

Exploring Aeronautics			
2009 Mathematics			
Academic Standards			
Nebraska Mathematics			
Grade 5			
Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	NE	MA.5.MA 5.2.5.e	Measure weight (mass) and temperature using metric units
Fundamentals of Aeronautics (145-176)	NE	MA.5.MA 5.4.1.b	Represent the same set of data in different formats (e.g., table, pictographs, bar graphs, line graphs)
Fundamentals of Aeronautics (145-176)	NE	MA.5.MA 5.4.1.e	Generate questions and answers from data sets and their graphical representations
Fundamentals of Aeronautics (145-176)	NE	MA.5.MA 5.4.2.a	Make predictions based on data to answer questions from tables, bar graphs, and line graphs
Fundamentals of Aeronautics (145-176)	NE	MA.5.MA 5.4.3.b	Generate a list of possible outcomes for a simple event
Integrating with Aeronautics	NE	MA.5.MA 5.2.5.c	Estimate and measure length with customary units to the nearest $\frac{1}{4}$ inch
Integrating with Aeronautics	NE	MA.5.MA 5.3.1.b	Create and analyze numeric patterns using words, tables, and graphs
Integrating with Aeronautics	NE	MA.5.MA 5.3.1.c	Communicate relationships using expressions and equations
Integrating with Aeronautics	NE	MA.5.MA 5.3.2.a	Model situations that involve the addition, subtraction, and multiplication of positive rational numbers using words, graphs, and tables
Integrating with Aeronautics	NE	MA.5.MA 5.4.1.b	Represent the same set of data in different formats (e.g., table, pictographs, bar graphs, line graphs)
Integrating with Aeronautics	NE	MA.5.MA 5.4.2.a	Make predictions based on data to answer questions from tables, bar graphs, and line graphs
Intro to Aeronautics (109-123)	NE	MA.5.MA 5.4.1.e	Generate questions and answers from data sets and their graphical representations
Scientific Method(124-144)	NE	MA.5.MA 5.4.1.c	Draw conclusions based on a set of data
Scientific Method(124-144)	NE	MA.5.MA 5.4.1.e	Generate questions and answers from data sets and their graphical representations
Scientific Method(124-144)	NE	MA.5.MA 5.4.3.a	Perform and record results of probability experiments
Exploring Aeronautics			
2009 Mathematics			
Academic Standards			
Nebraska Mathematics			
Grade 6			
Activity/Lesson	State	Standards	

Fundamentals of Aeronautics (145-176)	NE	MA.6.MA 6.2.5.c	Convert length, weight (mass), and liquid capacity from one unit to another within the same system
Fundamentals of Aeronautics (145-176)	NE	MA.6.MA 6.3.2.a	Model contextualized problems using various representations (e.g., graphs, tables)
Fundamentals of Aeronautics (145-176)	NE	MA.6.MA 6.4.1.b	Compare and interpret data sets and their graphical representations
Fundamentals of Aeronautics (145-176)	NE	MA.6.MA 6.4.2.a	Make predictions based on data and create questions to further investigate the quality of the predictions
Wings(177-208)	NE	MA.6.MA 6.2.5.e	Determine the area of parallelograms and triangles
The Resource Center	NE	MA.6.MA 6.1.1.f	Classify numbers as natural, whole, or integer
Science of Flight	NE	MA.6.MA 6.2.5.c	Convert length, weight (mass), and liquid capacity from one unit to another within the same system
Integrating with Aeronautics	NE	MA.6.MA 6.1.1.c	Identify integers less than 0 on a number line
Integrating with Aeronautics	NE	MA.6.MA 6.1.3.b	Select and apply the appropriate method of computation when problem solving (e.g., models, mental computation, paper-pencil, technology, divisibility rules)
Integrating with Aeronautics	NE	MA.6.MA 6.1.4.a	Use appropriate estimation methods to check the reasonableness of solutions for problems involving positive rational numbers
Integrating with Aeronautics	NE	MA.6.MA 6.2.5.a	Estimate and measure length with customary and metric units to the nearest 1/16 inch and mm
Integrating with Aeronautics	NE	MA.6.MA 6.3.1.b	Use a variable to describe a situation with an equation (e.g., one-step, one variable)
Integrating with Aeronautics	NE	MA.6.MA 6.3.2.a	Model contextualized problems using various representations (e.g., graphs, tables)
Intro to Aeronautics (109-123)	NE	MA.6.MA 6.4.1.b	Compare and interpret data sets and their graphical representations
Scientific Method(124-144)	NE	MA.6.MA 6.4.2.a	Make predictions based on data and create questions to further investigate the quality of the predictions
Exploring Aeronautics			
2009 Mathematics			
Academic Standards			
Nebraska Mathematics			
Grade 7			
Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	NE	MA.7.MA 7.3.1.a	Describe and create algebraic expressions from words, tables, and graphs
Fundamentals of Aeronautics (145-176)	NE	MA.7.MA 7.4.1.a	Analyze data sets and interpret their graphical representations

Fundamentals of Aeronautics (145-176)	NE	MA.7.MA 7.4.1.d	List biases that may be created by various data collection processes
Fundamentals of Aeronautics (145-176)	NE	MA.7.MA 7.4.2.a	Determine if data collected from a sample can be used to make predictions about a population
The Tools of Aeronautics	NE	MA.7.MA 7.4.1.e	Formulate a question about a characteristic within one population that can be answered by simulation or a survey
Science of Flight	NE	MA.7.MA 7.4.1.d	List biases that may be created by various data collection processes
Science of Flight	NE	MA.7.MA 7.4.1.e	Formulate a question about a characteristic within one population that can be answered by simulation or a survey
Integrating with Aeronautics	NE	MA.7.MA 7.1.3.b	Select, apply, and explain the method of computation when problem solving using integers and positive rational numbers (e.g., models, mental computation, paper-pencil, technology, divisibility rules)
Integrating with Aeronautics	NE	MA.7.MA 7.3.1.a	Describe and create algebraic expressions from words, tables, and graphs
Integrating with Aeronautics	NE	MA.7.MA 7.3.1.b	Use a variable to describe a situation with an inequality (e.g., one-step, one variable)
Integrating with Aeronautics	NE	MA.7.MA 7.3.2.b	Represent a variety of quantitative relationships using algebraic expressions and one-step equations
Integrating with Aeronautics	NE	MA.7.MA 7.4.1.a	Analyze data sets and interpret their graphical representations
Intro to Aeronautics (109-123)	NE	MA.7.MA 7.4.1.a	Analyze data sets and interpret their graphical representations
Scientific Method(124-144)	NE	MA.7.MA 7.4.1.a	Analyze data sets and interpret their graphical representations
Scientific Method(124-144)	NE	MA.7.MA 7.4.1.e	Formulate a question about a characteristic within one population that can be answered by simulation or a survey
Exploring Aeronautics			
2009 Mathematics			
Academic Standards			
Nebraska Mathematics			
Grade 8			
Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	NE	MA.8.MA 8.2.4.a	Draw geometric objects with specified properties (e.g., parallel sides, number of sides, angle measures, number of faces)
Fundamentals of Aeronautics (145-176)	NE	MA.8.MA 8.2.5.c	Apply the Pythagorean theorem to find missing lengths in right triangles and to solve problems
Fundamentals of Aeronautics (145-176)	NE	MA.8.MA 8.2.5.d	Use scale factors to find missing lengths in similar shapes

Fundamentals of Aeronautics (145-176)	NE	MA.8.MA 8.3.1.a	Represent and analyze a variety of patterns with tables, graphs, words, and algebraic equations
The Resource Center	NE	MA.8.MA 8.1.1.a	Compare and order real numbers
The Resource Center	NE	MA.8.MA 8.1.1.b	Demonstrate relative position of real numbers on the number line (e.g., square root of 2 is left of 1.5)
Science of Flight	NE	MA.8.MA 8.4.2.a	Evaluate predictions to formulate new questions and plan new studies
Integrating with Aeronautics	NE	MA.8.MA 8.1.1.b	Demonstrate relative position of real numbers on the number line (e.g., square root of 2 is left of 1.5)
Integrating with Aeronautics	NE	MA.8.MA 8.1.3.d	Select, apply, and explain the method of computation when problem solving using rational numbers (e.g., models, mental computation, paper-pencil, technology, divisibility rules)
Integrating with Aeronautics	NE	MA.8.MA 8.2.5.e	Convert between metric and standard units of measurement, given conversion factors (e.g., meters to yards)
Integrating with Aeronautics	NE	MA.8.MA 8.3.1.a	Represent and analyze a variety of patterns with tables, graphs, words, and algebraic equations
Integrating with Aeronautics	NE	MA.8.MA 8.3.2.a	Model contextualized problems using various representations (e.g., two-step/one variable equations)
Integrating with Aeronautics	NE	MA.8.MA 8.3.2.b	Represent a variety of quantitative relationships using algebraic expressions and two-step/one variable equations
Integrating with Aeronautics	NE	MA.8.MA 8.4.1.a	Represent data using circle graphs and box plots with and without the use of technology
Scientific Method(124-144)	NE	MA.8.MA 8.4.1.a	Represent data using circle graphs and box plots with and without the use of technology
Scientific Method(124-144)	NE	MA.8.MA 8.4.2.a	Evaluate predictions to formulate new questions and plan new studies