

<b>Exploring the Extreme</b>			
<b>2007 Mathematics</b>			
<b>Core Curriculum</b>			
<b>Utah Mathematics</b>			
<b>Grade K</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Finding the Center of Gravity Using Rulers	UT	MA.K.3.3.a	Pose questions and gather data about self and surroundings.
<b>Exploring the Extreme</b>			
<b>2007 Mathematics</b>			
<b>Core Curriculum</b>			
<b>Utah Mathematics</b>			
<b>Grade 1</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Finding the Center of Gravity Using Rulers	UT	MA.1.3.2.a	Identify the appropriate tools for measuring length, weight, capacity, temperature, and time.
<b>Exploring the Extreme</b>			
<b>2007 Mathematics</b>			
<b>Core Curriculum</b>			
<b>Utah Mathematics</b>			
<b>Grade 2</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Finding the Center of Gravity Using Rulers	UT	MA.2.3.2.b	Estimate and measure length by iterating a nonstandard or standard unit of measure.
<b>Exploring the Extreme</b>			
<b>2007 Mathematics</b>			
<b>Core Curriculum</b>			
<b>Utah Mathematics</b>			
<b>Grade 3</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Finding the Center of Gravity Using Rulers	UT	MA.3.4.1.b	Measure the length of objects to the nearest centimeter, meter, half- and quarter-inch, foot, and yard.
Finding the Center of Gravity Using Plumb Lines	UT	MA.3.4.1.b	Measure the length of objects to the nearest centimeter, meter, half- and quarter-inch, foot, and yard.
Changing the Center of Gravity Using Moment Arms	UT	MA.3.4.1.b	Measure the length of objects to the nearest centimeter, meter, half- and quarter-inch, foot, and yard.
<b>Exploring the Extreme</b>			
<b>2007 Mathematics</b>			
<b>Core Curriculum</b>			
<b>Utah Mathematics</b>			
<b>Grade 4</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	

Finding the Center of Gravity Using Rulers	UT	MA.4.5.1.a	Identify a question that can be answered by collecting data.
Changing the Center of Gravity Using Moment Arms	UT	MA.4.5.1.a	Identify a question that can be answered by collecting data.
<b>Exploring the Extreme</b>			
<b>2007 Mathematics</b>			
<b>Core Curriculum</b>			
<b>Utah Mathematics</b>			
<b>Grade 5</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Jet Propulsion	UT	MA.5.2.1.b	Determine a rule for the pattern using organized lists, tables, objects, and variables.
Center of Gravity, Pitch, Yaw	UT	MA.5.1.1.b	Demonstrate multiple ways to represent whole numbers, decimals, fractions, percents, and integers using models and symbolic representations (e.g., $108 = 2 \times 50 + 8$ ; $108 = 10^2 + 8$ ; $90\% = 90$ out of 100 squares on a hundred chart).
Center of Gravity, Pitch, Yaw	UT	MA.5.1.5.a	Determine when it is appropriate to use estimation, mental math strategies, paper and pencil, and algorithms.
<b>Exploring the Extreme</b>			
<b>2007 Mathematics</b>			
<b>Core Curriculum</b>			
<b>Utah Mathematics</b>			
<b>Grade 6</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Jet Propulsion	UT	MA.6.2.2.a	Solve single variable linear equations using a variety of strategies.
Center of Gravity, Pitch, Yaw	UT	MA.6.1.5.c	Use estimation or calculation to compute results, depending on the context and numbers involved in the problem.
Center of Gravity, Pitch, Yaw	UT	MA.6.4.2.a	Recognize that measurements are approximations and describe how the size of the unit used in measuring affects the precision.
Center of Gravity, Pitch, Yaw	UT	MA.6.4.2.d	Determine when it is appropriate to estimate or use precise measurement when solving problems.
<b>Exploring the Extreme</b>			
<b>2007 Mathematics</b>			
<b>Core Curriculum</b>			
<b>Utah Mathematics</b>			
<b>Grade 7 (Math 7)</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	

Vectoring	UT	MA.7.5.2.d	Propose and justify inferences and predictions based on data.
Center of Gravity, Pitch, Yaw	UT	MA.7.1.1.a	Demonstrate multiple ways to represent whole numbers, decimals, fractions, percents, and integers using models and real-life examples.
Center of Gravity, Pitch, Yaw	UT	MA.7.1.3.a	Find equivalent forms for common fractions, decimals, percents, and ratios, including repeating or terminating decimals.
Center of Gravity, Pitch, Yaw	UT	MA.7.1.4.b	Recognize percents as ratios based on 100 and decimals as ratios based on powers of 10.
Center of Gravity, Pitch, Yaw	UT	MA.7.1.5.d	Determine if an answer is reasonable using estimation.
Center of Gravity, Pitch, Yaw	UT	MA.7.2.1.b	Solve percent problems using ratio and proportion, including problems involving discounts, interest, taxes, tips, and percent increase or decrease.
Center of Gravity, Pitch, Yaw	UT	MA.7.4.2.a	Estimate metric and customary measures using everyday objects and comparisons.
Center of Gravity, Pitch, Yaw	UT	MA.7.4.2.b	Measure length, area, volume, and angles to appropriate levels of precision.
Fuel Efficiency	UT	MA.7.2.1.c	Solve problems involving proportions, rates, and measures.
Fuel Efficiency	UT	MA.7.3.1.d	Show that performing the same operation on both sides of an equation will produce an equivalent equation.
Fuel Efficiency	UT	MA.7.4.2.a	Estimate metric and customary measures using everyday objects and comparisons.
Fuel Efficiency	UT	MA.7.4.2.b	Measure length, area, volume, and angles to appropriate levels of precision.
<b>Exploring the Extreme</b>			
<b>2007 Mathematics</b>			
<b>Core Curriculum</b>			
<b>Utah Mathematics</b>			
<b>Grades 7-8</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Jet Propulsion	UT	MA.7-8.3.2.a	Evaluate algebraic expressions, including those with whole number exponents, when given values for the variable(s).
Vectoring	UT	MA.7-8.2.2.a	Set up and solve problems involving proportional reasoning using variables.
Center of Gravity, Pitch, Yaw	UT	MA.7-8.1.1.a	Compute fluently using all four operations with integers, and explain why the corresponding algorithms work.
Center of Gravity, Pitch, Yaw	UT	MA.7-8.1.1.c	Check the reasonableness of results using estimation.

Center of Gravity, Pitch, Yaw	UT	MA.7-8.1.2.b	Predict the effect of operating with fractions, decimals, percents, and integers as an increase or a decrease of the original value.
Center of Gravity, Pitch, Yaw	UT	MA.7-8.1.3.c	Solve problems involving rational numbers, percents, and proportions.
Center of Gravity, Pitch, Yaw	UT	MA.7-8.2.1.c	Represent percents as ratios based on 100 and decimals as ratios based on powers of ten.
Fuel Efficiency	UT	MA.7-8.1.1.a	Compute fluently using all four operations with integers, and explain why the corresponding algorithms work.
Fuel Efficiency	UT	MA.7-8.1.1.c	Check the reasonableness of results using estimation.
Fuel Efficiency	UT	MA.7-8.2.2.a	Set up and solve problems involving proportional reasoning using variables.
Fuel Efficiency	UT	MA.7-8.3.1.a	Compare representations of a relation using tables, graphs, algebraic symbols, and mathematical rules.
<b>Exploring the Extreme</b>			
<b>2007 Mathematics</b>			
<b>Core Curriculum</b>			
<b>Utah Mathematics</b>			
<b>Grades 7-12 (Algebra 1)</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Vectoring	UT	MA.7-12.3.2.c	Solve equations for a specified variable.
Vectoring	UT	MA.7-12.4.1.a	Collect, record, organize, and display a set of data with at least two variables.
Center of Gravity, Pitch, Yaw	UT	MA.7-12.4.2.a	Estimate the equation of a line of best fit to make and test conjectures.
Fuel Efficiency	UT	MA.7-12.3.1.a	Simplify and evaluate monomial expressions and formulas.
Fuel Efficiency	UT	MA.7-12.3.4.b	Factor trinomials with integer coefficients of the form $x^2 + bx + c$ .
Fuel Efficiency	UT	MA.7-12.4.2.a	Estimate the equation of a line of best fit to make and test conjectures.
<b>Exploring the Extreme</b>			
<b>2007 Mathematics</b>			
<b>Core Curriculum</b>			
<b>Utah Mathematics</b>			
<b>Grades 8-12</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Center of Gravity, Pitch, Yaw	UT	MA.8-12.4.1.a	Find linear and angle measures in real-world situations using appropriate tools or technology.
Fuel Efficiency	UT	MA.8-12.4.1.a	Find linear and angle measures in real-world situations using appropriate tools or technology.