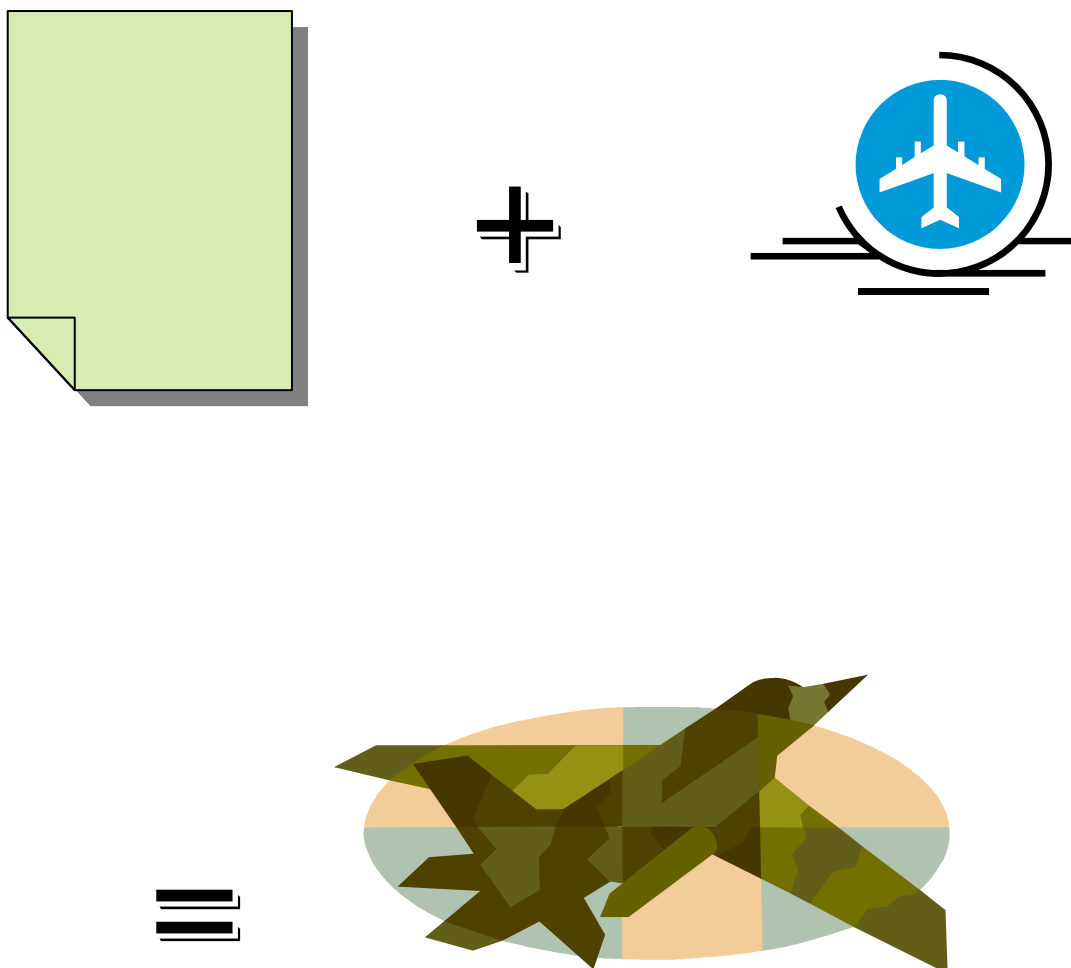


THE PAPER AIRPLANE EXPERIMENT



Are you ready to fly?

How far flew the furiously fast plane if the fast plane flew fairly far?

Your mission: (in groups of 2 – 4)

- Create 3 different paper airplanes using any of the following materials:
 - Notebook paper
 - Cardboard
 - Construction paper
 - Photo paper
 - Scotch tape
 - Pennies (for weight)
 - Any other material OK'ed by the teacher
- Test your airplanes by flying them and keeping track of at least four of the following variables:
 - Distance flown
 - Paper type
 - Weight
 - Weight placement on plane (location)
 - Approximate surface area
 - How hard it was thrown (light, medium or hard)
 - The number of passengers (number cubes) it could hold
 - Time in the air
 - Speed (distance = rate * time)
- Choose which plane you think is best and justify your choice

Complete at least 150 points worth of assignments using the following possible choices:

10 pts. – Draw pictures of your different planes and compare their construction differences.

10 pts. – List your data in a table and describe what you think caused the biggest changes in your data.

20 pts. – Interview a real pilot about what makes a good plane and write a short essay about what you found out.

20 pts. – Outline the construction process for your chosen plane and how you make sure construction is high quality.

30 pts. – Predict changes in distance based on how you change the construction of your chosen plane. Test your theories and then report the results by writing a short essay.

30 pts. – Research different properties of flight that affect airplanes and write a short essay describing them.

40 pts. – Design an informational pamphlet trying to persuade people to choose your type of paper airplane as the best.

40 pts. – Create a commercial trying to persuade people to choose your type of paper airplane as the best.

50 pts. – Create 10 criteria that would make the best paper airplane, then rank all the paper airplanes.

50 pts. – Decide which property of paper airplane construction is the most important and explain why in a persuasive class presentation.

___ pts. – Make your own assignment and get it approved by the teacher.

___ pts. – Make your own assignment and get it approved by the teacher.

WEB RESOURCES

Individually designed paper airplanes

<http://www.josephpalmer.com/planes/Airplane.shtml>

<http://www.omniwing.com/>

<http://www.paperairplanes.co.uk/sciencefair.html>

Paper airplane contest

<http://teacher.scholastic.com/paperairplane/>

List of paper airplane sites

http://teams.lacoe.edu/documentation/projects/math/airplane_sites.html

http://tycphysics.org/IPC4%20group_projects/Group%201/AIRPLANE.HTM

<http://johnevans.greeleyschools.org/Flight%20Resources.htm>

Paper Airplane WebQuest

http://www.geocities.com/paperplane_quest/