

Exploring Aeronautics			
2004 Mathematics			
Grade Expectations			
Vermont Mathematics			
Grade 5			
Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	VT	MA.5.M5:28	In response to a teacher- or student-generated question or hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate makes predictions, asks new questions, or makes connections to real-world situations.
The Resource Center	VT	MA.5.M5:2	Demonstrates understanding of the relative magnitude of numbers by ordering, comparing, or identifying equivalent positive fractional numbers, decimals, or benchmark percents within number formats (fractions to fractions, decimals to decimals, or percents to percents); or integers in context using models or number lines.
Science of Flight	VT	MA.5.M5:13	Demonstrates conceptual understanding of similarity by describing the proportional effect on the linear dimensions of polygons when scaling up or down while preserving the angles of polygons, or by solving related problems (including applying scales on maps). Describes effects using models or explanations.
Science of Flight	VT	MA.5.M5:28	In response to a teacher- or student-generated question or hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate makes predictions, asks new questions, or makes connections to real-world situations.
Integrating with Aeronautics	VT	MA.5.M5:3	Demonstrates conceptual understanding of mathematical operations by describing or illustrating the meaning of a remainder with respect to division of whole numbers using models, explanations, or solving problems.
Intro to Aeronautics (109-123)	VT	MA.5.M5:28	In response to a teacher- or student-generated question or hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate makes predictions, asks new questions, or makes connections to real-world situations.

Scientific Method(124-144)	VT	MA.5.M5:28	In response to a teacher- or student-generated question or hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate makes predictions, asks new questions, or makes connections to real-world situations.
Exploring Aeronautics			
2004 Mathematics			
Grade Expectations			
Vermont Mathematics			
Grade 6			
Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	VT	MA.6.M6:25	Organizes and displays data using bar graphs, tables, frequency tables, line plots, circle graphs, and stem-and-leaf plots to answer question related to the data, to analyze the data to formulate or justify conclusions, or to make predictions.
Fundamentals of Aeronautics (145-176)	VT	MA.6.M6:28	In response to a teacher- or student-generated question, makes a hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate makes predictions, asks new questions, or makes connection to real-world situations.
The Resource Center	VT	MA.6.M6:2	Demonstrates understanding of the relative magnitude of numbers by ordering or comparing numbers with whole-number bases and whole-number exponents (e.g., 33 , 43), integers, or rational numbers within and across number formats (fractions, decimals, or whole-number percents from 1 to 100) using number lines or equality and inequality symbols.
Science of Flight	VT	MA.6.M6:23	Interprets a given representation (circle graphs, line graphs, or stem-and-leaf plots) to answer questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems. And (frequency charts, line graphs, Venn diagrams, pictographs, line plots, histograms).

Science of Flight	VT	MA.6.M6:28	In response to a teacher- or student-generated question, makes a hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate makes predictions, asks new questions, or makes connection to real-world situations.
Science of Flight	VT	MA.6.M6:30.2	Connections—Demonstration of observations, applications, extensions, and generalizations;
Scientific Method(124-144)	VT	MA.6.M6:23	Interprets a given representation (circle graphs, line graphs, or stem-and-leaf plots) to answer questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems. And (frequency charts, line graphs, Venn diagrams, pictographs, line plots, histograms).
Scientific Method(124-144)	VT	MA.6.M6:28	In response to a teacher- or student-generated question, makes a hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate makes predictions, asks new questions, or makes connection to real-world situations.
Exploring Aeronautics			
2004 Mathematics			
Grade Expectations			
Vermont Mathematics			
Grade 7			
Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	VT	MA.7.M7:28	In response to a teacher- or student-generated question, makes a hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate makes predictions, asks new questions, or makes connection to real-world situations.
Science of Flight	VT	MA.7.M7:28	In response to a teacher- or student-generated question, makes a hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate makes predictions, asks new questions, or makes connection to real-world situations.

Intro to Aeronautics (109-123)	VT	MA.7.M7:28	In response to a teacher- or student-generated question, makes a hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate makes predictions, asks new questions, or makes connection to real-world situations.
Scientific Method(124-144)	VT	MA.7.M7:28	In response to a teacher- or student-generated question, makes a hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate makes predictions, asks new questions, or makes connection to real-world situations.
Exploring Aeronautics			
2004 Mathematics			
Grade Expectations			
Vermont Mathematics			
Grade 8			
Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	VT	MA.8.M8:25	Organizes and displays data using scatter plots to answer questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems; or identifies representations or elements of representations that best display a given set of data or situation, consistent with the representations required in M8: 23.
Fundamentals of Aeronautics (145-176)	VT	MA.8.M8:28	In response to a teacher- or student-generated question, makes a hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate to make predictions, asks new questions, or makes connection to real-world situations. (See also GLEs M24, M25 and M29.)
Wings(177-208)	VT	MA.8.M8:13	Applies concepts of similarity to determine the impact of scaling on the volume or surface area of three-dimensional figures when linear dimensions are multiplied by a constant factor; to determine the length of sides of similar triangles, or to solve problems involving growth and rate and makes scale drawings.

Science of Flight	VT	MA.8.M8:25	Organizes and displays data using scatter plots to answer questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems; or identifies representations or elements of representations that best display a given set of data or situation, consistent with the representations required in M8: 23.
Science of Flight	VT	MA.8.M8:28	In response to a teacher- or student-generated question, makes a hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate to make predictions, asks new questions, or makes connection to real-world situations. (See also GLEs M24, M25 and M29.)
Science of Flight	VT	MA.8.M8:30.2	Connections—Demonstration of observations, applications, extensions, and generalizations;
Integrating with Aeronautics	VT	MA.8.M8:1	Demonstrates conceptual understanding of rational numbers with respect to percents as a way of describing change (percent increase and decrease) using explanations, models, or other representations.
Integrating with Aeronautics	VT	MA.8.M8:2	Demonstrates understanding of the relative magnitude of numbers by ordering or comparing rational numbers, common irrational numbers (the square root of 2 and pi), numbers with whole-number or fractional bases and whole-number exponents, square roots, absolute values, integers, or numbers represented in scientific notation using number lines or equality and inequality symbols.
Scientific Method(124-144)	VT	MA.8.M8:25	Organizes and displays data using scatter plots to answer questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems; or identifies representations or elements of representations that best display a given set of data or situation, consistent with the representations required in M8: 23.

Scientific Method(124-144)	VT	MA.8.M8:28	In response to a teacher- or student-generated question, makes a hypothesis, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate to make predictions, asks new questions, or makes connection to real-world situations. (See also GLEs M24, M25 and M29.)
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