder to bring to class each day.**

## Course outline

**Unit 1 topics** Modeling with linear equations and inequalities

**1<sup>st</sup> quarter Unit 1 topics** (about 9 weeks) Modeling with linear equations and inequalities

- Review 8th grade Algebra skills
- Solving and Writing linear equations and inequalities
- Interpreting expressions /equations given a context
- Graphing linear and exponential equations
- Understanding the definition of a function
- Representing functions multiple ways

**2<sup>nd</sup> quarter topics** (about 9 weeks)

**Unit 2 topics** Modeling with Linear Functions and Linear Systems

- Writing linear equations in different forms
- Writing equations of parallel and perpendicular lines
- Solving systems of linear equations using different methods
- Solving and graphing linear inequalities
- Solving and graphing systems of linear inequalities

**3<sup>rd</sup> quarter topics** (about 9 weeks)

**Unit 3 topics** Quadratic Equations, Polynomials and Exponential Functions

- Writing and evaluating exponential functions
- Adding, Subtracting, Multiplying and Dividing Polynomials
- Factoring Polynomials
- Solving and graphing quadratic functions

**4<sup>th</sup> quarter topics**

**Unit 4 topics** Modeling with Quadratic Equations, Sequences and Statistics

- Using standard and intercept form of a quadratic function
- Comparing linear exponential and quadratic equations
- Solving quadratic equations by graphing
- Solving quadratic equation by completing the square
- Solving quadratics using square roots
- Writing Arithmetic and Geometric sequences
- Apply measures of central tendency

### Suggestion:

Please check FOCUS frequently. Almost all of the students are able to access FOCUS, and they monitor their grades frequently. Take advantage of the opportunity to check on your child's progress.

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