**AIRPLANE SCENARIO**

Based on an experiment written by Dmitrii Zholud (2014)

Customers of Forest Helicopter Company (FHC) have been complaining about the short flight distance of FHC airplanes. A team of FHC engineers, pilots, managers and field representatives is formed to study how the FHC airplane design could be modified to prolong the flight distance.

During a brainstorming session, the FHC engineering team proposed a large number of factors that might affect the airplane flight distance. They finally limited the list to **7 factors,** which are to be studied:

1. wing length
2. body length
3. body width
4. paper clips
5. folded wings
6. tapered body
7. taped wings

Your aeronautical team has been hired to determine the feasibility of changing one factor listed above to improve the FHC airplane in order to prolong flight distance.

The results are to be presented to FHC in a report and a test model directed to the team of engineers at FHC. All steps must be explained in such a way that the method your team used can be reproduced in order for FHC engineers to verify your team’s analysis. A letter will be mailed to the teams tomorrow with delivery instructions. You are in competition with several other teams.

Name the model you submit using the aviation alphabet. (Example N 831 FE represents November 831 Foxtrot Echo) Identification numbers and letters must not exceed 7; and the identification must begin with **N**, which stands for the United States. The 26 code words in the NATO phonetic alphabet are assigned to the 26 letters of the English alphabet in alphabetical order as follows: Alfa, Bravo, Charlie, Delta, Echo, Foxtrot, Golf, Hotel, India, Juliett, Kilo, Lima, Mike, November, Oscar, Papa, Quebec, Romeo, Sierra, Tango, Uniform, Victor, Whiskey, X-ray, Yankee, Zulu.

(Reference websites: <http://www.paperhelicopterexperiment.com/design-and-assembly.php>; <http://www.funpaperairplanes.com> or<http://bestpaperairplanes.com>)