

PAPER AIRCRAFT GUIDE

Grades 4-8

STEP	TASK	GUIDING QUESTIONS
IDENTIFY 	Identify the qualities of a good paper aircraft. Consider paper aircraft you have seen or made in the past.	What makes a good paper aircraft? How do you know if you have made a good paper aircraft?
UNDERSTAND 	Select a criterion by which to judge a paper aircraft. Pick materials that would work best according to the criterion you have defined.	Will you build an aircraft that holds as many passengers as possible, or one that flies a long distance? Which type of paper will you use? Which size paper clips?
IDEATE 	Think about the features you want your aircraft to have.	What does a paper aircraft usually look like? What features can make it successful? Can it look different?
DESIGN 	Draw a picture of what you want your aircraft to look like. Sketch the aircraft from different angles (side, top, front, etc.)	What does a paper aircraft usually look like? Are there different ways of making them?
BUILD 	Build a prototype of your aircraft using the materials you have.	
TEST 	Test your aircraft. Make note of how high it flies, the distance it travels, how many passengers it can hold (consider your criteria for a successful aircraft defined in the Understand step). Record your observations.	What worked? What didn't? How can you improve your design?
REDESIGN 	Rebuild- you may need to cycle through the Test and Build processes several times.	For the rebuilt prototype: Did performance improve? Why or why not? What did you learn from other people's designs or feedback? What might you do differently next time?
COMMUNICATE 	Explain your design and aircraft to someone else. Be sure to highlight your features and why you wanted to make your aircraft the way you did to meet the criteria for a successful aircraft.	What did you do? Why did you chose to add the features you did? What did you have to modify after testing and how did you improve the aircraft?