

Aviation Curriculum	Science Content Standards	Performance Indicators **	Performance Measures
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Nature and Application of Science and Technology

"Air Fair" "Up, Up, and Away" Compare/ Contrast "Dunked Napkin"	Science as Inquiry	K.301, K.303, K.304 1.322	Observations in journal, Sorting pictures into collages accurately Conduct experiment/State conclusion
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Intro with model planes	Science, Technology, and Society	K.307	Parts of an airplane/cockpit test
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Make paper airplanes Experience Hartel trainers/simulator Trip to Dover Air Base Guest speakers, Careers in aviation overview	History and Context of Science	3.304	Written report
		*None specified, described in standard	Written report or drawn pictures
		*None specified, described in standard	Oral report or pictures

Materials and Their Properties

History of Flight overview, Books and videos "The Wright Brothers as Scientists"	Material Technology	*None specified, described in standard	Literature, Video reaction, Journal entries
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Energy and Its Effects

All of the following: "Fun with Force" (thrust) "Losing Your Marbles (gravity)" "It's a Drag" (drag) "Lift Off" (lift) "Balloon Jet", "Plane Obstacles" "Paper Copter" making parachutes Thiokol rocket blasts "Gravity Fighter"	Forms/Sources of Energy	2.325, 2.326, 2.327	All of the following: Successful completion of activities Observation entries in journal Class discussion Venn diagrams
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see attached chart

*** Performance Indicators are K-3 as per Aviation Program*

PERFORMANCE INDICATORS

K.301 Observe and describe the properties of a variety of living and non-living things using the 5 senses

K.303 Use the physical properties of living and non-living things to describe their similarities and differences

K.304 Sort, group, and regroup a variety of living & non-living things based on their physical properties

1.322 Use writing, drawing, and discussion to communicate observations, descriptions, investigations, and experiences concerning solids and liquids

K.307 Demonstrate, through a variety of ways, development of appropriate vocabulary used to describe living and non-living things

3.304 Identify and explain how the contributions and inventions of Delaware scientists and businesses have contributed to the success of the Nation's space program

2.325 Demonstrate how pushes and pulls (forces) can change the position, motion, or direction of an object. Explain that the greater the force, the greater the change.

2.326 Recognize that objects can exhibit different kinds of motion such as fast, slow, circular, and zigzag. Identify how living and non-living things move or can be made to move.

2.327 Recognize that some forces can make objects move without touching them.

- **From History and Context of Science:** People from all parts of the world have practiced science and have made many important contributions. Many men and women have chosen science as a career and a lifetime activity because of their intense interest in better understanding nature and the great joy this pursuit brings them.
- **From Materials and Their Properties:** The properties of a material or an object influence how the material or object is used. Some materials are more suitable than others for making a particular product or device. Technology has created and introduced new materials to help people solve problems. In some cases a new material may solve one problem, but create another.

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Classroom Applications of Aviation Education

-Use Aviation as framework for introducing science process skills

- Observing
- Classifying
- Ordering
- Measuring
- Collecting & recording data
- Hypothesizing & experimenting
- Inferring & predicting
- Constructing and interpreting simple models

Introducing Aviation Activities: Examples

-Create an awareness of things that fly

- Collect pictures in individual or class folder
- Sort into living vs. non-living
- Compare shapes & sizes

-Identify attributes of things that fly

- Observe in flight: ie. birds & planes, body, flat tail, wings
- Discuss likenesses & differences, etc. birds: wings that flap
planes, engines & fixed wings (people tried to copy birds)
- Observe fish: how they use dorsal fin, same as rudder on plane

-Study different types of airplanes

- Single engine to multi-engine military aircraft
Airport /Base visit

-Design & experiment with paper airplanes/models