

Exploring Aeronautics			
2008 Science			
Next Generation Sunshine State Standards			
Florida Science			
Grade 5			
Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	FL	SCI.5.SC.5.P.13 .C	Some forces act through physical contact, while others act at a distance.
Fundamentals of Aeronautics (145-176)	FL	SCI.5.SC.5.P.13 .1	Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects.
Fundamentals of Aeronautics (145-176)	FL	SCI.5.SC.5.P.13 .2	Investigate and describe that the greater the force applied to it, the greater the change in motion of a given object.
Fundamentals of Aeronautics (145-176)	FL	SCI.5.SC.5.P.13 .3	Investigate and describe that the more mass an object has, the less effect a given force will have on the object's motion.
How an Airplane Flies	FL	SCI.5.SC.5.P.13 .1	Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects.
How an Airplane Flies	FL	SCI.5.SC.5.P.13 .2	Investigate and describe that the greater the force applied to it, the greater the change in motion of a given object.
How an Airplane Flies	FL	SCI.5.SC.5.P.13 .3	Investigate and describe that the more mass an object has, the less effect a given force will have on the object's motion.
How an Airplane Flies	FL	SCI.5.SC.5.P.13 .4	Investigate and explain that when a force is applied to an object but it does not move, it is because another opposing force is being applied by something in the environment so that the forces are balanced.
Science of Flight	FL	SCI.5.SC.5.N.1. A	Scientific inquiry is a multifaceted activity; The processes of science include the formulation of scientifically investigable questions, construction of investigations into those questions, the collection of appropriate data, the evaluation of the meaning of those data, and the communication of this evaluation.
Science of Flight	FL	SCI.5.SC.5.N.1. B	The processes of science frequently do not correspond to the traditional portrayal of "the scientific method."
Science of Flight	FL	SCI.5.SC.5.N.1. D	Scientific knowledge is based on observation and inference; it is important to recognize that these are very different things. Not only does science require creativity in its methods and processes, but also in its questions and explanations.
Science of Flight	FL	SCI.5.SC.5.N.1. 3	Recognize and explain the need for repeated experimental trials.

Integrating with Aeronautics	FL	SCI.5.SC.5.N.1.1	Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as: systematic observations, experiments requiring the identification of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
Scientific Method(124-144)	FL	SCI.5.SC.5.N.1.A	Scientific inquiry is a multifaceted activity; The processes of science include the formulation of scientifically investigable questions, construction of investigations into those questions, the collection of appropriate data, the evaluation of the meaning of those data, and the communication of this evaluation.
Scientific Method(124-144)	FL	SCI.5.SC.5.N.1.B	The processes of science frequently do not correspond to the traditional portrayal of "the scientific method."
Scientific Method(124-144)	FL	SCI.5.SC.5.N.1.D	Scientific knowledge is based on observation and inference; it is important to recognize that these are very different things. Not only does science require creativity in its methods and processes, but also in its questions and explanations.
Scientific Method(124-144)	FL	SCI.5.SC.5.N.1.1	Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as: systematic observations, experiments requiring the identification of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
Scientific Method(124-144)	FL	SCI.5.SC.5.N.1.2	Explain the difference between an experiment and other types of scientific investigation.

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Florida Science			
Grade 6			
Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	FL	SCI.6.SC.6.P.12.A	Motion is a key characteristic of all matter that can be observed, described, and measured.
Fundamentals of Aeronautics (145-176)	FL	SCI.6.SC.6.P.12.B	The motion of objects can be changed by forces.
Fundamentals of Aeronautics (145-176)	FL	SCI.6.SC.6.P.13.3	Investigate and describe that an unbalanced force acting on an object changes its speed, or direction of motion, or both.

Airplane Control(209-256)	FL	SCI.6.SC.6.P.12 .B	The motion of objects can be changed by forces.
Airplane Control(209-256)	FL	SCI.6.SC.6.P.13 .3	Investigate and describe that an unbalanced force acting on an object changes its speed, or direction of motion, or both.
How an Airplane Flies	FL	SCI.6.SC.6.P.12 .B	The motion of objects can be changed by forces.
How an Airplane Flies	FL	SCI.6.SC.6.P.13 .B	Energy change is understood in terms of forces--pushes or pulls.
How an Airplane Flies	FL	SCI.6.SC.6.P.13 .1	Investigate and describe types of forces including contact forces and forces acting at a distance, such as electrical, magnetic, and gravitational.
Science of Flight	FL	SCI.6.SC.6.N.1. A	Scientific inquiry is a multifaceted activity; The processes of science include the formulation of scientifically investigable questions, construction of investigations into those questions, the collection of appropriate data, the evaluation of the meaning of those data, and the communication of this evaluation.
Science of Flight	FL	SCI.6.SC.6.N.1. D	Scientific knowledge is based on observation and inference; it is important to recognize that these are very different things. Not only does science require creativity in its methods and processes, but also in its questions and explanations.
Science of Flight	FL	SCI.6.SC.6.N.1. 3	Explain the difference between an experiment and other types of scientific investigation, and explain the relative benefits and limitations of each.
Integrating with Aeronautics	FL	SCI.6.SC.6.N.1. 1	Define a problem from the sixth grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
Scientific Method(124-144)	FL	SCI.6.SC.6.N.1. A	Scientific inquiry is a multifaceted activity; The processes of science include the formulation of scientifically investigable questions, construction of investigations into those questions, the collection of appropriate data, the evaluation of the meaning of those data, and the communication of this evaluation.
Scientific Method(124-144)	FL	SCI.6.SC.6.N.1. B	The processes of science frequently do not correspond to the traditional portrayal of "the scientific method."

Scientific Method(124-144)	FL	SCI.6.SC.6.N.1. D	Scientific knowledge is based on observation and inference; it is important to recognize that these are very different things. Not only does science require creativity in its methods and processes, but also in its questions and explanations.
Scientific Method(124-144)	FL	SCI.6.SC.6.N.1. 3	Explain the difference between an experiment and other types of scientific investigation, and explain the relative benefits and limitations of each.
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2008 Science			
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Florida Science			
Grade 7			
Activity/Lesson	State	Standards	
Science of Flight	FL	SCI.7.SC.7.N.1. A	Scientific inquiry is a multifaceted activity; The processes of science include the formulation of scientifically investigable questions, construction of investigations into those questions, the collection of appropriate data, the evaluation of the meaning of those data, and the communication of this evaluation.
Science of Flight	FL	SCI.7.SC.7.N.1. D	Scientific knowledge is based on observation and inference; it is important to recognize that these are very different things. Not only does science require creativity in its methods and processes, but also in its questions and explanations.
Science of Flight	FL	SCI.7.SC.7.N.1. 3	Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.
Science of Flight	FL	SCI.7.SC.7.N.2. 1	Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.
Integrating with Aeronautics	FL	SCI.7.SC.7.N.1. 1	Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.

Scientific Method(124-144)	FL	SCI.7.SC.7.N.1. A	Scientific inquiry is a multifaceted activity; The processes of science include the formulation of scientifically investigable questions, construction of investigations into those questions, the collection of appropriate data, the evaluation of the meaning of those data, and the communication of this evaluation.
Scientific Method(124-144)	FL	SCI.7.SC.7.N.1. B	The processes of science frequently do not correspond to the traditional portrayal of "the scientific method."
Scientific Method(124-144)	FL	SCI.7.SC.7.N.1. D	Scientific knowledge is based on observation and inference; it is important to recognize that these are very different things. Not only does science require creativity in its methods and processes, but also in its questions and explanations.
Scientific Method(124-144)	FL	SCI.7.SC.7.N.1. 3	Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.

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Florida Science			
Grade 8			
Activity/Lesson	State	Standards	
Tools of Aeronautics(257-326)	FL	SCI.8.SC.8.N.3. 1	Select models useful in relating the results of their own investigations.
Science of Flight	FL	SCI.8.SC.8.N.1. A	Scientific inquiry is a multifaceted activity; The processes of science include the formulation of scientifically investigable questions, construction of investigations into those questions, the collection of appropriate data, the evaluation of the meaning of those data, and the communication of this evaluation.
Science of Flight	FL	SCI.8.SC.8.N.1. D	Scientific knowledge is based on observation and inference; it is important to recognize that these are very different things. Not only does science require creativity in its methods and processes, but also in its questions and explanations.
Science of Flight	FL	SCI.8.SC.8.N.1. 4	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.
Science of Flight	FL	SCI.8.SC.8.N.1. 6	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.

Science of Flight	FL	SCI.8.SC.8.N.3.1	Select models useful in relating the results of their own investigations.
Integrating with Aeronautics	FL	SCI.8.SC.8.N.1.1	Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
Integrating with Aeronautics	FL	SCI.8.SC.8.E.5.10	Assess how technology is essential to science for such purposes as access to outer space and other remote locations, sample collection, measurement, data collection and storage, computation, and communication of information.
Scientific Method(124-144)	FL	SCI.8.SC.8.N.1.A	Scientific inquiry is a multifaceted activity; The processes of science include the formulation of scientifically investigable questions, construction of investigations into those questions, the collection of appropriate data, the evaluation of the meaning of those data, and the communication of this evaluation.
Scientific Method(124-144)	FL	SCI.8.SC.8.N.1.B	The processes of science frequently do not correspond to the traditional portrayal of "the scientific method."
Scientific Method(124-144)	FL	SCI.8.SC.8.N.1.D	Scientific knowledge is based on observation and inference; it is important to recognize that these are very different things. Not only does science require creativity in its methods and processes, but also in its questions and explanations.
Scientific Method(124-144)	FL	SCI.8.SC.8.E.5.10	Assess how technology is essential to science for such purposes as access to outer space and other remote locations, sample collection, measurement, data collection and storage, computation, and communication of information.