

The Wright Brothers' Adventure, Learning to Fly

National Standards

Grades 6 - 8 Mathematics

Source: NCTM National Standards Mathematics 2000

Lesson/Activity	Grades 6 - 8 Mathematics Standards
The Society	select and apply techniques and tools to accurately find length, area, volume, and angle measures to appropriate levels of precision;
Meet the Wrights	select and apply techniques and tools to accurately find length, area, volume, and angle measures to appropriate levels of precision;
1900: Kitty Hawks	use two-dimensional representations of three-dimensional objects to visualize and solve problems such as those involving surface area and volume;
1900: Kitty Hawks	understand, select, and use units of appropriate size and type to measure angles, perimeter, area, surface area, and volume.
1900: Kitty Hawks	develop strategies to determine the surface area and volume of selected prisms, pyramids, and cylinders;
New Data	select appropriate methods and tools for computing with fractions and decimals from among mental computation, estimation, calculators or computers, and paper and pencil, depending on the situation, and apply the selected methods;
1902: Success at Last	work flexibly with fractions, decimals, and percents to solve problems;
1902: Success at Last	develop meaning for percents greater than 100 and less than 1;
1903: Powered Flight	select appropriate methods and tools for computing with fractions and decimals from among mental computation, estimation, calculators or computers, and paper and pencil, depending on the situation, and apply the selected methods;
1903: Powered Flight	represent, analyze, and generalize a variety of patterns with tables, graphs, words, and, when possible, symbolic rules;
1903: Powered Flight	model and solve contextualized problems using various representations, such as graphs, tables, and equations.
1903: Powered Flight	use common benchmarks to select appropriate methods for estimating measurements;
1903: Powered Flight	solve simple problems involving rates and derived measurements for such attributes as velocity and density.
1903: Powered Flight	find, use, and interpret measures of center and spread, including mean and interquartile range;
Wright Brothers: 1901 Glider	compare and order fractions, decimals, and percents efficiently and find their approximate locations on a number line;
Wright Brothers: 1902 Glider	select and apply techniques and tools to accurately find length, area, volume, and angle measures to appropriate levels of precision;

National Standards

Grades 9 - 12 Mathematics

Source: NCTM National Standards Mathematics 2000

Lesson/Activity	Grades 9 - 12 Mathematics Standards
1900: Kitty Hawks	visualize three-dimensional objects and spaces from different perspectives and analyze their cross sections;
1900: Kitty Hawks	understand and use formulas for the area, surface area, and volume of geometric figures, including cones, spheres, and cylinders;
1903: Powered Flight	recognize how linear transformations of univariate data affect shape, center & spread;