

# Activity: Paper Airplanes

<b>TITLE: Engineering Paper Airplanes</b>	<b>TEACHER: Randy Kreifel</b>	<b>COURSE: 7<sup>th</sup> gr Intro to Design</b>	<b>DURATION:</b>
<b>CONTENT—What will students learn?</b>			
<b>CAREER/TECHNICAL KNOWLEDGE AND SKILLS</b>	<b>ACADEMIC KNOWLEDGE AND SKILLS</b>	<b>21ST CENTURY SKILLS</b>	
ISTE: 3.d – Process data & report results ISTE :1.c – Use models & simulations	NGSS: MS-ETS1-4 - Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.	Critical Thinking & Problem Solving Productivity & Accountability	
<b>SCENARIO OR PROBLEM/ESSENTIAL QUESTIONS</b>			
Students are to create and test 2 types of paper airplanes. During the activity students will note the flight characteristics of each plane including distance & time aloft. Upon completion of testing students will compare the results and speculate as to what may have caused the differences. Students will be challenged to think of possible modifications which would change the flight characteristics of either, or both, planes.			

**ASSESSMENT (Check all that apply)**

FORMATIVE		SUMMATIVE	
Quizzes/Tests		Multiple Choice/Short Answer Test	
Notes/Graphic Representations		Essay Test	
Rough Draft		Written Product with Rubric	
Practice Presentation		Oral Presentation with Rubric	
Preliminary Plans/Goals/Checklists of Progress		Other Product or Performance with Rubric	
Journal/Learning Log		Self-Evaluation or Reflection	X
Other: Exit Ticket	X	Evaluation by Authentic Audience	

**MATERIALS AND RESOURCES NEEDED TO SUPPORT THE UNIT**

Vocabulary and definitions uploaded to Google Classroom.  
 Directions for the “Dart” & “Stable” uploaded to Google Classroom.  
 Exit ticket posted on Google Classroom.  
 Paper

**SUPPORT, MODIFICATIONS AND EXTENSIONS—What is needed to provide support for students who have difficulty learning the content, modify for students with special learning needs, or provide enrichment for advanced students?**

Students without adequate WIFI can receive all information in packet form.  
 Teacher can be reached and answer questions through the Remind app.  
 Advanced students can be challenged to create their own designs.