

Aeronautics Educator Guide			
2005 Mathematics			
Learning Standards			
District of Columbia Mathematics			
Grade 2			
Activity/Lesson	State	Standards	
Air Engines (12-16)	DC	MA.2.M.1	Measure and compare the length of common objects using metric and U.S. customary units to the nearest centimeter or inch.
Air Engines (12-16)	DC	MA.2.M.3	Select and correctly use the appropriate measurement tool (ruler, balance scale, thermometer).
Air Engines (12-16)	DC	MA.2.DASP.1	Use interviews, surveys, and observations to gather data about themselves and their surroundings.
Rotor Motor (69-75)	DC	MA.2.DASP.2	Organize, classify, and represent data using tallies, charts, tables, bar graphs, pictographs, and Venn diagrams; interpret the representations.
Flight: Interdisciplinary Learning Activities (76-79)	DC	MA.2.NSO-N.1	Count, read, and write whole numbers to 1,000 and relate them to the quantities they represent.
Flight: Interdisciplinary Learning Activities (76-79)	DC	MA.2.PRA.3	Skip count forward and backward by twos, fives, and tens up to at least 100, starting at any number.
Flight: Interdisciplinary Learning Activities (76-79)	DC	MA.2.DASP.2	Organize, classify, and represent data using tallies, charts, tables, bar graphs, pictographs, and Venn diagrams; interpret the representations.
Making Time Fly (80-86)	DC	MA.2.NSO-C.12	Find the distance between numbers on the number line (e.g., how far is 76 from 24).
Where is North? The Compass Can Tell Us (87-90)	DC	MA.2.G.4	Identify shapes under rotation (turns), reflections (flips), translation (slides), and enlargement. Describe direction of translations (e.g., left, right, up, down).
Let's Build a Table Top Airport (91-96)	DC	MA.2.G.6	Relate geometric ideas to numbers (e.g., seeing rows in an array as a model of repeated addition).
Dunked Napkin (17-22)	DC	MA.2.DASP.1	Use interviews, surveys, and observations to gather data about themselves and their surroundings.
Dunked Napkin (17-22)	DC	MA.2.DASP.2	Organize, classify, and represent data using tallies, charts, tables, bar graphs, pictographs, and Venn diagrams; interpret the representations.
Dunked Napkin (17-22)	DC	MA.2.DASP.3	Formulate inferences (draw conclusions) and make educated guesses (conjectures) about a situation based on information gained from data.

Paper Bag Mask (23-28)	DC	MA.2.G.1	Identify, describe, draw, and compare two-dimensional shapes, including both polygonal (up to six sides) and curved figures such as circles.
Paper Bag Mask (23-28)	DC	MA.2.G.5	Predict and explain the results of putting two-dimensional shapes together and taking them apart (e.g., two congruent right triangular shapes form a rectangle).
Paper Bag Mask (23-28)	DC	MA.2.M.1	Measure and compare the length of common objects using metric and U.S. customary units to the nearest centimeter or inch.
Paper Bag Mask (23-28)	DC	MA.2.M.3	Select and correctly use the appropriate measurement tool (ruler, balance scale, thermometer).
Paper Bag Mask (23-28)	DC	MA.2.DASP.3	Formulate inferences (draw conclusions) and make educated guesses (conjectures) about a situation based on information gained from data.
Wind in Your Socks) (29-35)	DC	MA.2.M.1	Measure and compare the length of common objects using metric and U.S. customary units to the nearest centimeter or inch.
Wind in Your Socks) (29-35)	DC	MA.2.M.3	Select and correctly use the appropriate measurement tool (ruler, balance scale, thermometer).
Wind in Your Socks) (29-35)	DC	MA.2.DASP.1	Use interviews, surveys, and observations to gather data about themselves and their surroundings.
Wind in Your Socks) (29-35)	DC	MA.2.DASP.2	Organize, classify, and represent data using tallies, charts, tables, bar graphs, pictographs, and Venn diagrams; interpret the representations.
Right Flight (52-59)	DC	MA.2.DASP.3	Formulate inferences (draw conclusions) and make educated guesses (conjectures) about a situation based on information gained from data.
Delta Wing Glider (60-68)	DC	MA.2.DASP.3	Formulate inferences (draw conclusions) and make educated guesses (conjectures) about a situation based on information gained from data.
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Grade 3			
Activity/Lesson	State	Standards	
Air Engines (12-16)	DC	MA.3.M.1	Demonstrate an understanding of such attributes as length, area, and weight; select the appropriate type of unit for measuring each attribute using both the U.S. customary and metric systems.
Air Engines (12-16)	DC	MA.3.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments.

Rotor Motor (69-75)	DC	MA.3.DASP.2	Construct, identify the main idea, and make predictions from various representations of data sets in the forms of tables, bar graphs (horizontal and vertical forms), pictographs, and tallies.
Flight: Interdisciplinary Learning Activities (76-79)	DC	MA.3.M.3	Identify time to the nearest 5 minutes on analog and digital clocks using a.m. and p.m. Compute elapsed time using a clock (e.g., hours and minutes since ...) and using a calendar (e.g., days since ...).
Flight: Interdisciplinary Learning Activities (76-79)	DC	MA.3.DASP.2	Construct, identify the main idea, and make predictions from various representations of data sets in the forms of tables, bar graphs (horizontal and vertical forms), pictographs, and tallies.
Making Time Fly (80-86)	DC	MA.3.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments.
Let's Build a Table Top Airport (91-96)	DC	MA.3.G.2	Describe, model, draw, compare, and classify three-dimensional and two-dimensional shapes, especially circles and polygons (e.g., triangles and quadrilaterals).
Plan to Fly There (97-106)	DC	MA.3.M.3	Identify time to the nearest 5 minutes on analog and digital clocks using a.m. and p.m. Compute elapsed time using a clock (e.g., hours and minutes since ...) and using a calendar (e.g., days since ...).
We Can Fly, You and I: Interdisciplinary Learning (107-108)	DC	MA.3.M.3	Identify time to the nearest 5 minutes on analog and digital clocks using a.m. and p.m. Compute elapsed time using a clock (e.g., hours and minutes since ...) and using a calendar (e.g., days since ...).
Dunked Napkin (17-22)	DC	MA.3.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments.
Dunked Napkin (17-22)	DC	MA.3.DASP.2	Construct, identify the main idea, and make predictions from various representations of data sets in the forms of tables, bar graphs (horizontal and vertical forms), pictographs, and tallies.
Paper Bag Mask (23-28)	DC	MA.3.G.2	Describe, model, draw, compare, and classify three-dimensional and two-dimensional shapes, especially circles and polygons (e.g., triangles and quadrilaterals).
Paper Bag Mask (23-28)	DC	MA.3.G.4	Identify and draw lines that are parallel, perpendicular, and intersecting.
Paper Bag Mask (23-28)	DC	MA.3.G.5	Identify and draw lines of symmetry in two-dimensional shapes.
Paper Bag Mask (23-28)	DC	MA.3.M.1	Demonstrate an understanding of such attributes as length, area, and weight; select the appropriate type of unit for measuring each attribute using both the U.S. customary and metric systems.
Paper Bag Mask (23-28)	DC	MA.3.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments.

Paper Bag Mask (23-28)	DC	MA.3.DASP.2	Construct, identify the main idea, and make predictions from various representations of data sets in the forms of tables, bar graphs (horizontal and vertical forms), pictographs, and tallies.
Wind in Your Socks) (29-35)	DC	MA.3.NSO-F.6	Recognize, name, and use equivalent fractions with denominators 2, 3, 4, and 8; place these fractions on the number line; compare and order them and relate the number line to a ruler (e.g., $1/2 = 2/4 = 4/8$).
Wind in Your Socks) (29-35)	DC	MA.3.PRA.4	Know and express the relationships among linear units of measure, i.e., unit conversions (e.g., 3 feet = 1 yard; 12 inches = 1 foot).
Wind in Your Socks) (29-35)	DC	MA.3.M.1	Demonstrate an understanding of such attributes as length, area, and weight; select the appropriate type of unit for measuring each attribute using both the U.S. customary and metric systems.
Wind in Your Socks) (29-35)	DC	MA.3.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments.
Right Flight (52-59)	DC	MA.3.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments.
Right Flight (52-59)	DC	MA.3.DASP.2	Construct, identify the main idea, and make predictions from various representations of data sets in the forms of tables, bar graphs (horizontal and vertical forms), pictographs, and tallies.
Delta Wing Glider (60-68)	DC	MA.3.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments.
Delta Wing Glider (60-68)	DC	MA.3.DASP.2	Construct, identify the main idea, and make predictions from various representations of data sets in the forms of tables, bar graphs (horizontal and vertical forms), pictographs, and tallies.
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Grade 4			
Activity/Lesson	State	Standards	
Air Engines (12-16)	DC	MA.4.M.1	Identify and use appropriate metric and U.S. customary units and tools (e.g., ruler, protractor, graduated cylinder, thermometer) to estimate, measure, and solve problems involving length, area, volume, weight, time, angle size, and temperature.
Air Engines (12-16)	DC	MA.4.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data.

Rotor Motor (69-75)	DC	MA.4.PRA.3	Use pictures, models, tables, charts, graphs, words, number sentences, and mathematical notations to interpret mathematical relationships.
Rotor Motor (69-75)	DC	MA.4.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data.
Rotor Motor (69-75)	DC	MA.4.DASP.3	Compare two data sets represented in two bar graphs, pie graphs, and histograms.
Flight: Interdisciplinary Learning Activities (76-79)	DC	MA.4.PRA.3	Use pictures, models, tables, charts, graphs, words, number sentences, and mathematical notations to interpret mathematical relationships.
Flight: Interdisciplinary Learning Activities (76-79)	DC	MA.4.M.3	Identify time to the minute on analog and digital clocks using a.m. and p.m. Compute elapsed time using a clock (e.g., hours and minutes since ...) and using a calendar (e.g., days since ...).
Flight: Interdisciplinary Learning Activities (76-79)	DC	MA.4.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data.
Making Time Fly (80-86)	DC	MA.4.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data.
Let's Build a Table Top Airport (91-96)	DC	MA.4.G.2	Describe, model, draw, compare, and classify two- and three-dimensional shapes (e.g., circles, polygons, parallelograms, trapezoids, cubes, spheres, pyramids, cones, cylinders).
Plan to Fly There (97-106)	DC	MA.4.M.1	Identify and use appropriate metric and U.S. customary units and tools (e.g., ruler, protractor, graduated cylinder, thermometer) to estimate, measure, and solve problems involving length, area, volume, weight, time, angle size, and temperature.
Plan to Fly There (97-106)	DC	MA.4.M.3	Identify time to the minute on analog and digital clocks using a.m. and p.m. Compute elapsed time using a clock (e.g., hours and minutes since ...) and using a calendar (e.g., days since ...).
We Can Fly, You and I: Interdisciplinary Learning (107-108)	DC	MA.4.PRA.3	Use pictures, models, tables, charts, graphs, words, number sentences, and mathematical notations to interpret mathematical relationships.
We Can Fly, You and I: Interdisciplinary Learning (107-108)	DC	MA.4.M.1	Identify and use appropriate metric and U.S. customary units and tools (e.g., ruler, protractor, graduated cylinder, thermometer) to estimate, measure, and solve problems involving length, area, volume, weight, time, angle size, and temperature.

We Can Fly, You and I: Interdisciplinary Learning (107-108)	DC	MA.4.M.3	Identify time to the minute on analog and digital clocks using a.m. and p.m. Compute elapsed time using a clock (e.g., hours and minutes since ...) and using a calendar (e.g., days since ...).
Dunked Napkin (17-22)	DC	MA.4.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data.
Paper Bag Mask (23-28)	DC	MA.4.G.2	Describe, model, draw, compare, and classify two- and three-dimensional shapes (e.g., circles, polygons, parallelograms, trapezoids, cubes, spheres, pyramids, cones, cylinders).
Paper Bag Mask (23-28)	DC	MA.4.G.4	Describe and draw intersecting, parallel, and perpendicular lines.
Paper Bag Mask (23-28)	DC	MA.4.G.7	Predict and validate the results of partitioning, folding, and combining two- and three-dimensional shapes.
Paper Bag Mask (23-28)	DC	MA.4.M.1	Identify and use appropriate metric and U.S. customary units and tools (e.g., ruler, protractor, graduated cylinder, thermometer) to estimate, measure, and solve problems involving length, area, volume, weight, time, angle size, and temperature.
Paper Bag Mask (23-28)	DC	MA.4.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data.
Wind in Your Socks) (29-35)	DC	MA.4.M.1	Identify and use appropriate metric and U.S. customary units and tools (e.g., ruler, protractor, graduated cylinder, thermometer) to estimate, measure, and solve problems involving length, area, volume, weight, time, angle size, and temperature.
Wind in Your Socks) (29-35)	DC	MA.4.DASP.1	Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data.
Sled Kite (44-51)	DC	MA.4.M.1	Identify and use appropriate metric and U.S. customary units and tools (e.g., ruler, protractor, graduated cylinder, thermometer) to estimate, measure, and solve problems involving length, area, volume, weight, time, angle size, and temperature.