

Lift Off

* The following lessons are designed for grades 3-5

Lesson Title	Pg	Grade Level	Academic Standards	Activity Description
Rockets away	6	3	1.6.3 E	After building a rocket, teach a friend
		4	3.1.4 A	Identify rocket parts
		3-5	2.3.3 A, B, C & E; 2.3.5 A & B; 3.2.4 C & D; 13.2.3 G	Build a rocket and experiment to get it to fly farther. Measure time and distance.
Gnome of your own	8	3	13.2.3 G	Follow directions to build a rocket
I want to be	10	3-5	1.6.3 E; 1.6.5 E	Interview someone with a career of interest
		3-5	13.1.3 A, E & G; 13.1.5 A & C	Learn about a carrier of interest and training required
Airfoil Magic	12	3-4	1.6.3 E; 3.1.4 B; 3.2.4 C	Use an airfoil to model a wing. Experiment with airfoil and describe results.
From here to there	14	3	7.1.3 A & B	Draw a detailed map home
Can I fly today	18	3-4	1.6.3 E; 3.5.4 C	Interview a pilot to learn about good flying conditions
Which way is up?	20	3	13.1.3 E & G	Learn why pilots have to understand disorientation and explain why it is important
Angle of attack	22	3	1.6.3 E	Discuss with helper what flying a kite felt like
		4	3.1.4 A	Learn about parts of a kite
		4	3.2.4 C	Experiment with different angles of attack
		3	13.2.3 G	Build and fly a kite
Up, up and away!	24	3	1.6.3 E	Teach a friend about hot air balloons
		4	3.1.4 A	Identify and teach a friend about hot air balloon parts
		3-5	9.1.3 A; 9.1.5 A	Design a hot air balloon envelope
Round and round	26	3	1.6.3 E	Explain results of paper helicopter experiment to helper
		4	2.3.3 C; 3.2.4 C	Experiment to get paper helicopter to stay aloft longer. Measure time aloft.
		4	3.1.4 B	Use a model of a helicopter (paper helicopter) and reflect on using it
Charlie, Oscar, Delta, Echo	28	3	13.1.3 E	Learn about pilot use of international phonetic alphabet
From nose to tail	32	3	1.6.3 E; 3.1.4 A	Learn parts of an airplane then teach someone
		3	13.1.3 E	Understand why pilots need to know parts

Academic Standards for Reading, Writing, Speaking and Listening met:

Speaking & Listening: 1.6.3 E; 1.6.5 E

Academic Standards for Mathematics met:

Measurements & Estimation: 2.3.3 A B C E; 2.3.5 A B

Academic Standards for Science and Technology met:

Unifying Themes of Science: 3.1.4 A B
Computation & Estimation: 3.2.4 C D
Earth Science: 3.5.4 C

Academic Standards for Geography met:

Basic Geographic Literacy: 7.1.3 A B

Academic Standards for the Arts and Humanities met:

Production, Performance and Exhibition of Dance, Music, Theatre and
Visual Arts: 9.1.3 A; 9.1.5 A

Proposed Academic Standards for Career Education and Work met:

Career Awareness & Preparation: 13.1.3 A E G; 13.1.5 A C
Career Acquisition (Getting a Job): 13.2.3 G