



Thunder Vista P-8
3461 Preble Creek Parkway, Broomfield, CO 80023
Office: 720-972-7300 • Fax: (720) 972-7398
<https://thundervista.adams12.org/>



Thunder Vista P-8
8th Grade Math Course Syllabus
2025 - 2026

Classroom Number	C373	Teacher Name	Mr. Braunlich
Phone	720-972-7424	Email Address	bra030987@adams12.org

Communication	I will post all classroom materials (homeworks, study guides, etc.) on Google Classroom. Grades will be posted in a timely manner on Infinite Campus. General information will be communicated through Aptegey. I encourage parents to email me with any and all concerns and/or questions. I will respond to every email within 24 hours; however, if I don't please don't hesitate to spend a friendly follow up. I try to contact parents as much as I can to let you know how your student is doing in my class – both positives and concerns. We all grow together when we are all united.
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Office Hours	I am always available for extra help! I am here before or after school most days. You are always welcome to simply drop in and ask me for extra help with math. Parents, I just ask that if you are making an extra effort to get your student here early or pick them up late that you check with me to ensure my availability.
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Supplies you will need:	● Folder ● Paper – loose leaf and graph ● Scientific calculator (graphing calculator is a plus!) ● PENCILS!!! (we learn from our mistakes – especially in math)
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Classroom Expectations / Non-negotiables:	1. Treat everyone and everything in the classroom with dignity – every student has the right to a safe and secure classroom; you do not have the right to impede or jeopardize that in any way. Be respectful of yourself, your environment, your fellow classmates, and your teacher. Treat others the way you want to be treated. 2. Try your best, and try everything. Do your job! Challenge yourself. I do not ask that you get everything right but that you try your hardest at everything you do. 3. Show responsibility - Bring your supplies to class every day. Recognize your own role in building a fun and productive community of learners. Understand there will be consequences, both good and bad, for your actions
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Course Name		8th grade Math	
Unit of Study	Summary Statement	Approximate Time Spent	Essential Questions
Equations	Students will extend their knowledge of solving equations to multi-step equations. They will also include using their solving skills to work with literal equations..	11-13 Days	• What is meant by a “solution” to a linear equation? • How is it possible for an equation to have more than one solution? How is it possible for an equation to have no solution?
Transformations	Students formalize their understanding of transformations. They use this knowledge to determine if figures are similar or congruent.	16-18 Days	• How are the properties of rotations, reflections, transformations and dilations connected to congruence? • How are the properties of rotations, reflections, transformations and dilations connected to similarity? • Why are angle measurements significant regarding the similarity of two figures?
Angles and Triangles	Students will understand the relationships between different types of angles. They will use this information to write equations and solve simple problems regarding angles.	10-12 Days	• How can you physically verify that two lines are really parallel? • How can you use angles to tell whether triangles are similar?
Graphing and Writing Linear Equations	Students will be introduced to the concept of slope which connects to proportional relationships. In addition, they will learn to graph and write linear equations in equivalent forms.	16-18 Days	• How is the unit rate of a proportional relationship related to the slope of its graphical representation? • Why are similar triangles effective for describing slope geometrically?
Systems of Linear Equations	Students will extend their knowledge of linear equations to comparing two linear functions, creating a system. They will explore these systems both graphically and algebraically.	10-12 Days	• How does energy drive changes in matter? • How do humans interact with energy and matter?



Data Analysis and Displays	Students apply their knowledge of linear equations to scatterplots and lines of best fit. In addition, they begin to explore two-way tables to display data.	11-13 Days	• In what ways is a scatter plot useful in describing and interpreting the relationship between two quantities. • Why would we create a linear model for a set of bivariate data? • How do you know when a credible prediction can be made from a linear model of bivariate data? • What does a pattern of association look like for categorical data?
Functions	Students will gain a conceptual understanding of functions. They will connect this understanding to linear functions.	12-14 Days	• In what ways is a scatter plot useful in describing and interpreting the relationship between two quantities. • Why would we create a linear model for a set of bivariate data?
Exponents and Scientific Notation	Students will explore the properties of integer exponents. They will apply this knowledge to operations with scientific notation.	16-18 Days	• How is performing operations on numbers in scientific notation similar to or different from performing operations on numbers in standard notation? • Why does a positive number raised to a negative exponent not equal a negative number?
Real Numbers and the Pythagorean Theorem	Students will formalize their understanding of irrational numbers including square roots and cube roots. They will use squares and square roots to explore the Pythagorean Theorem.	14-16 Days	• How many irrational numbers exist? • Why is there no real number closest to zero? • Can you accurately plot an irrational number on the number line? How do you know?
Volume and Similar Solids	Students will extend their previous knowledge of volume to 3D figures involving circles. They will also explore how the ratio of side lengths, area, and volume are connected.	10-12 Days	• How are the volume formulas of cones, cylinders, and spheres similar to each other? • How are the formulas of cones, cylinders, and spheres connected to formulas for pyramids, prisms, and cubes?