

<b>Smart Skies</b>			
<b>2009 Science</b>			
<b>Essential Knowledge and Skills</b>			
<b>Texas Science</b>			
<b>Grade 5</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Fly by Math	TX	SCI.5.2.C	Collect information by detailed observations and accurate measuring
Fly by Math	TX	SCI.5.2.G	Construct appropriate simple graphs, tables, maps, and charts using technology, including computers, to organize, examine, and evaluate information.
Fly by Math	TX	SCI.5.3.A	In all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student
Fly by Math	TX	SCI.5.4.A	Collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, prisms, mirrors, pan balances, triple beam balances, spring scales, graduated cylinders, beakers, hot plates, meter sticks, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observations of habitats or organisms such as terrariums and aquariums
Fly by Math	TX	SCI.5.6.D	Design an experiment that tests the effect of force on an object.
<b>Smart Skies</b>			
<b>2009 Science</b>			
<b>Essential Knowledge and Skills</b>			
<b>Texas Science</b>			
<b>Grade 6</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Fly by Math	TX	SCI.6.2.C	Collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers
Fly by Math	TX	SCI.6.2.E	Analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
Fly by Math	TX	SCI.6.3.A	In all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student

Fly by Math	TX	SCI.6.4.A	Use appropriate tools to collect, record, and analyze information, including journals/notebooks, beakers, Petri dishes, meter sticks, graduated cylinders, hot plates, test tubes, triple beam balances, microscopes, thermometers, calculators, computers, timing devices, and other equipment as needed to teach the curriculum
Fly by Math	TX	SCI.6.8.B	Identify and describe the changes in position, direction, and speed of an object when acted upon by unbalanced forces
Fly by Math	TX	SCI.6.8.C	Calculate average speed using distance and time measurements
Fly by Math	TX	SCI.6.8.D	Measure and graph changes in motion
Fly by Math	TX	SCI.6.8.E	Investigate how inclined planes and pulleys can be used to change the amount of force to move an object.
Line Up with Math	TX	SCI.6.8.B	Identify and describe the changes in position, direction, and speed of an object when acted upon by unbalanced forces
Line Up with Math	TX	SCI.6.8.C	Calculate average speed using distance and time measurements
Line Up with Math	TX	SCI.6.11.A	Describe the physical properties, locations, and movements of the Sun, planets, Galilean moons, meteors, asteroids, and comets
<b>Smart Skies</b>			
<b>2009 Science</b>			
<b>Essential Knowledge and Skills</b>			
<b>Texas Science</b>			
<b>Grade 7</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Fly by Math	TX	SCI.7.2.C	Collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers
Fly by Math	TX	SCI.7.2.E	Analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
Fly by Math	TX	SCI.7.3.A	In all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student

Fly by Math	TX	SCI.7.4.A	Use appropriate tools to collect, record, and analyze information, including life science models, hand lens, stereoscopes, microscopes, beakers, Petri dishes, microscope slides, graduated cylinders, test tubes, meter sticks, metric rulers, metric tape measures, timing devices, hot plates, balances, thermometers, calculators, water test kits, computers, temperature and pH probes, collecting nets, insect traps, globes, digital cameras, journals/notebooks, and other equipment as needed to teach the curriculum
Fly by Math	TX	SCI.7.7.A	Contrast situations where work is done with different amounts of force to situations where no work is done such as moving a box with a ramp and without a ramp, or standing still
Fly by Math	TX	SCI.7.7.C	Demonstrate and illustrate forces that affect motion in everyday life such as emergence of seedlings, turgor pressure, and geotropism.
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<b>2009 Science</b>			
<b>Essential Knowledge and Skills</b>			
<b>Texas Science</b>			
<b>Grade 8</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Fly by Math	TX	SCI.8.2.E	Analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
Fly by Math	TX	SCI.8.2.C	Collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers
Fly by Math	TX	SCI.8.3.A	In all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student;
Fly by Math	TX	SCI.8.4.A	Use appropriate tools to collect, record, and analyze information, including lab journals/notebooks, beakers, meter sticks, graduated cylinders, anemometers, psychrometers, hot plates, test tubes, spring scales, balances, microscopes, thermometers, calculators, computers, spectroscopes, timing devices, and other equipment as needed to teach the curriculum; and
Fly by Math	TX	SCI.8.6.A	Demonstrate and calculate how unbalanced forces change the speed or direction of an object's motion

Fly by Math	TX	SCI.8.6.B	Differentiate between speed, velocity, and acceleration
Fly by Math	TX	SCI.8.7.C	Relate the position of the Moon and Sun to their effect on ocean tides.
Line Up with Math	TX	SCI.8.6.A	Demonstrate and calculate how unbalanced forces change the speed or direction of an object's motion
Line Up with Math	TX	SCI.8.6.B	Differentiate between speed, velocity, and acceleration
<b>Smart Skies</b>			
<b>2009 Science</b>			
<b>Essential Knowledge and Skills</b>			
<b>Texas Science</b>			
<b>Grades 9-11</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Fly by Math	TX	SCI.9-11.2.F	Collect and organize qualitative and quantitative data and make measurements with accuracy and precision using tools such as calculators, spreadsheet software, data-collecting probes, computers, standard laboratory glassware, microscopes, various prepared slides, stereoscopes, metric rulers, electronic balances, gel electrophoresis apparatuses, micropipettors, hand lenses, Celsius thermometers, hot plates, lab notebooks or journals, timing devices, cameras, Petri dishes, lab incubators, dissection equipment, meter sticks, and models, diagrams, or samples of biological specimens or structures;