

<b>Smart Skies</b>			
<b>2000 Science</b>			
<b>Academic Standards</b>			
<b>Indiana Science</b>			
<b>Grade 5</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Fly by Math	IN	SCI.5.5.3.11	Investigate and describe that changes in speed or direction of motion of an object are caused by forces. Understand that the greater the force, the greater the change in motion and the more massive an object, the less effect a given force will have.
Fly by Math	IN	SCI.5.5.3.12	Explain that objects move at different rates, with some moving very slowly and some moving too quickly for people to see them.
Fly by Math	IN	SCI.5.5.5.8	Realize and explain that predictions may be more accurate if they are based on large collections of objects or events.
Fly by Math	IN	SCI.5.5.5.10	Explain the danger in using only a portion of the data collected to describe the whole.
Line Up with Math	IN	SCI.5.5.3.11	Investigate and describe that changes in speed or direction of motion of an object are caused by forces. Understand that the greater the force, the greater the change in motion and the more massive an object, the less effect a given force will have.
Line Up with Math	IN	SCI.5.5.3.12	Explain that objects move at different rates, with some moving very slowly and some moving too quickly for people to see them.
<b>Smart Skies</b>			
<b>2000 Science</b>			
<b>Academic Standards</b>			
<b>Indiana Science</b>			
<b>Grade 6</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Fly by Math	IN	SCI.6.6.1.2	Give examples of different ways scientists investigate natural phenomena and identify processes all scientists use, such as collection of relevant evidence, the use of logical reasoning, and the application of imagination in devising hypotheses and explanations, in order to make sense of the evidence.
Fly by Math	IN	SCI.6.6.1.6	Explain that computers have become invaluable in science because they speed up and extend people's ability to collect, store, compile, and analyze data; prepare research reports; and share data and ideas with investigators all over the world.

Fly by Math	IN	SCI.6.6.1.7	Explain that technology is essential to science for such purposes as access to outer space and other remote locations, sample collection and treatment, measurement, data collection and storage, computation, and communication of information.
Fly by Math	IN	SCI.6.6.2.2	Use technology, such as calculators or computer spreadsheets, in analysis of data.
Fly by Math	IN	SCI.6.6.5.3	Explain why shapes on a sphere like Earth cannot be depicted on a flat surface without some distortion.
<b>Smart Skies</b>			
<b>2000 Science</b>			
<b>Academic Standards</b>			
<b>Indiana Science</b>			
<b>Grade 7</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Fly by Math	IN	SCI.7.7.1.3	Explain why it is important in science to keep honest, clear, and accurate records.
Fly by Math	IN	SCI.7.7.3.17	Investigate that an unbalanced force, acting on an object, changes its speed or path of motion or both, and know that if the force always acts toward the same center as the object moves, the object's path may curve into an orbit around the center.
<b>Smart Skies</b>			
<b>2000 Science</b>			
<b>Academic Standards</b>			
<b>Indiana Science</b>			
<b>Grade 8</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Fly by Math	IN	SCI.8.8.3.2	Explain that the slow movement of material within Earth results from heat flowing out of the deep interior and the action of gravitational forces on regions of different density.
Fly by Math	IN	SCI.8.8.3.9	Demonstrate, using drawings and models, the movement of atoms in a solid, liquid, and gaseous state. Explain that atoms and molecules are perpetually in motion.
Fly by Math	IN	SCI.8.8.5.7	Recognize and describe the danger of making over-generalizations when inventing a general rule based on a few observations.
Fly by Math	IN	SCI.8.8.5.8	Explain how estimates can be based on data from similar conditions in the past or on the assumption that all the possibilities are known.
Fly by Math	IN	SCI.8.8.5.10	Explain how the comparison of data from two groups involves comparing both their middles and the spreads.

Line Up with Math	IN	SCI.8.8.3.9	Demonstrate, using drawings and models, the movement of atoms in a solid, liquid, and gaseous state. Explain that atoms and molecules are perpetually in motion.
<b>Smart Skies</b>			
<b>2000 Science</b>			
<b>Academic Standards</b>			
<b>Indiana Science</b>			
<b>Grades 9-12 (Integrated Chemistry - Physics)</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Fly by Math	IN	SCI.9-12.CP.1.21	Understand and explain that the change in motion of an object (acceleration) is proportional to the net force applied to the object and inversely proportional to the object's mass. ( $a=F/m$ )
Fly by Math	IN	SCI.9-12.CP.1.22	Recognize and explain that whenever one object exerts a force on another, an equal and opposite force is exerted back on it by the other object.
Fly by Math	IN	SCI.9-12.CP.1.25	Understand and explain that waves can superpose on one another, bend around corners, reflect off surfaces, be absorbed by materials they enter, and change direction when entering a new material.
Fly by Math	IN	SCI.9-12.CP.1.27	Recognize and describe that gravitational force is an attraction between masses and that the strength of the force is proportional to the masses and decreases rapidly as the square of the distance between the masses increases. ( $F = G[(m_1m_2)/r^2]$ )
Fly by Math	IN	SCI.9-12.CP.1.29	Understand and explain that at the atomic level, electric forces between oppositely charged electrons and protons hold atoms and molecules together and thus, are involved in all chemical reactions.
Fly by Math	IN	SCI.9-12.CP.1.30	Understand and explain that in materials, there are usually equal proportions of positive and negative charges, making the materials as a whole electrically neutral. However, also know that a very small excess or deficit of negative charges will produce noticeable electric forces.
Line Up with Math	IN	SCI.9-12.CP.1.25	Understand and explain that waves can superpose on one another, bend around corners, reflect off surfaces, be absorbed by materials they enter, and change direction when entering a new material.