

<b>Learning to Fly: The Wright Brother's Adventure</b>			
<b>2005 Science</b>			
<b>Curriculum Framework</b>			
<b>Arkansas Science</b>			
<b>Grade 6</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
The Society	AR	SCI.6.PS.6.6.1 0	Investigate careers, scientists, and historical breakthroughs related to compound machines and forces
Meet the Wrights	AR	SCI.6.PS.6.6.1 0	Investigate careers, scientists, and historical breakthroughs related to compound machines and forces
1901: The First Improvement	AR	SCI.6.NS.1.6.2 .d	Apply components of experimental design used to produce empirical evidence (appropriate use of control)
1901: The First Improvement	AR	SCI.6.PS.6.6.3	Conduct investigations of various forces using SI units (newton)
1901: The First Improvement	AR	SCI.6.PS.6.6.7 .c	Describe the effects of force (change the shape of objects)
1903: Powered Flight	AR	SCI.6.PS.6.6.7 .b	Describe the effects of force (speed up, slow down or change the direction of motion)
1903: Powered Flight	AR	SCI.6.PS.6.6.9	Conduct investigations to calculate the change in speed caused by applying forces to an object
1904: Improvement in Dayton	AR	SCI.6.PS.6.6.3	Conduct investigations of various forces using SI units (newton)
1904: Improvement in Dayton	AR	SCI.6.PS.6.6.7 .c	Describe the effects of force (change the shape of objects)
<b>Learning to Fly: The Wright Brother's Adventure</b>			
<b>2005 Science</b>			
<b>Curriculum Framework</b>			
<b>Arkansas Science</b>			
<b>Grade 7</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
The Society	AR	SCI.7.NS.1.7.7	Distinguish between questions that can and cannot be answered by science
The Society	AR	SCI.7.PS.6.7.6	Investigate careers, scientists, and historical breakthroughs related to laws of motion
Meet the Wrights	AR	SCI.7.PS.6.7.6	Investigate careers, scientists, and historical breakthroughs related to laws of motion
1901: The First Improvement	AR	SCI.7.NS.1.7.2 .d	Analyze components of experimental design used to produce empirical evidence (appropriate use of control)
<b>Learning to Fly: The Wright Brother's Adventure</b>			
<b>2005 Science</b>			
<b>Curriculum Framework</b>			
<b>Arkansas Science</b>			

<b>Grade 8</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
The Society	AR	SCI.8.NS.1.8.9	Generate questions that can and cannot be answered by science
1901: The First Improvement	AR	SCI.8.NS.1.8.2.d	Evaluate the merits of empirical evidence based on experimental design (appropriate use of control)
1901: The First Improvement	AR	SCI.8.NS.1.8.2.e	Evaluate the merits of empirical evidence based on experimental design (use of standardized independent and dependent variables)
New Data	AR	SCI.8.NS.1.8.3	Formulate a testable problem using experimental design
1904: Improvement in Dayton	AR	SCI.8.NS.1.8.7	Communicate results and conclusions from scientific inquiry following peer review
<b>Learning to Fly: The Wright Brother's Adventure</b>			
<b>2005 Science</b>			
<b>Curriculum Framework</b>			
<b>Arkansas Science</b>			
<b>Grades 9-12 (Physical Science)</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
The Society	AR	SCI.9-12.NS.11.PS.5	Research historical events in physical science
The Society	AR	SCI.9-12.NS.13.PS.5	Describe in detail the methods used by scientists in their research
Meet the Wrights	AR	SCI.9-12.NS.11.PS.5	Research historical events in physical science
Meet the Wrights	AR	SCI.9-12.NS.13.PS.2	Discuss why scientists should work within ethical parameters
Meet the Wrights	AR	SCI.9-12.NS.13.PS.5	Describe in detail the methods used by scientists in their research
1901: The First Improvement	AR	SCI.9-12.NS.10.PS.1	Develop and explain the appropriate procedure, controls, and variables (dependent and independent) in scientific experimentation
1901: The First Improvement	AR	SCI.9-12.P.6.PS.10.a	Calculate force, mass, and acceleration using Newton's second law of motion: $F=ma$
1901: The First Improvement	AR	SCI.9-12.P.6.PS.10.b	Calculate force, mass, and acceleration using Newton's second law of motion: Where $f$ =force, $m$ =mass, $a$ =acceleration
New Data	AR	SCI.9-12.NS.9.PS.4.a	Summarize the guidelines of science (explanations are based on observations, evidence, and testing)

New Data	AR	SCI.9-12.NS.10.PS.1	Develop and explain the appropriate procedure, controls, and variables (dependent and independent) in scientific experimentation
New Data	AR	SCI.9-12.NS.10.PS.3	Identify sources of bias that could affect experimental outcome
New Data	AR	SCI.9-12.NS.10.PS.6	Communicate experimental results using appropriate reports, figures, and tables
1904: Improvement in Dayton	AR	SCI.9-12.NS.10.PS.6	Communicate experimental results using appropriate reports, figures, and tables
1904: Improvement in Dayton	AR	SCI.9-12.NS.12.PS.3	Utilize technology to communicate research findings
1904: Improvement in Dayton	AR	SCI.9-12.P.6.PS.10.a	Calculate force, mass, and acceleration using Newton's second law of motion: $F=ma$
1904: Improvement in Dayton	AR	SCI.9-12.P.6.PS.10.b	Calculate force, mass, and acceleration using Newton's second law of motion: Where $f$ =force, $m$ =mass, $a$ =acceleration
<b>Learning to Fly: The Wright Brother's Adventure</b>			
<b>2005 Science</b>			
<b>Curriculum Framework</b>			
<b>Arkansas Science</b>			
<b>Grades 9-12 (Physics)</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
The Society	AR	SCI.9-12.NS.18.P.2	Research historical and current events in physics
Meet the Wrights	AR	SCI.9-12.NS.18.P.2	Research historical and current events in physics
1900: Kitty Hawks	AR	SCI.9-12.MF.1.P.7	Draw free body diagrams of all forces acting upon an object
1901: The First Improvement	AR	SCI.9-12.MF.1.P.7	Draw free body diagrams of all forces acting upon an object
1901: The First Improvement	AR	SCI.9-12.MF.1.P.8	Calculate the applied forces represented in a free body diagram
1901: The First Improvement	AR	SCI.9-12.MF.1.P.9	Apply Newton's first law of motion to show balanced and unbalanced forces
1901: The First Improvement	AR	SCI.9-12.MF.2.P.4.a	Solve two-dimensional problems using balanced forces ( $W = T \sin \theta$ )
1901: The First Improvement	AR	SCI.9-12.MF.4.P.1.a	Calculate net work done by a constant net force ( $W(\text{net}) = F(\text{net}) d \cos \theta$ )
1901: The First Improvement	AR	SCI.9-12.NS.17.P.1	Develop the appropriate procedures using controls and variables (dependent and independent) in scientific experimentation
New Data	AR	SCI.9-12.NS.16.P.3.a	Summarize the guidelines of science (results are based on observations, evidence, and testing)

New Data	AR	SCI.9-12.NS.17.P.1	Develop the appropriate procedures using controls and variables (dependent and independent) in scientific experimentation
New Data	AR	SCI.9-12.NS.17.P.3	Identify sources of bias that could affect experimental outcome
New Data	AR	SCI.9-12.NS.20.P.2	Give examples of scientific bias that affect outcomes of experimental results
1904: Improvement in Dayton	AR	SCI.9-12.MF.1.P.7	Draw free body diagrams of all forces acting upon an object
1904: Improvement in Dayton	AR	SCI.9-12.MF.1.P.8	Calculate the applied forces represented in a free body diagram