

Pushing the Envelope			
2006 Science			
Content Standards			
Montana Science			
Grades 5-8			
Activity/Lesson	State	Standards	
Types of Engines (pgs. 11-23)	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.
Chemistry (pgs. 25-41)	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.
Chemistry (pgs. 25-41)	MT	SCI.5-8.2.2	Examine, describe, compare and classify objects and substances based on common physical properties and simple chemical properties.
Chemistry (pgs. 25-41)	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.
Physics and Math (pgs. 43-63)	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.
Physics and Math (pgs. 43-63)	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.
Physics and Math (pgs. 43-63)	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.
Physics and Math (pgs. 43-63)	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.
Rocket Activity (pgs. 69-75)	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.
Rocket Activity (pgs. 69-75)	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.
Rocket Activity (pgs. 69-75)	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.

Rocket Activity (pgs. 69-75)	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.
Pushing the Envelope			
2006 Science			
Content Standards			
Montana Science			
Grades 9-12			
Activity/Lesson	State	Standards	
History of Aviation Propulsion (pgs. 5-9)	MT	SCI.9-12.6.1	Analyze and illustrate the historical impact of scientific and technological advances, including Montana American Indian examples.
Chemistry (pgs. 25-41)	MT	SCI.9-12.2.2.d	Explain how the particulate-level structure and properties of matter affect its macroscopic properties, including the effect of kinetic molecular theory on phases of matter.
Physics and Math (pgs. 43-63)	MT	SCI.9-12.2.5.a	Explain the interactions between motions and forces, including the laws of motion.
Physics and Math (pgs. 43-63)	MT	SCI.9-12.2.5.b	Explain the interactions between motions and forces, including an understanding of the gravitational and electromagnetic forces.
Rocket Activity (pgs. 69-75)	MT	SCI.9-12.2.5.a	Explain the interactions between motions and forces, including the laws of motion.