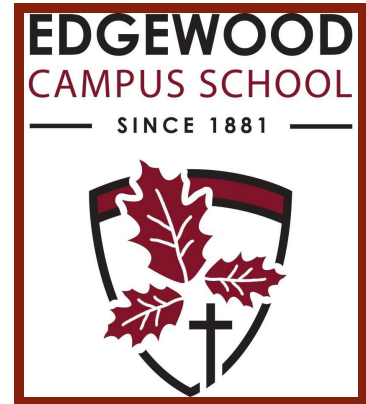


Pre-Algebra

2020-2021

Mrs. Jennifer Koziar

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Mathematical Practice Goals: Students will

- Accurately choose, communicate and apply computational methods used for real life applications
- Be able to apply math skills and problem solving strategies to solve multiple-step problems
- Communicate mathematical ideas and reasoning effectively and demonstrate appropriate use of vocabulary.

Curriculum Content Goals:

- Review & extend understanding of properties of integers, absolute value and rational numbers
- Simplify multiple step expressions and solve multiple step algebraic equations algebraically
- Apply the distributive property and factoring strategies when working with expressions
- Represent real life applications with algebraic equations
- Generate, graph and solve inequalities
- Generate ratios and proportions to represent situations (price comparisons, similar triangles, percents, scale, direct variation)
- Derive method of cross products to solve proportions
- Model percents, explore applications of percents in multiple step contexts (taxes, tips, percent change, simple interest)
- Compare simple interest to compound interest in the context of data, equation and graphs
- Explore concept of slope, slope-intercept form of a line, point-slope form of a line
- Explore linear equations using data, equation and graphical representations
- Explore compass constructions and use compass constructions to prove basic geometric principles (transversals of parallel lines, congruence of angles and shapes)
- Derive π and apply to area and circumference formulas
- Derive and apply basic area, surface area and volume formulas
- Explore properties and applications of exponents and roots
- Represent numbers using scientific notation
- Prove the Pythagorean Theorem using inductive reasoning, apply the Pythagorean Theorem to real life applications
- Explore topics in probability (simple & compound events, dependent & independent events)
- Explore topics in statistics (mean, median, mode, scatter plots, trend lines, interpretation of graphs)

Assessment:

- Class Participation - 10% (overall effort, participation in discussion, completion of warm-up problems and notes)
- Homework - 30% (daily work, math labs, weekly IXL, notebook checks)
- Tests/Cumulative Reviews/Topic Quizzes - 60%

Cross-Curricular Projects:

- Lake Wingra longitudinal research project in collaboration with science
- Scale models in collaboration with art
- Compass constructions in collaboration with art
- Simplifying polynomials in collaboration with art
- Ratio of surface area to volume in collaboration with science

Expectations:

- Homework is completed in pencil with both effort and quality, and homework is completed in a timely fashion
- Students come to class prepared daily (homework completed, pencil, notebook, textbook, charged Chromebook, calculator and other requested tools)
- Students are responsible for connecting with teacher regarding missed concepts due to illness or planned absence
- Students should maintain an 85% or higher average
- Students should positively engage in discussions and activities

Classroom Rules: “The Triple R”

- Respect yourself - always try, use resources, seek help when needed
- Respect others - strive to maintain a positive working environment for all, wear a mask and be cognizant of social distancing requirements
- Respect property - keep the classroom clean and care for equipment

Helpful Hints:

- Show your work in order to communicate your thought process
- Use correct vocabulary when communicating your work
- Use your resources (book, web tools, classmates)
- Ask for help after you have tried and used your resources
- Stay positive. Mastery does not happen immediately.
- **Be patient with your brain**

Text and Resources:

- my.hrw.com
Username: prealgebra@edgewood Password: mathrocks
- www.desmos.com
- <http://www.mathopenref.com/>
- IXL.com

Communication:

- Email: jkoziar@edgewoodk8.com
- Classroom Phone: (608)663-4104
- Weekly plan posted in Google Classroom
- FACTs grading system - please contact Mrs. Koziar or Mr. Grabins with program issues