

Pushing the Envelope			
2008 Science			
Next Generation Sunshine State Standards			
Florida Science			
Grade 5			
Activity/Lesson	State	Standards	
Types of Engines (pgs. 11-23)	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.
Chemistry (pgs. 25-41)	FL	SCI.5.SC.5.P.8. B	Objects and substances can be classified by their physical and chemical properties. Mass is the amount of matter (or "stuff") in an object. Weight, on the other hand, is the measure of force of attraction (gravitational force) between an object and Earth.
Chemistry (pgs. 25-41)	FL	SCI.5.SC.5.P.8. 1	Compare and contrast the basic properties of solids, liquids, and gases, such as mass, volume, color, texture, and temperature.
Physics and Math (pgs. 43-63)	FL	SCI.5.SC.5.P.13 .B	Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects: Energy change is understood in terms of forces--pushes or pulls.
Physics and Math (pgs. 43-63)	FL	SCI.5.SC.5.P.13 .C	Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects: Some forces act through physical contact, while others act at a distance.
Physics and Math (pgs. 43-63)	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.
Rocket Activity (pgs. 69-75)	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.
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2008 Science			
Next Generation Sunshine State Standards			
Florida Science			
Grade 6			
Activity/Lesson	State	Standards	
Types of Engines (pgs. 11-23)	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.
Physics and Math (pgs. 43-63)	FL	SCI.6.SC.6.P.13 .A	Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects: It takes energy to change the motion of objects.

Physics and Math (pgs. 43-63)	FL	SCI.6.SC.6.P.13 .B	Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects: Energy change is understood in terms of forces--pushes or pulls.
Physics and Math (pgs. 43-63)	FL	SCI.6.SC.6.P.13 .C	Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects: Some forces act through physical contact, while others act at a distance.
Physics and Math (pgs. 43-63)	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.
Physics and Math (pgs. 43-63)	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.
Rocket Activity (pgs. 69-75)	FL	SCI.6.SC.6.P.13 .A	Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects: It takes energy to change the motion of objects.
Rocket Activity (pgs. 69-75)	FL	SCI.6.SC.6.P.13 .B	Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects: Energy change is understood in terms of forces--pushes or pulls.
Rocket Activity (pgs. 69-75)	FL	SCI.6.SC.6.P.13 .C	Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects: Some forces act through physical contact, while others act at a distance.
Rocket Activity (pgs. 69-75)	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.
Rocket Activity (pgs. 69-75)	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.

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2008 Science

Next Generation Sunshine State Standards

Florida Science			
Grade 7			
Activity/Lesson	State	Standards	
History of Aviation Propulsion (pgs. 5-9)	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.

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2008 Science

Next Generation Sunshine State Standards

Florida Science			
Grade 8			
Activity/Lesson	State	Standards	
Types of Engines (pgs. 11-23)	FL	SCI.8.SC.8.P.8.2	Differentiate between weight and mass recognizing that weight is the amount of gravitational pull on an object and is distinct from, though proportional to, mass.
Chemistry (pgs. 25-41)	FL	SCI.8.SC.8.P.8.B	Objects and substances can be classified by their physical and chemical properties. Mass is the amount of matter (or "stuff") in an object. Weight, on the other hand, is the measure of force of attraction (gravitational force) between an object and Earth.
Chemistry (pgs. 25-41)	FL	SCI.8.SC.8.P.8.5	Recognize that there are a finite number of elements and that their atoms combine in a multitude of ways to produce compounds that make up all of the living and nonliving things that we encounter.
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2008 Science			
Next Generation Sunshine State Standards			
Florida Science			
Grades 9-12 (Physical Science Body of Knowledge)			
Activity/Lesson	State	Standards	
Types of Engines (pgs. 11-23)	FL	SCI.9-12.SC.912.P.12.4	Describe how the gravitational force between two objects depends on their masses and the distance between them.
Chemistry (pgs. 25-41)	FL	SCI.9-12.SC.912.P.8.2	Differentiate between physical and chemical properties and physical and chemical changes of matter.
Chemistry (pgs. 25-41)	FL	SCI.9-12.SC.912.P.8.13	Identify selected functional groups and relate how they contribute to properties of carbon compounds.
Chemistry (pgs. 25-41)	FL	SCI.9-12.SC.912.P.12.10	Interpret the behavior of ideal gases in terms of kinetic molecular theory.
Physics and Math (pgs. 43-63)	FL	SCI.9-12.SC.912.P.12.A	Motion can be measured and described qualitatively and quantitatively. Net forces create a change in motion. When objects travel at speeds comparable to the speed of light, Einstein's special theory of relativity applies.
Physics and Math (pgs. 43-63)	FL	SCI.9-12.SC.912.P.12.B	Momentum is conserved under well-defined conditions. A change in momentum occurs when a net force is applied to an object over a time interval.
Physics and Math (pgs. 43-63)	FL	SCI.9-12.SC.912.P.12.4	Describe how the gravitational force between two objects depends on their masses and the distance between them.

Rocket Activity (pgs. 69-75)	FL	SCI.9-12.SC.912.P.12. A	Motion can be measured and described qualitatively and quantitatively. Net forces create a change in motion. When objects travel at speeds comparable to the speed of light, Einstein's special theory of relativity applies.
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