

Exploring Aeronautics			
2006 Science			
Content Standards			
Montana Science			
Grades 5-8			
Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	MT	SCI.5-8.1.3	review, communicate and defend results of investigations, including considering alternative explanations
Fundamentals of Aeronautics (145-176)	MT	SCI.5-8.1.4	create models to illustrate scientific concepts and use the model to predict change. (e.g., computer simulation, stream table, graphic representation)
Fundamentals of Aeronautics (145-176)	MT	SCI.5-8.2.3	describe energy and compare and contrast the energy transformations and the characteristics of light, heat, motion, magnetism, electricity, sound and mechanical waves
Fundamentals of Aeronautics (145-176)	MT	SCI.5-8.2.5	describe and explain the motion of an object in terms of its position, direction, and speed as well as the forces acting upon it
Fundamentals of Aeronautics (145-176)	MT	SCI.5-8.2.6	identify, build, describe, measure, and analyze mechanical systems (e.g., simple and complex compound machines) and describe the forces acting within those systems
Wings(177-208)	MT	SCI.5-8.2.5	describe and explain the motion of an object in terms of its position, direction, and speed as well as the forces acting upon it
Airplane Control(209-256)	MT	SCI.5-8.1.5	identify strengths and weakness in an investigation design
Airplane Control(209-256)	MT	SCI.5-8.2.4	model and explain the states of matter are dependent upon the quantity of energy present in the system and describe what will change and what will remain unchanged at the particulate level when matter experiences an external force or energy change
Airplane Control(209-256)	MT	SCI.5-8.2.5	describe and explain the motion of an object in terms of its position, direction, and speed as well as the forces acting upon it
Airplane Control(209-256)	MT	SCI.5-8.2.6	identify, build, describe, measure, and analyze mechanical systems (e.g., simple and complex compound machines) and describe the forces acting within those systems
Tools of Aeronautics(257-326)	MT	SCI.5-8.1.4	create models to illustrate scientific concepts and use the model to predict change. (e.g., computer simulation, stream table, graphic representation)
Tools of Aeronautics(257-326)	MT	SCI.5-8.1.5	identify strengths and weakness in an investigation design
How an Airplane Flies	MT	SCI.5-8.2.5	describe and explain the motion of an object in terms of its position, direction, and speed as well as the forces acting upon it

How an Airplane Flies	MT	SCI.5-8.2.6	identify, build, describe, measure, and analyze mechanical systems (e.g., simple and complex compound machines) and describe the forces acting within those systems
The Tools of Aeronautics	MT	SCI.5-8.1.4	create models to illustrate scientific concepts and use the model to predict change. (e.g., computer simulation, stream table, graphic representation)
The Tools of Aeronautics	MT	SCI.5-8.1.5	identify strengths and weakness in an investigation design
The Activity Center	MT	SCI.5-8.2.4	model and explain the states of matter are dependent upon the quantity of energy present in the system and describe what will change and what will remain unchanged at the particulate level when matter experiences an external force or energy change
The Activity Center	MT	SCI.5-8.2.5	describe and explain the motion of an object in terms of its position, direction, and speed as well as the forces acting upon it
Science of Flight	MT	SCI.5-8.1.1	identify a question, determine relevant variables and a control, formulate a testable hypothesis, plan and predict the outcome of an investigation, safely conduct scientific investigation, and compare and analyze data
Science of Flight	MT	SCI.5-8.1.2	select and use appropriate tools including technology to make measurements (in metric units), gather, process and analyze data from scientific investigations
Science of Flight	MT	SCI.5-8.1.4	create models to illustrate scientific concepts and use the model to predict change. (e.g., computer simulation, stream table, graphic representation)
Science of Flight	MT	SCI.5-8.1.5	identify strengths and weakness in an investigation design
Science of Flight	MT	SCI.5-8.1.6	compare how observations of nature form an essential base of knowledge among the Montana American Indians
Science of Flight	MT	SCI.5-8.2.1	classify, describe, and manipulate the physical models of matter in terms of: elements, and compounds, pure substances and mixtures, atoms, and molecules
Science of Flight	MT	SCI.5-8.2.3	describe energy and compare and contrast the energy transformations and the characteristics of light, heat, motion, magnetism, electricity, sound and mechanical waves
Science of Flight	MT	SCI.5-8.2.5	describe and explain the motion of an object in terms of its position, direction, and speed as well as the forces acting upon it
Science of Flight	MT	SCI.5-8.6.2	identify major milestones in science that have impacted science, technology, and society

Integrating with Aeronautics	MT	SCI.5-8.1.2	select and use appropriate tools including technology to make measurements (in metric units), gather, process and analyze data from scientific investigations
Integrating with Aeronautics	MT	SCI.5-8.2.5	describe and explain the motion of an object in terms of its position, direction, and speed as well as the forces acting upon it
Intro to Aeronautics (109-123)	MT	SCI.5-8.1.1	identify a question, determine relevant variables and a control, formulate a testable hypothesis, plan and predict the outcome of an investigation, safely conduct scientific investigation, and compare and analyze data
Intro to Aeronautics (109-123)	MT	SCI.5-8.1.2	select and use appropriate tools including technology to make measurements (in metric units), gather, process and analyze data from scientific investigations
Intro to Aeronautics (109-123)	MT	SCI.5-8.1.3	review, communicate and defend results of investigations, including considering alternative explanations
Intro to Aeronautics (109-123)	MT	SCI.5-8.1.5	identify strengths and weakness in an investigation design
Intro to Aeronautics (109-123)	MT	SCI.5-8.2.5	describe and explain the motion of an object in terms of its position, direction, and speed as well as the forces acting upon it
Intro to Aeronautics (109-123)	MT	SCI.5-8.2.6	identify, build, describe, measure, and analyze mechanical systems (e.g., simple and complex compound machines) and describe the forces acting within those systems
Scientific Method(124-144)	MT	SCI.5-8.1.1	identify a question, determine relevant variables and a control, formulate a testable hypothesis, plan and predict the outcome of an investigation, safely conduct scientific investigation, and compare and analyze data
Scientific Method(124-144)	MT	SCI.5-8.1.2	select and use appropriate tools including technology to make measurements (in metric units), gather, process and analyze data from scientific investigations
Scientific Method(124-144)	MT	SCI.5-8.1.3	review, communicate and defend results of investigations, including considering alternative explanations
Scientific Method(124-144)	MT	SCI.5-8.1.5	identify strengths and weakness in an investigation design