

**Flight-Testing Newton's Laws**  
**2009 Science Revised June 2010**

**Learning Standards**

**Washington Science Revised June 2010**

**Grades 9-12**

<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Session-10 (1-5)	WA	SCI.9-12.4.9-11 PS1B.1	Calculate the average acceleration of an object, given the object's change in velocity with respect to time ( $a = (v_{\text{subscript 2}} - v_{\text{subscript 1}})/(t_{\text{subscript 2}} - t_{\text{subscript 1}})$ ).
Session-10 (1-5)	WA	SCI.9-12.4.9-11 PS1D.2	Calculate the acceleration of an object, given the object's mass and the net force on the object, using Newton's Second Law of Motion ( $F=ma$ ).
Session-1 (1-17)	WA	SCI.9-12.4.9-11 PS1B.1	Calculate the average acceleration of an object, given the object's change in velocity with respect to time ( $a = (v_{\text{subscript 2}} - v_{\text{subscript 1}})/(t_{\text{subscript 2}} - t_{\text{subscript 1}})$ ).
Session-1 (1-17)	WA	SCI.9-12.4.9-11 PS1D.2	Calculate the acceleration of an object, given the object's mass and the net force on the object, using Newton's Second Law of Motion ( $F=ma$ ).
Session-1 (1-17)	WA	SCI.9-12.4.9-11 PS1F.1	Predict how the gravitational force between two bodies would differ for bodies of different masses or different distances apart.
Session-2 (1-10)	WA	SCI.9-12.4.9-11 PS1D.2	Calculate the acceleration of an object, given the object's mass and the net force on the object, using Newton's Second Law of Motion ( $F=ma$ ).
Session-2 (1-10)	WA	SCI.9-12.4.9-11 PS1F.1	Predict how the gravitational force between two bodies would differ for bodies of different masses or different distances apart.
Session-3 (1-6)	WA	SCI.9-12.4.9-11 PS1B.1	Calculate the average acceleration of an object, given the object's change in velocity with respect to time ( $a = (v_{\text{subscript 2}} - v_{\text{subscript 1}})/(t_{\text{subscript 2}} - t_{\text{subscript 1}})$ ).
Session-3 (1-6)	WA	SCI.9-12.4.9-11 PS1D.2	Calculate the acceleration of an object, given the object's mass and the net force on the object, using Newton's Second Law of Motion ( $F=ma$ ).
Session-5 (1-6)	WA	SCI.9-12.4.9-11 PS1B.1	Calculate the average acceleration of an object, given the object's change in velocity with respect to time ( $a = (v_{\text{subscript 2}} - v_{\text{subscript 1}})/(t_{\text{subscript 2}} - t_{\text{subscript 1}})$ ).
Session-5 (1-6)	WA	SCI.9-12.4.9-11 PS1D.2	Calculate the acceleration of an object, given the object's mass and the net force on the object, using Newton's Second Law of Motion ( $F=ma$ ).
Session-6 ( 1-8)	WA	SCI.9-12.4.9-11 PS1B.1	Calculate the average acceleration of an object, given the object's change in velocity with respect to time ( $a = (v_{\text{subscript 2}} - v_{\text{subscript 1}})/(t_{\text{subscript 2}} - t_{\text{subscript 1}})$ ).

Session-6 ( 1-8)	WA	SCI.9-12.4.9-11 PS1D.2	Calculate the acceleration of an object, given the object's mass and the net force on the object, using Newton's Second Law of Motion ( $F=ma$ ).
Session-7 (1-5)	WA	SCI.9-12.4.9-11 PS1B.1	Calculate the average acceleration of an object, given the object's change in velocity with respect to time ( $a = (v_{\text{subscript 2}} - v_{\text{subscript 1}})/(t_{\text{subscript 2}} - t_{\text{subscript 1}})$ ).
Session-7 (1-5)	WA	SCI.9-12.4.9-11 PS1D.2	Calculate the acceleration of an object, given the object's mass and the net force on the object, using Newton's Second Law of Motion ( $F=ma$ ).
Session-8 (1-9)	WA	SCI.9-12.4.9-11 PS1B.1	Calculate the average acceleration of an object, given the object's change in velocity with respect to time ( $a = (v_{\text{subscript 2}} - v_{\text{subscript 1}})/(t_{\text{subscript 2}} - t_{\text{subscript 1}})$ ).
Session-8 (1-9)	WA	SCI.9-12.4.9-11 PS1D.2	Calculate the acceleration of an object, given the object's mass and the net force on the object, using Newton's Second Law of Motion ( $F=ma$ ).
Session-9 (1-7)	WA	SCI.9-12.4.9-11 PS1B.1	Calculate the average acceleration of an object, given the object's change in velocity with respect to time ( $a = (v_{\text{subscript 2}} - v_{\text{subscript 1}})/(t_{\text{subscript 2}} - t_{\text{subscript 1}})$ ).
Session-9 (1-7)	WA	SCI.9-12.4.9-11 PS1D.2	Calculate the acceleration of an object, given the object's mass and the net force on the object, using Newton's Second Law of Motion ( $F=ma$ ).