

Exploring Aeronautics			
2010 Science			
Standards of Learning			
Virginia Science			
Grade 5			
Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	VA	SCI.5.5.1.b	estimates are made and accurate measurements of length, mass, volume, and temperature are made in metric units using proper tools;
Fundamentals of Aeronautics (145-176)	VA	SCI.5.5.1.g	data are collected, recorded, analyzed, and communicated using proper graphical representations and metric measurements;
Fundamentals of Aeronautics (145-176)	VA	SCI.5.5.1.h	predictions are made using patterns from data collected, and simple graphical data are generated;
Tools of Aeronautics(257-326)	VA	SCI.5.5.1.j	models are constructed to clarify explanations, demonstrate relationships, and solve needs; and
The Tools of Aeronautics	VA	SCI.5.5.1.j	models are constructed to clarify explanations, demonstrate relationships, and solve needs; and
Science of Flight	VA	SCI.5.5.1.d	hypotheses are formed from testable questions;
Science of Flight	VA	SCI.5.5.1.f	constants in an experimental situation are identified;
Science of Flight	VA	SCI.5.5.1.h	predictions are made using patterns from data collected, and simple graphical data are generated;
Science of Flight	VA	SCI.5.5.1.i	inferences are made and conclusions are drawn;
Integrating with Aeronautics	VA	SCI.5.5.1.c	estimates are made and accurate measurements of elapsed time are made using proper tools;
Integrating with Aeronautics	VA	SCI.5.5.1.h	predictions are made using patterns from data collected, and simple graphical data are generated;
Intro to Aeronautics (109-123)	VA	SCI.5.5.1.h	predictions are made using patterns from data collected, and simple graphical data are generated;
Scientific Method(124-144)	VA	SCI.5.5.1.g	data are collected, recorded, analyzed, and communicated using proper graphical representations and metric measurements;
Scientific Method(124-144)	VA	SCI.5.5.1.h	predictions are made using patterns from data collected, and simple graphical data are generated;
Scientific Method(124-144)	VA	SCI.5.5.1.i	inferences are made and conclusions are drawn;
Exploring Aeronautics			
2010 Science			
Standards of Learning			
Virginia Science			
Grade 6			

Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	VA	SCI.6.6.1.h	data are analyzed and communicated through graphical representation;
The Tools of Aeronautics	VA	SCI.6.6.1.i	models and simulations are designed and used to illustrate and explain phenomena and systems; and
The Resource Center	VA	SCI.6.6.8.i	the history and technology of space exploration.
Science of Flight	VA	SCI.6.6.1.c	scale models are used to estimate distance, volume, and quantity;
Science of Flight	VA	SCI.6.6.1.g	data are collected, recorded, analyzed, and reported using metric measurements and tools;
Science of Flight	VA	SCI.6.6.1.i	models and simulations are designed and used to illustrate and explain phenomena and systems; and
Integrating with Aeronautics	VA	SCI.6.6.1.c	scale models are used to estimate distance, volume, and quantity;
Intro to Aeronautics (109-123)	VA	SCI.6.6.8.i	the history and technology of space exploration.
Scientific Method(124-144)	VA	SCI.6.6.1.d	hypotheses are stated in ways that identify the independent and dependent variables;
Scientific Method(124-144)	VA	SCI.6.6.1.g	data are collected, recorded, analyzed, and reported using metric measurements and tools;
Scientific Method(124-144)	VA	SCI.6.6.1.h	data are analyzed and communicated through graphical representation;
Exploring Aeronautics			
2010 Science			
Standards of Learning			
Virginia Science			
Grades 7-8 (Life Science)			
Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	VA	SCI.7-8.LS.1.e	sources of experimental error are identified;
Fundamentals of Aeronautics (145-176)	VA	SCI.7-8.LS.1.h	data are organized, communicated through graphical representation, interpreted, and used to make predictions;
Tools of Aeronautics(257-326)	VA	SCI.7-8.LS.1.d	models and simulations are constructed and used to illustrate and explain phenomena;
The Tools of Aeronautics	VA	SCI.7-8.LS.1.d	models and simulations are constructed and used to illustrate and explain phenomena;
Science of Flight	VA	SCI.7-8.LS.1.d	models and simulations are constructed and used to illustrate and explain phenomena;
Integrating with Aeronautics	VA	SCI.7-8.LS.1.h	data are organized, communicated through graphical representation, interpreted, and used to make predictions;
Integrating with Aeronautics	VA	SCI.7-8.LS.1.i	patterns are identified in data and are interpreted and evaluated; and
Intro to Aeronautics (109-123)	VA	SCI.7-8.LS.1.h	data are organized, communicated through graphical representation, interpreted, and used to make predictions;

Intro to Aeronautics (109-123)	VA	SCI.7-8.LS.1.i	patterns are identified in data and are interpreted and evaluated; and
Scientific Method(124-144)	VA	SCI.7-8.LS.1.h	data are organized, communicated through graphical representation, interpreted, and used to make predictions;
Exploring Aeronautics			
2010 Science			
Standards of Learning			
Virginia Science			
Grades 7-8 (Physical Science)			
Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	VA	SCI.7-8.PS.1.i	frequency distributions, scatterplots, line plots, and histograms are constructed and interpreted;
Fundamentals of Aeronautics (145-176)	VA	SCI.7-8.PS.1.i	experimental results are presented in appropriate written form;
Fundamentals of Aeronautics (145-176)	VA	SCI.7-8.PS.10.a	investigate and understand the scientific principles of work, force, motion, speed, velocity, and acceleration;
Fundamentals of Aeronautics (145-176)	VA	SCI.7-8.PS.10.b	Newton's laws of motion;
Fundamentals of Aeronautics (145-176)	VA	SCI.7-8.PS.10.c	investigate and understand the scientific principles of work, force, motion, mechanical advantage, efficiency, and power; and
Fundamentals of Aeronautics (145-176)	VA	SCI.7-8.PS.10.d	technological applications of work, force, and motion.
Wings(177-208)	VA	SCI.7-8.PS.1.b	length, mass, volume, density, temperature, weight, and force are accurately measured;
Wings(177-208)	VA	SCI.7-8.PS.10.b	Newton's laws of motion;
Airplane Control(209-256)	VA	SCI.7-8.PS.10.d	technological applications of work, force, and motion.
Tools of Aeronautics(257-326)	VA	SCI.7-8.PS.1.m	models and simulations are constructed and used to illustrate and explain phenomena; and
How an Airplane Flies	VA	SCI.7-8.PS.10.b	Newton's laws of motion;
How an Airplane Flies	VA	SCI.7-8.PS.10.c	investigate and understand the scientific principles of work, force, motion, mechanical advantage, efficiency, and power; and
How an Airplane Flies	VA	SCI.7-8.PS.10.d	technological applications of work, force, and motion.
Science of Flight	VA	SCI.7-8.PS.1.m	models and simulations are constructed and used to illustrate and explain phenomena; and
Science of Flight	VA	SCI.7-8.PS.10.a	investigate and understand the scientific principles of work, force, motion, speed, velocity, and acceleration;
Science of Flight	VA	SCI.7-8.PS.10.b	Newton's laws of motion;

Science of Flight	VA	SCI.7-8.PS.10.c	investigate and understand the scientific principles of work, force, motion, mechanical advantage, efficiency, and power; and
Science of Flight	VA	SCI.7-8.PS.10.d	technological applications of work, force, and motion.
Integrating with Aeronautics	VA	SCI.7-8.PS.1.b	length, mass, volume, density, temperature, weight, and force are accurately measured;
Scientific Method(124-144)	VA	SCI.7-8.PS.1.j	valid conclusions are made after analyzing data;
Scientific Method(124-144)	VA	SCI.7-8.PS.1.k	research methods are used to investigate practical problems and questions;
Scientific Method(124-144)	VA	SCI.7-8.PS.1.l	experimental results are presented in appropriate written form;
Scientific Method(124-144)	VA	SCI.7-8.PS.10.b	Newton's laws of motion;