

Exploring the Extreme			
2005 Mathematics			
Learning Standards			
District of Columbia Mathematics			
Grade 1			
Activity/Lesson	State	Standards	
Finding the Center of Gravity Using Rulers	DC	MA.1.M.3	Measure the length of objects by repeating a nonstandard or standard unit.
Exploring the Extreme			
2005 Mathematics			
Learning Standards			
District of Columbia Mathematics			
Grade 2			
Activity/Lesson	State	Standards	
Finding the Center of Gravity Using Rulers	DC	MA.2.M.3	Select and correctly use the appropriate measurement tool (ruler, balance scale, thermometer).
Finding the Center of Gravity Using Rulers	DC	MA.2.DASP.3	Formulate inferences (draw conclusions) and make educated guesses (conjectures) about a situation based on information gained from data.
Exploring the Extreme			
2005 Mathematics			
Learning Standards			
District of Columbia Mathematics			
Grade 3			
Activity/Lesson	State	Standards	
Finding the Center of Gravity Using Rulers	DC	MA.3.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments.
Finding the Center of Gravity Using Plumb Lines	DC	MA.3.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments.
Changing the Center of Gravity Using Moment Arms	DC	MA.3.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments.
Exploring the Extreme			
2005 Mathematics			
Learning Standards			
District of Columbia Mathematics			
Grade 4			
Activity/Lesson	State	Standards	
Finding the Center of Gravity Using Rulers	DC	MA.4.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data.

Finding the Center of Gravity Using Plumb Lines	DC	MA.4.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data.
Changing the Center of Gravity Using Moment Arms	DC	MA.4.PRA.3	Use pictures, models, tables, charts, graphs, words, number sentences, and mathematical notations to interpret mathematical relationships.
Changing the Center of Gravity Using Moment Arms	DC	MA.4.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data.
Exploring the Extreme			
2005 Mathematics			
Learning Standards			
District of Columbia Mathematics			
Grade 5			
Activity/Lesson	State	Standards	
Vectoring	DC	MA.5.M.7	Identify, measure, describe, classify, and draw various angles and triangles, given sides and the angle between them or given two angles and the side between them (e.g., draw a triangle with one right angle and two sides congruent).
Vectoring	DC	MA.5.DASP.2	Construct, draw conclusions, and make predictions from various representations of data sets, including tables, line graphs, line plots, circle graphs, and bar graphs (where symbols or scales represent multiple units).
Center of Gravity, Pitch, Yaw	DC	MA.5.NSO-F.9	Interpret percents as parts out of 100, use % notation, and express a part of a whole as a percentage.
Exploring the Extreme			
2005 Mathematics			
Learning Standards			
District of Columbia Mathematics			
Grade 6			
Activity/Lesson	State	Standards	
Center of Gravity, Pitch, Yaw	DC	MA.6.NSO-N.5	Identify and determine common equivalent fractions, mixed numbers, decimals, and percentages.
Center of Gravity, Pitch, Yaw	DC	MA.6.NSO-E.18	Estimate results of computations with whole numbers and with positive fractions, mixed numbers, decimals, and percentages. Determine reasonableness of estimates.
Exploring the Extreme			
2005 Mathematics			
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District of Columbia Mathematics			

Grade 7			
Activity/Lesson	State	Standards	
Jet Propulsion	DC	MA.7.PRA.10	Use algebraic terminology including, but not limited to, variable, equation, term, coefficient, inequality, expression, and constant.
Center of Gravity, Pitch, Yaw	DC	MA.7.NSO-N.1	Compare, order, estimate, and translate among integers, fractions, mixed numbers (i.e., rational numbers), decimals, and percents.
Center of Gravity, Pitch, Yaw	DC	MA.7.NSO-E.20	Estimate results of computations with rational numbers; determine estimates to a certain stated accuracy.
Exploring the Extreme			
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District of Columbia Mathematics			
Grade 8			
Activity/Lesson	State	Standards	
Vectoring	DC	MA.8.DASP.3	Recognize practices of collecting and displaying data that may bias the presentation or analysis.
Center of Gravity, Pitch, Yaw	DC	MA.8.NSO-E.17	Determine estimates to a certain stated accuracy.
Fuel Efficiency	DC	MA.8.NSO-N.1	Explain the properties of and compute with real numbers expressed in a variety of forms.
Fuel Efficiency	DC	MA.8.PRA.1	Use tables and graphs to represent and compare linear growth patterns. In particular, compare rates of change and x- and y-intercepts of different linear patterns.