

<b>Future Flight Design</b>			
<b>2006 21st Century Science</b>			
<b>Standards and Objectives</b>			
<b>West Virginia 21st Century Science</b>			
<b>Grade 5</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Air Transportation Problem	WV	SCI.5.SC.O.5.1.05	cooperate and collaborate to ask questions, design and conduct investigations to find answers and solve problems.
Air Transportation Problem	WV	SCI.5.SC.O.5.1.06	formulate conclusions through close observations, logical reasoning, objectivity, perseverance and integrity in data collection.
Air Transportation Problem	WV	SCI.5.SC.O.5.1.11	construct and use charts, graphs and tables to organize, display, interpret, analyze and explain data.
Air Transportation Problem	WV	SCI.5.SC.O.5.1.12	use inferential reasoning to make logical conclusions from collected data.
Aircraft Design Problem	WV	SCI.5.SC.O.5.3.01	explore the relationship between the parts of a system to the whole system.
Aircraft Design Problem	WV	SCI.5.SC.O.5.3.03	compare and contrast changes that occur in an object or a system to its original state.
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<b>2006 21st Century Science</b>			
<b>Standards and Objectives</b>			
<b>West Virginia 21st Century Science</b>			
<b>Grade 6</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Air Transportation Problem	WV	SCI.6.SC.O.6.1.05	cooperate and collaborate to ask questions, design and conduct investigations to find answers and solve problems.
Air Transportation Problem	WV	SCI.6.SC.O.6.1.11	construct and use charts, graphs and tables to organize, display, interpret, analyze and explain data.
Air Transportation Problem	WV	SCI.6.SC.O.6.1.12	use inferential reasoning to make logical conclusions from collected data.
Aircraft Design Problem	WV	SCI.6.SC.O.6.2.21	examine simple machines and the forces involved.
Aircraft Design Problem	WV	SCI.6.SC.O.6.2.22	apply the effects of balanced and unbalanced forces on motion of objects.
Aircraft Design Problem	WV	SCI.6.SC.O.6.3.01	explore the relationship between the parts of a system to the whole system.
Aircraft Design Problem	WV	SCI.6.SC.O.6.3.03	compare and contrast changes that occur in an object or a system to its original state.
<b>Future Flight Design</b>			
<b>2006 21st Century Science</b>			
<b>Standards and Objectives</b>			
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<b>Grade 7</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Air Transportation Problem	WV	SCI.7.SC.O.7.1.05	cooperate and collaborate to ask questions, design and conduct investigations to find answers and solve problems.
Air Transportation Problem	WV	SCI.7.SC.O.7.1.06	formulate conclusions through close observations, logical reasoning, objectivity, perseverance and integrity in data collection.
Air Transportation Problem	WV	SCI.7.SC.O.7.1.11	construct and use charts, graphs and tables to organize, display, interpret, analyze and explain data.
Air Transportation Problem	WV	SCI.7.SC.O.7.1.12	use inferential reasoning to make logical conclusions from collected data.
Aircraft Design Problem	WV	SCI.7.SC.O.7.2.24	perform experiments with simple machines to demonstrate the relationship between forces and distance; use vectors to represent motion.
Aircraft Design Problem	WV	SCI.7.SC.O.7.3.01	explore the relationship between the parts of a system to the whole system.
Aircraft Design Problem	WV	SCI.7.SC.O.7.3.02	construct a variety of useful models of an object, event, or process.
Aircraft Design Problem	WV	SCI.7.SC.O.7.3.03	compare and contrast changes that occur in an object or a system to its original state.
Aircraft Design Problem	WV	SCI.7.SC.O.7.3.04	compare and contrast the influence that a variation in scale will have on the way an object or system works. (e.g., cooling rates of different-sized containers of water, strength of different-sized constructions from the same material, or flight characteristics of different-sized model airplanes).
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<b>2006 21st Century Science</b>			
<b>Standards and Objectives</b>			
<b>West Virginia 21st Century Science</b>			
<b>Grade 8</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Air Transportation Problem	WV	SCI.8.SC.O.8.1.04	conduct and/or design investigations that incorporate the skills and attitudes and/or values of scientific inquiry (e.g., established research protocol, accurate record keeping, replication of results and peer review, objectivity, openness, skepticism, fairness, or creativity and logic).

Air Transportation Problem	WV	SCI.8.SC.O.8.1.06	use appropriate technology solutions within a problem solving setting to measure and collect data; interpret data; analyze and/or report data; interact with simulations; conduct research; and present and communicate conclusions.
Air Transportation Problem	WV	SCI.8.SC.O.8.2.22	quantitatively represent work, power, pressure (e.g., $Work=Force \times distance$ , $Power=Work/time$ , or $pressure=force/area$ ) from collected data.
Air Transportation Problem	WV	SCI.8.SC.O.8.3.03	communicate experimental designs, results and conclusions using advanced technology tools.
Aircraft Design Problem	WV	SCI.8.SC.O.8.2.22	quantitatively represent work, power, pressure (e.g., $Work=Force \times distance$ , $Power=Work/time$ , or $pressure=force/area$ ) from collected data.
Aircraft Design Problem	WV	SCI.8.SC.O.8.3.01	synthesize concepts across various science disciplines to better understand the natural world (e.g., form and function, systems, or change over time).