

Pushing the Envelope			
2007 Mathematics			
Standards			
Oregon Mathematics			
Grade 6			
Activity/Lesson	State	Standards	
Types of Engines (pgs. 11-23)	OR	MA.6.6.3.3	Write, evaluate, and use expressions and formulas to solve problems.
Chemistry (pgs. 25-41)	OR	MA.6.6.3.3	Write, evaluate, and use expressions and formulas to solve problems.
Physics and Math (pgs. 43-63)	OR	MA.6.6.2.1	Develop, analyze, and apply the meaning of ratio, rate, and percent to solve problems.
Physics and Math (pgs. 43-63)	OR	MA.6.6.2.3	Understand the meaning of probability and represent probabilities as ratios, decimals, and percents.
Physics and Math (pgs. 43-63)	OR	MA.6.6.3.2	Develop the meanings and uses of variables.
Physics and Math (pgs. 43-63)	OR	MA.6.6.3.3	Write, evaluate, and use expressions and formulas to solve problems.
Physics and Math (pgs. 43-63)	OR	MA.6.6.3.6	Recognize that the solutions of an equation are the values of the variables that make the equation true.
Rocket Activity (pgs. 69-75)	OR	MA.6.6.3.3	Write, evaluate, and use expressions and formulas to solve problems.
Pushing the Envelope			
2007 Mathematics			
Standards			
Oregon Mathematics			
Grade 7			
Activity/Lesson	State	Standards	
Types of Engines (pgs. 11-23)	OR	MA.7.7.3.1	Use models to explain the reasonableness of formulas for the circumference and area of circles.
Chemistry (pgs. 25-41)	OR	MA.7.7.2.6	Apply scale factor to analyze how the change in one measure (e.g., length, area, volume) affects another.
Chemistry (pgs. 25-41)	OR	MA.7.7.3.1	Use models to explain the reasonableness of formulas for the circumference and area of circles.
Physics and Math (pgs. 43-63)	OR	MA.7.7.2.2	Apply ratio and proportionality to solve problems, including percent and simple probability.
Physics and Math (pgs. 43-63)	OR	MA.7.7.3.1	Use models to explain the reasonableness of formulas for the circumference and area of circles.
Rocket Activity (pgs. 69-75)	OR	MA.7.7.3.1	Use models to explain the reasonableness of formulas for the circumference and area of circles.
Pushing the Envelope			
2007 Mathematics			
Standards			

Oregon Mathematics			
Grade 8			
Activity/Lesson	State	Standards	
Physics and Math (pgs. 43-63)	OR	MA.8.8.1.1	Translate among contextual, verbal, tabular, graphical, and algebraic representations of linear functions.
Physics and Math (pgs. 43-63)	OR	MA.8.8.1.2	Determine the slope of a line and understand that it is a constant rate of change.
Physics and Math (pgs. 43-63)	OR	MA.8.8.1.4	Use linear functions and equations to represent, analyze and solve problems, and to make predictions and inferences.
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2007 Mathematics			
Standards			
Oregon Mathematics			
Grades 9-12 (Algebra)			
Activity/Lesson	State	Standards	
Physics and Math (pgs. 43-63)	OR	MA.9-12.H.2A.5	Given a linear function, interpret and analyze the relationship between the independent and dependent variables. Solve for x given f(x) or solve for f(x) given x.
Pushing the Envelope			
2007 Mathematics			
Standards			
Oregon Mathematics			
Grades 9-12 (Geometry)			
Activity/Lesson	State	Standards	
Types of Engines (pgs. 11-23)	OR	MA.9-12.H.1G.7	In problems involving circles, apply theorems and properties of chords, tangents, and angles; and theorems and formulas of arcs and sectors.
Types of Engines (pgs. 11-23)	OR	MA.9-12.H.2G.2	Identify and apply formulas for surface area and volume of spheres; right solids, including rectangular prisms and pyramids; cones; and cylinders; and compositions thereof. Solve related context-based problems.
Types of Engines (pgs. 11-23)	OR	MA.9-12.H.2G.3	Identify and apply formulas to solve for the missing dimensions of spheres and right solids, including rectangular prisms and pyramids, cones, and cylinders, both numerically and symbolically.
Types of Engines (pgs. 11-23)	OR	MA.9-12.H.3G.4	Apply slope, distance, and midpoint formulas to solve problems in a coordinate plane.
Chemistry (pgs. 25-41)	OR	MA.9-12.H.1G.7	In problems involving circles, apply theorems and properties of chords, tangents, and angles; and theorems and formulas of arcs and sectors.

