

Learning to Fly: The Wright Brother's Adventure

2006 Science Revised January 2008

State Curriculum

Maryland Science Revised January 2008

Grade 6

Activity/Lesson	State	Standards	
The Society	MD	SCI.6.1.A.1.b	Develop the ability to clarify questions and direct them toward objects and phenomena that can be described, explained, or predicted by scientific investigations.
The Society	MD	SCI.6.1.A.1.f	Give examples of when further studies of the question being investigated may be necessary.
The Society	MD	SCI.6.1.A.1.i	Explain why accurate record-keeping, openness, and replication are essential for maintaining an investigator's credibility with other scientists and society.
The Society	MD	SCI.6.1.B.1.e	Question claims based on vague statements or on statements made by people outside their area of expertise.
The Society	MD	SCI.6.1.C.1.g	Recognize that important contributions to the advancement of science, mathematics, and technology have been made by different kinds of people, in different cultures, at different times.
Meet the Wrights	MD	SCI.6.1.A.1.a	Explain that scientists differ greatly in what phenomena they study and how they go about their work.
Meet the Wrights	MD	SCI.6.1.C.1.g	Recognize that important contributions to the advancement of science, mathematics, and technology have been made by different kinds of people, in different cultures, at different times.
1901: The First Improvement	MD	SCI.6.1.A.1.e	Explain that if more than one variable changes at the same time in an investigation, the outcome of the investigation may not be clearly attributable to any one of the variables.
New Data	MD	SCI.6.1.A.1.g	Give reasons for the importance of waiting until an investigation has been repeated many times before accepting the results as correct.
New Data	MD	SCI.6.1.B.1.b	Explain that what people expect to observe often affects what they actually do observe and that scientists know about this danger to objectivity and take steps to try to avoid it when designing investigations and examining data.
New Data	MD	SCI.6.1.C.1.d.3	Existence of control groups and the relationship to experimental groups is not made obvious.

1902: Success at Last	MD	SCI.6.1.D1.A.c	Realize that design usually requires taking constraints into account. (Some constraints, such as gravity or the properties of the materials to be used, are unavoidable. Other constraints, including economic, political, social, ethical, and aesthetic ones also limit choices.)
1902: Success at Last	MD	SCI.6.1.D1.C.a	Explain that the kind of model to use and how complex it should be depends on its purpose and that it is possible to have different models used to represent the same thing.
1903: Powered Flight	MD	SCI.6.1.C.1.a	Organize and present data in tables and graphs and identify relationships they reveal.
1903: Powered Flight	MD	SCI.6.1.C.1.b	Interpret tables and graphs produced by others and describe in words the relationships they show.
1904: Improvement in Dayton	MD	SCI.6.1.A.1.h	Use mathematics to interpret and communicate data.
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Grade 7			
Activity/Lesson	State	Standards	
The Society	MD	SCI.7.1.A.1.a	Explain that scientists differ greatly in what phenomena they study and how they go about their work.
The Society	MD	SCI.7.1.A.1.b	Develop the ability to clarify questions and direct them toward objects and phenomena that can be described, explained, or predicted by scientific investigations.
The Society	MD	SCI.7.1.A.1.f	Give examples of when further studies of the question being investigated may be necessary.
The Society	MD	SCI.7.1.A.1.i	Explain why accurate record-keeping, openness, and replication are essential for maintaining an investigator's credibility with other scientists and society.
The Society	MD	SCI.7.1.B.1.e	Question claims based on vague statements or on statements made by people outside their area of expertise.
The Society	MD	SCI.7.1.C.1.g	Recognize that important contributions to the advancement of science, mathematics, and technology have been made by different kinds of people, in different cultures, at different times.
Meet the Wrights	MD	SCI.7.1.A.1.a	Explain that scientists differ greatly in what phenomena they study and how they go about their work.

Meet the Wrights	MD	SCI.7.1.C.1.g	Recognize that important contributions to the advancement of science, mathematics, and technology have been made by different kinds of people, in different cultures, at different times.
1900: Kitty Hawks	MD	SCI.7.1.D1.A.c	Realize that design usually requires taking constraints into account. (Some constraints, such as gravity or the properties of the materials to be used, are unavoidable. Other constraints, including economic, political, social, ethical, and aesthetic ones also limit choices.)
1901: The First Improvement	MD	SCI.7.1.A.1.e	Explain that if more than one variable changes at the same time in an investigation, the outcome of the investigation may not be clearly attributable to any one of the variables.
New Data	MD	SCI.7.1.A.1.g	Give reasons for the importance of waiting until an investigation has been repeated many times before accepting the results as correct.
New Data	MD	SCI.7.1.B.1.b	Explain that what people expect to observe often affects what they actually do observe and that scientists know about this danger to objectivity and take steps to try to avoid it when designing investigations and examining data.
New Data	MD	SCI.7.1.C.1.d.3	Existence of control groups and the relationship to experimental groups is not made obvious.
1902: Success at Last	MD	SCI.7.1.D1.A.c	Realize that design usually requires taking constraints into account. (Some constraints, such as gravity or the properties of the materials to be used, are unavoidable. Other constraints, including economic, political, social, ethical, and aesthetic ones also limit choices.)
1902: Success at Last	MD	SCI.7.1.D1.C.a	Explain that the kind of model to use and how complex it should be depends on its purpose and that it is possible to have different models used to represent the same thing.
1902: Success at Last	MD	SCI.7.1.D1.C.c	Explain that models may sometimes mislead by suggesting characteristics that are not really shared with what is being modeled.
1903: Powered Flight	MD	SCI.7.1.C.1.a	Organize and present data in tables and graphs and identify relationships they reveal.
1903: Powered Flight	MD	SCI.7.1.C.1.b	Interpret tables and graphs produced by others and describe in words the relationships they show.

1903: Powered Flight	MD	SCI.7.1.D1.A.c	Realize that design usually requires taking constraints into account. (Some constraints, such as gravity or the properties of the materials to be used, are unavoidable. Other constraints, including economic, political, social, ethical, and aesthetic ones also limit choices.)
1904: Improvement in Dayton	MD	SCI.7.1.A.1.h	Use mathematics to interpret and communicate data.
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Grade 8			
Activity/Lesson	State	Standards	
The Society	MD	SCI.8.1.A.1.a	Explain that scientists differ greatly in what phenomena they study and how they go about their work.
The Society	MD	SCI.8.1.A.1.b	Develop the ability to clarify questions and direct them toward objects and phenomena that can be described, explained, or predicted by scientific investigations.
The Society	MD	SCI.8.1.A.1.f	Give examples of when further studies of the question being investigated may be necessary.
The Society	MD	SCI.8.1.A.1.i	Explain why accurate record-keeping, openness, and replication are essential for maintaining an investigator's credibility with other scientists and society.
The Society	MD	SCI.8.1.B.1.e	Question claims based on vague statements or on statements made by people outside their area of expertise.
The Society	MD	SCI.8.1.C.1.g	Recognize that important contributions to the advancement of science, mathematics, and technology have been made by different kinds of people, in different cultures, at different times.
Meet the Wrights	MD	SCI.8.1.A.1.a	Explain that scientists differ greatly in what phenomena they study and how they go about their work.
Meet the Wrights	MD	SCI.8.1.A.1.i	Explain why accurate record-keeping, openness, and replication are essential for maintaining an investigator's credibility with other scientists and society.
Meet the Wrights	MD	SCI.8.1.C.1.g	Recognize that important contributions to the advancement of science, mathematics, and technology have been made by different kinds of people, in different cultures, at different times.

1900: Kitty Hawks	MD	SCI.8.1.D1.A.c	Realize that design usually requires taking constraints into account. (Some constraints, such as gravity or the properties of the materials to be used, are unavoidable. Other constraints, including economic, political, social, ethical, and aesthetic ones also limit choices.)
1901: The First Improvement	MD	SCI.8.1.A.1.e	Explain that if more than one variable changes at the same time in an investigation, the outcome of the investigation may not be clearly attributable to any one of the variables.
1901: The First Improvement	MD	SCI.8.1.D1.C.c	Explain that models may sometimes mislead by suggesting characteristics that are not really shared with what is being modeled.
1901: The First Improvement	MD	SCI.8.5.A.2.a	Investigate and explain the interaction of force and motion that causes objects that are at rest to move.
1901: The First Improvement	MD	SCI.8.5.A.2.b	Demonstrate and explain, through a variety of examples, that moving objects will stay in motion at the same speed and in the same direction unless acted on by an unbalanced force.
New Data	MD	SCI.8.1.A.1.g	Give reasons for the importance of waiting until an investigation has been repeated many times before accepting the results as correct.
New Data	MD	SCI.8.1.B.1.b	Explain that what people expect to observe often affects what they actually do observe and that scientists know about this danger to objectivity and take steps to try to avoid it when designing investigations and examining data.
New Data	MD	SCI.8.1.C.1.d.3	Existence of control groups and the relationship to experimental groups is not made obvious.
1902: Success at Last	MD	SCI.8.1.D1.C.a	Explain that the kind of model to use and how complex it should be depends on its purpose and that it is possible to have different models used to represent the same thing.
1902: Success at Last	MD	SCI.8.1.D1.C.c	Explain that models may sometimes mislead by suggesting characteristics that are not really shared with what is being modeled.
1903: Powered Flight	MD	SCI.8.1.C.1.b	Interpret tables and graphs produced by others and describe in words the relationships they show.

1903: Powered Flight	MD	SCI.8.1.D1.C.c	Explain that models may sometimes mislead by suggesting characteristics that are not really shared with what is being modeled.
1903: Powered Flight	MD	SCI.8.5.A.1.a	Observe, describe, and compare the motions of objects using position, speed, velocity, and the direction.
1903: Powered Flight	MD	SCI.8.5.A.2.b	Demonstrate and explain, through a variety of examples, that moving objects will stay in motion at the same speed and in the same direction unless acted on by an unbalanced force.
1904: Improvement in Dayton	MD	SCI.8.5.A.2.a	Investigate and explain the interaction of force and motion that causes objects that are at rest to move.