

<b>Flight-Testing Newton's Laws</b>			
<b>2008 Science</b>			
<b>State Frameworks</b>			
<b>Mississippi Science</b>			
<b>Grades 9-12 (Physical Science)</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Session-10 (1-5)	MS	SCI.9-12.2.a.2	Demonstrate and explain the basic principles of Newton's three laws of motion including calculations of net force (accounting for gravity, friction, and air resistance) and the resulting motion of objects
Session-10 (1-5)	MS	SCI.9-12.2.b.1	Explain the connection between force, work and energy: Force exerted over a distance (results in work done)
Session-1 (1-17)	MS	SCI.9-12.2.a.2	Demonstrate and explain the basic principles of Newton's three laws of motion including calculations of net force (accounting for gravity, friction, and air resistance) and the resulting motion of objects
Session-1 (1-17)	MS	SCI.9-12.2.b.1	Explain the connection between force, work and energy: Force exerted over a distance (results in work done)
Session-1 (1-17)	MS	SCI.9-12.2.b.3	Explain the connection between force, work and energy: Net work on an object which contributes to change in kinetic energy (work-to-energy theorem)
Session-2 (1-10)	MS	SCI.9-12.2.a.2	Demonstrate and explain the basic principles of Newton's three laws of motion including calculations of net force (accounting for gravity, friction, and air resistance) and the resulting motion of objects
Session-2 (1-10)	MS	SCI.9-12.2.b.1	Explain the connection between force, work and energy: Force exerted over a distance (results in work done)
Session-4 (1-11)	MS	SCI.9-12.2.a.2	Demonstrate and explain the basic principles of Newton's three laws of motion including calculations of net force (accounting for gravity, friction, and air resistance) and the resulting motion of objects
Session-6 ( 1-8)	MS	SCI.9-12.2.a.2	Demonstrate and explain the basic principles of Newton's three laws of motion including calculations of net force (accounting for gravity, friction, and air resistance) and the resulting motion of objects
Session-7 (1-5)	MS	SCI.9-12.2.a.2	Demonstrate and explain the basic principles of Newton's three laws of motion including calculations of net force (accounting for gravity, friction, and air resistance) and the resulting motion of objects
Session-7 (1-5)	MS	SCI.9-12.2.b.1	Explain the connection between force, work and energy: Force exerted over a distance (results in work done)

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<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Session-10 (1-5)	MS	SCI.9-12.2.b	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall).
Session-10 (1-5)	MS	SCI.9-12.2.c	Analyze real-world applications to draw conclusions about Newton's three laws of motion.
Session-1 (1-17)	MS	SCI.9-12.2.b	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall).
Session-1 (1-17)	MS	SCI.9-12.2.c	Analyze real-world applications to draw conclusions about Newton's three laws of motion.
Session-2 (1-10)	MS	SCI.9-12.2.c	Analyze real-world applications to draw conclusions about Newton's three laws of motion.
Session-3 (1-6)	MS	SCI.9-12.2.b	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall).
Session-3 (1-6)	MS	SCI.9-12.2.c	Analyze real-world applications to draw conclusions about Newton's three laws of motion.
Session-5 (1-6)	MS	SCI.9-12.2.b	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall).
Session-5 (1-6)	MS	SCI.9-12.2.c	Analyze real-world applications to draw conclusions about Newton's three laws of motion.
Session-6 ( 1-8)	MS	SCI.9-12.2.b	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall).
Session-6 ( 1-8)	MS	SCI.9-12.2.c	Analyze real-world applications to draw conclusions about Newton's three laws of motion.

Session-6 ( 1-8)	MS	SCI.9-12.2.d.2	Apply the effects of the universal gravitation law to graph and interpret the force between two masses, acceleration due to gravity, and planetary motion: Concept of centripetal acceleration undergoing uniform circular motion
Session-7 (1-5)	MS	SCI.9-12.2.b	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall).
Session-7 (1-5)	MS	SCI.9-12.2.c	Analyze real-world applications to draw conclusions about Newton's three laws of motion.
Session-8 (1-9)	MS	SCI.9-12.2.b	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall).
Session-8 (1-9)	MS	SCI.9-12.2.c	Analyze real-world applications to draw conclusions about Newton's three laws of motion.
Session-9 (1-7)	MS	SCI.9-12.2.b	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall).
Session-9 (1-7)	MS	SCI.9-12.2.c	Analyze real-world applications to draw conclusions about Newton's three laws of motion.