

Aeronautics Educator Guide			
2006 Science			
Grade Level Expectations			
Delaware Science			
Grade 2			
Activity/Lesson	State	Standards	
Air Engines (12-16)	DE	SCI.2.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Air Engines (12-16)	DE	SCI.2.1.1.9	Identify that objects that move have energy because of their motion. Demonstrate that a hanging mobile has energy because of its motion and the mobile was given this energy by the push of moving air.
Air Engines (12-16)	DE	SCI.2.3.1.1	Identify that objects that move have energy because of their motion. Demonstrate that a hanging mobile has energy because of its motion and the mobile was given this energy by the push of moving air.
Rotor Motor (69-75)	DE	SCI.2.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Rotor Motor (69-75)	DE	SCI.2.1.1.3	Collect data using observations, simple tools and equipment. Record data in tables, charts, and bar graphs. Compare data with others to examine and question results.
Rotor Motor (69-75)	DE	SCI.2.1.1.6	Use mathematics, reading, writing, and technology when conducting an investigation and communicating the results.
Rotor Motor (69-75)	DE	SCI.2.1.1.9	Identify that objects that move have energy because of their motion. Demonstrate that a hanging mobile has energy because of its motion and the mobile was given this energy by the push of moving air.
Rotor Motor (69-75)	DE	SCI.2.3.1.1	Identify that objects that move have energy because of their motion. Demonstrate that a hanging mobile has energy because of its motion and the mobile was given this energy by the push of moving air.
Flight: Interdisciplinary Learning Activities (76-79)	DE	SCI.2.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Flight: Interdisciplinary Learning Activities (76-79)	DE	SCI.2.1.1.4	Construct a simple explanation by analyzing observational data. Revise the explanation when given new evidence or information gained from other resources or from further investigation.
Flight: Interdisciplinary Learning Activities (76-79)	DE	SCI.2.1.1.6	Use mathematics, reading, writing, and technology when conducting an investigation and communicating the results.

Flight: Interdisciplinary Learning Activities (76-79)	DE	SCI.2.3.1.1	Identify that objects that move have energy because of their motion. Demonstrate that a hanging mobile has energy because of its motion and the mobile was given this energy by the push of moving air.
Making Time Fly (80-86)	DE	SCI.2.1.1.5	Share simple plans, data, and explanations with an audience and justify the results using the evidence from the investigation.
Making Time Fly (80-86)	DE	SCI.2.1.1.6	Use mathematics, reading, writing, and technology when conducting an investigation and communicating the results.
Where is North? The Compass Can Tell Us (87-90)	DE	SCI.2.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Where is North? The Compass Can Tell Us (87-90)	DE	SCI.2.1.1.3	Collect data using observations, simple tools and equipment. Record data in tables, charts, and bar graphs. Compare data with others to examine and question results.
Where is North? The Compass Can Tell Us (87-90)	DE	SCI.2.1.1.6	Use mathematics, reading, writing, and technology when conducting an investigation and communicating the results.
Dunked Napkin (17-22)	DE	SCI.2.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Dunked Napkin (17-22)	DE	SCI.2.1.1.5	Share simple plans, data, and explanations with an audience and justify the results using the evidence from the investigation.
Dunked Napkin (17-22)	DE	SCI.2.1.1.6	Use mathematics, reading, writing, and technology when conducting an investigation and communicating the results.
Paper Bag Mask (23-28)	DE	SCI.2.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Wind in Your Socks) (29-35)	DE	SCI.2.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Wind in Your Socks) (29-35)	DE	SCI.2.1.1.5	Share simple plans, data, and explanations with an audience and justify the results using the evidence from the investigation.
Wind in Your Socks) (29-35)	DE	SCI.2.1.1.9	Identify that objects that move have energy because of their motion. Demonstrate that a hanging mobile has energy because of its motion and the mobile was given this energy by the push of moving air.
Wind in Your Socks) (29-35)	DE	SCI.2.3.1.1	Identify that objects that move have energy because of their motion. Demonstrate that a hanging mobile has energy because of its motion and the mobile was given this energy by the push of moving air.

Air: Interdisciplinary Learning Activities (36-39)	DE	SCI.2.3.1.1	Identify that objects that move have energy because of their motion. Demonstrate that a hanging mobile has energy because of its motion and the mobile was given this energy by the push of moving air.
Bag Balloons (40-43)	DE	SCI.2.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Sled Kite (44-51)	DE	SCI.2.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Right Flight (52-59)	DE	SCI.2.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Right Flight (52-59)	DE	SCI.2.2.1.2	Predict the serial order for the weights of a variety of objects and test these predictions by weighing the objects.
Delta Wing Glider (60-68)	DE	SCI.2.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Delta Wing Glider (60-68)	DE	SCI.2.2.1.2	Predict the serial order for the weights of a variety of objects and test these predictions by weighing the objects.

Aeronautics Educator Guide

2006 Science

Grade Level Expectations

Delaware Science			
Grade 3			
Activity/Lesson	State	Standards	
Air Engines (12-16)	DE	SCI.3.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Rotor Motor (69-75)	DE	SCI.3.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Rotor Motor (69-75)	DE	SCI.3.1.1.6	Use mathematics, reading, writing, and technology when conducting an investigation and communicating the results.
Flight: Interdisciplinary Learning Activities (76-79)	DE	SCI.3.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Flight: Interdisciplinary Learning Activities (76-79)	DE	SCI.3.1.1.4	Construct a simple explanation by analyzing observational data. Revise the explanation when given new evidence or information gained from other resources or from further investigation.
Flight: Interdisciplinary Learning Activities (76-79)	DE	SCI.3.1.1.6	Use mathematics, reading, writing, and technology when conducting an investigation and communicating the results.

Making Time Fly (80-86)	DE	SCI.3.1.1.5	Share simple plans, data, and explanations with an audience and justify the results using the evidence from the investigation.
Making Time Fly (80-86)	DE	SCI.3.1.1.6	Use mathematics, reading, writing, and technology when conducting an investigation and communicating the results.
Where is North? The Compass Can Tell Us (87-90)	DE	SCI.3.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Where is North? The Compass Can Tell Us (87-90)	DE	SCI.3.1.1.6	Use mathematics, reading, writing, and technology when conducting an investigation and communicating the results.
Dunked Napkin (17-22)	DE	SCI.3.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Dunked Napkin (17-22)	DE	SCI.3.1.1.4	Construct a simple explanation by analyzing observational data. Revise the explanation when given new evidence or information gained from other resources or from further investigation.
Dunked Napkin (17-22)	DE	SCI.3.1.1.5	Share simple plans, data, and explanations with an audience and justify the results using the evidence from the investigation.
Dunked Napkin (17-22)	DE	SCI.3.1.1.6	Use mathematics, reading, writing, and technology when conducting an investigation and communicating the results.
Dunked Napkin (17-22)	DE	SCI.3.1.1.9	Investigate and describe what happens when an object at a higher temperature is placed in direct contact with an object at a lower temperature. Record data and use the data to describe which way the heat energy is moving between the objects.
Dunked Napkin (17-22)	DE	SCI.3.2.1.2	Observe and describe changes in the properties of water as it changes from solid to liquid to gas.
Paper Bag Mask (23-28)	DE	SCI.3.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Wind in Your Socks) (29-35)	DE	SCI.3.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Wind in Your Socks) (29-35)	DE	SCI.3.1.1.5	Share simple plans, data, and explanations with an audience and justify the results using the evidence from the investigation.
Air: Interdisciplinary Learning Activities (36-39)	DE	SCI.3.3.4.1	Investigate and describe how moving water and air can be used to make objects and machines, such as a waterwheel and windmill, move.
Bag Balloons (40-43)	DE	SCI.3.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Sled Kite (44-51)	DE	SCI.3.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.

Right Flight (52-59)	DE	SCI.3.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Delta Wing Glider (60-68)	DE	SCI.3.1.1.2	Generate and follow simple plans using systematic observations to explore questions and predictions.
Aeronautics Educator Guide			
2006 Science			
Grade Level Expectations			
Delaware Science			
Grade 4			
Activity/Lesson	State	Standards	
Air Engines (12-16)	DE	SCI.4.1.1.3	Accurately collect data using observations, simple tools and equipment. Display and organize data in tables, charts, diagrams, and bar graphs or plots over time. Compare and question results with and from others.
Air Engines (12-16)	DE	SCI.4.1.2.2	Using newspapers, the internet, and actual sky observations when possible, chart the appearance of the Moon in the night sky over the course of at least two months. Identify the basic pattern of the Moon's appearance. Classify the Moon's appearance by using the terms new, first quarter, full, last (third) quarter.
Air Engines (12-16)	DE	SCI.4.3.1.1	Identify, as basic forms of energy; light, heat, sound, electrical, and energy of motion.
Rotor Motor (69-75)	DE	SCI.4.1.1.2	Design and conduct simple to multi-step investigations in order to test predictions. Keep constant all but the condition being tested.
Rotor Motor (69-75)	DE	SCI.4.1.1.3	Accurately collect data using observations, simple tools and equipment. Display and organize data in tables, charts, diagrams, and bar graphs or plots over time. Compare and question results with and from others.
Rotor Motor (69-75)	DE	SCI.4.1.1.6	Use mathematics, reading, writing, and technology when conducting scientific inquiries.
Flight: Interdisciplinary Learning Activities (76-79)	DE	SCI.4.1.1.2	Design and conduct simple to multi-step investigations in order to test predictions. Keep constant all but the condition being tested.
Flight: Interdisciplinary Learning Activities (76-79)	DE	SCI.4.1.1.6	Use mathematics, reading, writing, and technology when conducting scientific inquiries.
Flight: Interdisciplinary Learning Activities (76-79)	DE	SCI.4.1.1.27	Keep daily records of weather conditions (wind speed and direction, type and amount of precipitation, cloud cover and type, temperature) and use these records to identify short term and seasonal patterns in Delaware.

Flight: Interdisciplinary Learning Activities (76-79)	DE	SCI.4.1.1.29	Select and use a variety of appropriate instruments (i.e., graduated cylinders, stream tables, hand lens, ruler, balances) for collecting, recording, and analyzing data obtained from stream table investigations. Communicate the results of stream table investigations through record sheets, oral and written observations, and drawings.
Making Time Fly (80-86)	DE	SCI.4.1.1.5	Communicate procedures, data, and explanations to a variety of audiences. Justify the results by using evidence to form an argument.
Making Time Fly (80-86)	DE	SCI.4.1.1.29	Select and use a variety of appropriate instruments (i.e., graduated cylinders, stream tables, hand lens, ruler, balances) for collecting, recording, and analyzing data obtained from stream table investigations. Communicate the results of stream table investigations through record sheets, oral and written observations, and drawings.
Making Time Fly (80-86)	DE	SCI.4.1.2.1	Using books, computers, and other resources, search for ways that people use natural resources to supply energy needs for lighting, heating, and electricity. Report your results by making a poster, written report or oral presentation.
Making Time Fly (80-86)	DE	SCI.4.3.4.2	Using books, computers, and other resources, search for ways that people use natural resources to supply energy needs for lighting, heating, and electricity. Report your results by making a poster, written report or oral presentation.
Making Time Fly (80-86)	DE	SCI.4.5'.3.2	Select and use a variety of appropriate instruments (i.e., graduated cylinders, stream tables, hand lens, ruler, balances) for collecting, recording, and analyzing data obtained from stream table investigations. Communicate the results of stream table investigations through record sheets, oral and written observations, and drawings.
Where is North? The Compass Can Tell Us (87-90)	DE	SCI.4.1.1.2	Design and conduct simple to multi-step investigations in order to test predictions. Keep constant all but the condition being tested.
Where is North? The Compass Can Tell Us (87-90)	DE	SCI.4.1.1.3	Accurately collect data using observations, simple tools and equipment. Display and organize data in tables, charts, diagrams, and bar graphs or plots over time. Compare and question results with and from others.
Where is North? The Compass Can Tell Us (87-90)	DE	SCI.4.1.1.6	Use mathematics, reading, writing, and technology when conducting scientific inquiries.

Where is North? The Compass Can Tell Us (87-90)	DE	SCI.4.3.2.7	Recognize magnetism as a force that attracts or repels a variety of common materials and identify the physical property of materials that makes them attracted to magnets.
We Can Fly, You and I: Interdisciplinary Learning (107-108)	DE	SCI.4.1.1.26	Use stream tables to model the effect of human activity on erosion and deposition. Describe how human activity (i.e., building a dam, clear cutting a forest, bulldozing a roadway) affects the amount of erosion and deposition and changes the environment.
We Can Fly, You and I: Interdisciplinary Learning (107-108)	DE	SCI.4.1.1.29	Select and use a variety of appropriate instruments (i.e., graduated cylinders, stream tables, hand lens, ruler, balances) for collecting, recording, and analyzing data obtained from stream table investigations. Communicate the results of stream table investigations through record sheets, oral and written observations, and drawings.
We Can Fly, You and I: Interdisciplinary Learning (107-108)	DE	SCI.4.5'.2.5	Use stream tables to model the effect of human activity on erosion and deposition. Describe how human activity (i.e., building a dam, clear cutting a forest, bulldozing a roadway) affects the amount of erosion and deposition and changes the environment.
Dunked Napkin (17-22)	DE	SCI.4.1.1.2	Design and conduct simple to multi-step investigations in order to test predictions. Keep constant all but the condition being tested.
Dunked Napkin (17-22)	DE	SCI.4.1.1.3	Accurately collect data using observations, simple tools and equipment. Display and organize data in tables, charts, diagrams, and bar graphs or plots over time. Compare and question results with and from others.
Dunked Napkin (17-22)	DE	SCI.4.1.1.6	Use mathematics, reading, writing, and technology when conducting scientific inquiries.
Dunked Napkin (17-22)	DE	SCI.4.1.1.29	Select and use a variety of appropriate instruments (i.e., graduated cylinders, stream tables, hand lens, ruler, balances) for collecting, recording, and analyzing data obtained from stream table investigations. Communicate the results of stream table investigations through record sheets, oral and written observations, and drawings.
Paper Bag Mask (23-28)	DE	SCI.4.1.1.2	Design and conduct simple to multi-step investigations in order to test predictions. Keep constant all but the condition being tested.
Paper Bag Mask (23-28)	DE	SCI.4.1.1.3	Accurately collect data using observations, simple tools and equipment. Display and organize data in tables, charts, diagrams, and bar graphs or plots over time. Compare and question results with and from others.

Wind in Your Socks) (29-35)	DE	SCI.4.1.1.3	Accurately collect data using observations, simple tools and equipment. Display and organize data in tables, charts, diagrams, and bar graphs or plots over time. Compare and question results with and from others.
Wind in Your Socks) (29-35)	DE	SCI.4.1.1.27	Keep daily records of weather conditions (wind speed and direction, type and amount of precipitation, cloud cover and type, temperature) and use these records to identify short term and seasonal patterns in Delaware.
Wind in Your Socks) (29-35)	DE	SCI.4.1.1.29	Select and use a variety of appropriate instruments (i.e., graduated cylinders, stream tables, hand lens, ruler, balances) for collecting, recording, and analyzing data obtained from stream table investigations. Communicate the results of stream table investigations through record sheets, oral and written observations, and drawings.
Wind in Your Socks) (29-35)	DE	SCI.4.1.2.2	Using newspapers, the internet, and actual sky observations when possible, chart the appearance of the Moon in the night sky over the course of at least two months. Identify the basic pattern of the Moon's appearance. Classify the Moon's appearance by using the terms new, first quarter, full, last (third) quarter.
Wind in Your Socks) (29-35)	DE	SCI.4.5'.3.2	Select and use a variety of appropriate instruments (i.e., graduated cylinders, stream tables, hand lens, ruler, balances) for collecting, recording, and analyzing data obtained from stream table investigations. Communicate the results of stream table investigations through record sheets, oral and written observations, and drawings.
Air: Interdisciplinary Learning Activities (36-39)	DE	SCI.4.1.1.27	Keep daily records of weather conditions (wind speed and direction, type and amount of precipitation, cloud cover and type, temperature) and use these records to identify short term and seasonal patterns in Delaware.
Sled Kite (44-51)	DE	SCI.4.1.1.3	Accurately collect data using observations, simple tools and equipment. Display and organize data in tables, charts, diagrams, and bar graphs or plots over time. Compare and question results with and from others.
Sled Kite (44-51)	DE	SCI.4.1.1.29	Select and use a variety of appropriate instruments (i.e., graduated cylinders, stream tables, hand lens, ruler, balances) for collecting, recording, and analyzing data obtained from stream table investigations. Communicate the results of stream table investigations through record sheets, oral and written observations, and drawings.

Right Flight (52-59)	DE	SCI.4.1.1.2	Design and conduct simple to multi-step investigations in order to test predictions. Keep constant all but the condition being tested.
Right Flight (52-59)	DE	SCI.4.1.1.3	Accurately collect data using observations, simple tools and equipment. Display and organize data in tables, charts, diagrams, and bar graphs or plots over time. Compare and question results with and from others.
Delta Wing Glider (60-68)	DE	SCI.4.1.1.2	Design and conduct simple to multi-step investigations in order to test predictions. Keep constant all but the condition being tested.