

Forces/Engineering/S TEAM

WHY DO PEOPLE KEEP TALKING
ABOUT THIS???

Shelley O'Malley

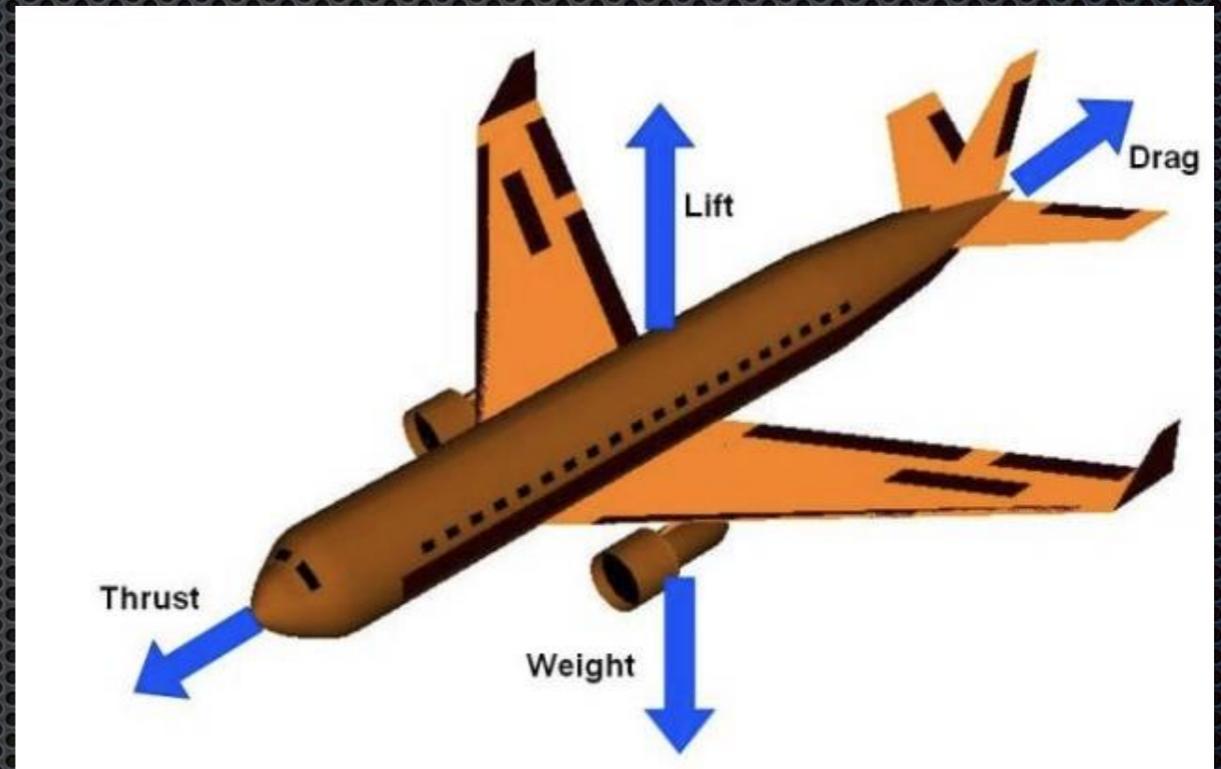
Luke's Mom

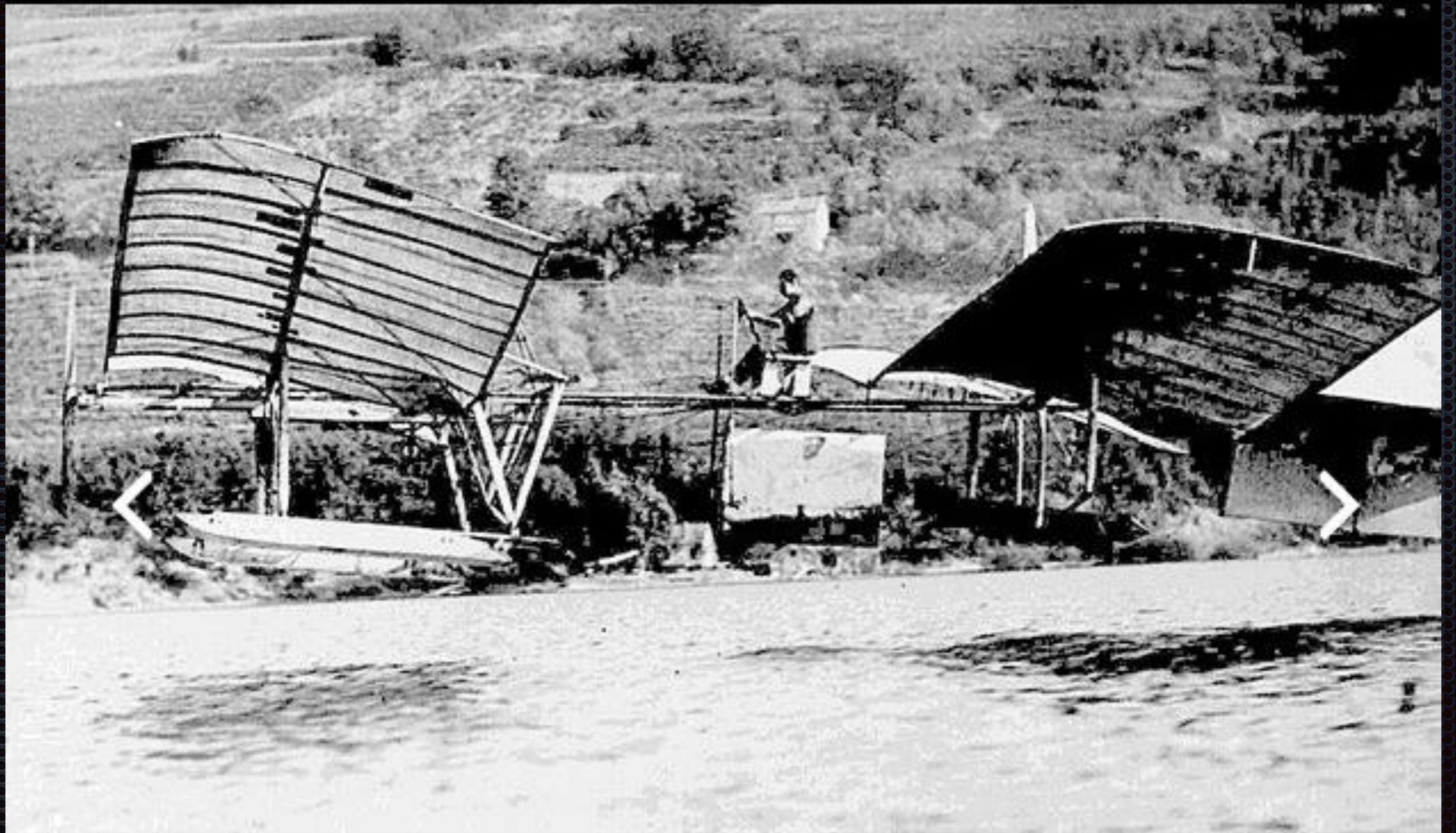
Delta Pilot/Former Navy Pilot

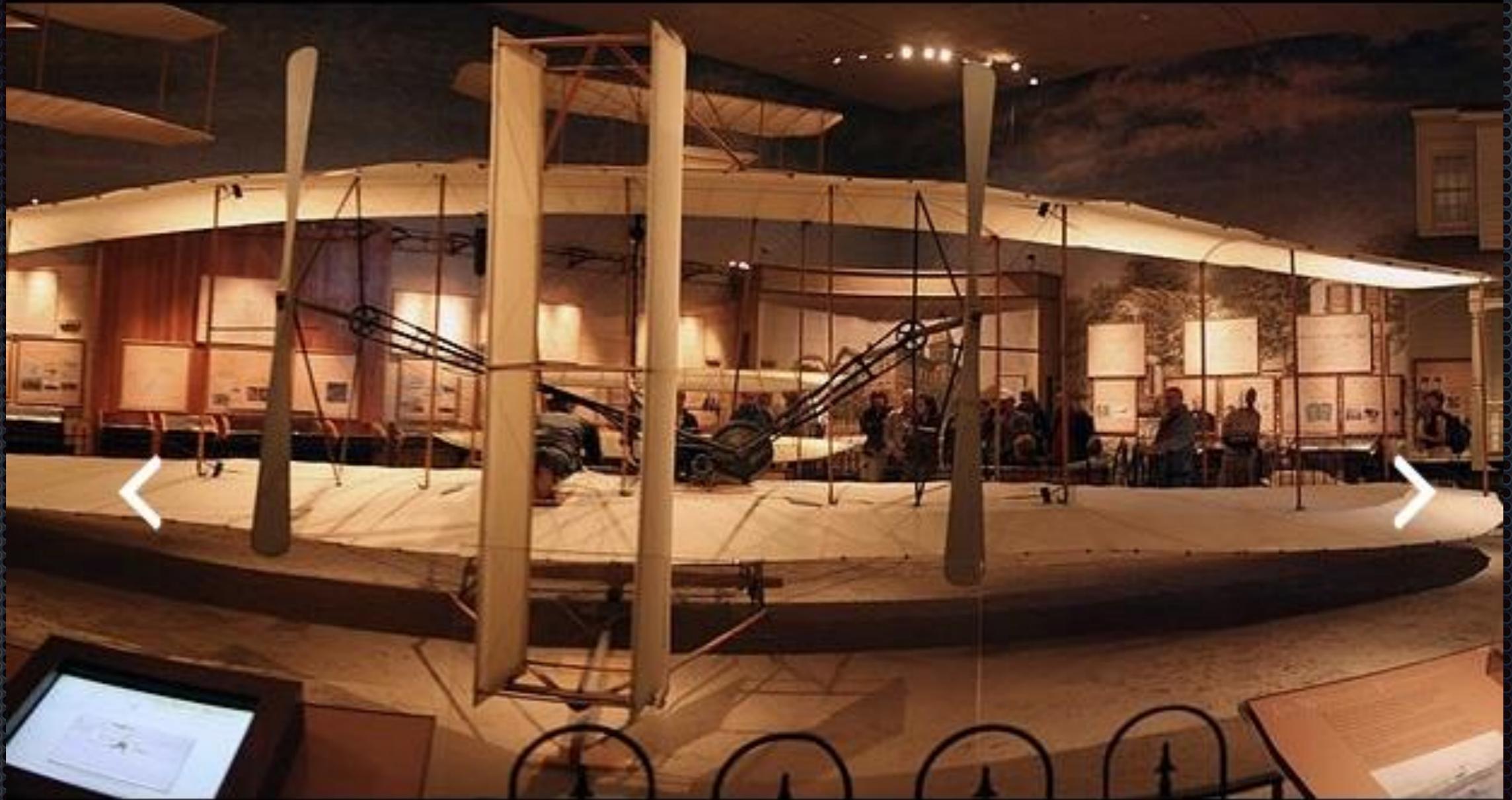


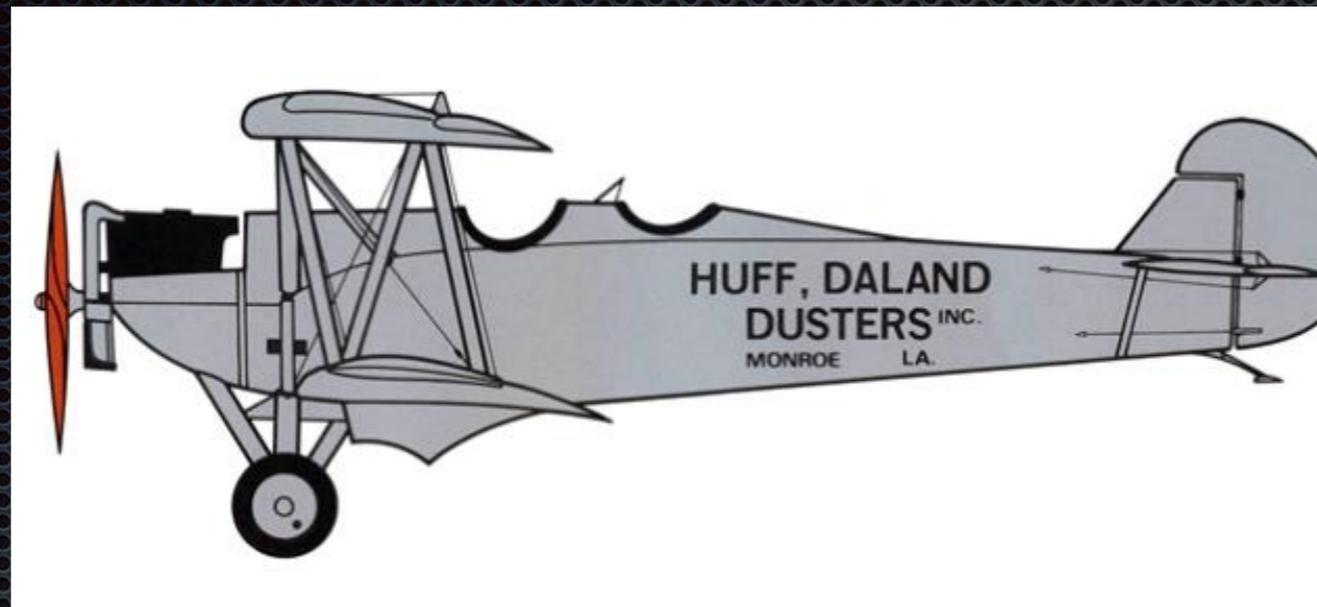
Four Forces

- Lift-upward Force
- Weight-downward Force
- Thrust-forward Force
- Drag-backward force









DOUGLAS DC-3













Image courtesy of Northrop Grumman



Advancements in Aviation

- Navigation
- Reliability
- Ergonomics
- Biofuels/efficiencies
- Communication
- Completely shifting our thinking!!

V-22 Osprey



Navigation

- Moving maps instead of arrows pointing at stations
- How—GPS, computers



Reliability

- Airplanes can “talk to us”
- Data is streamed to maintenance and operations



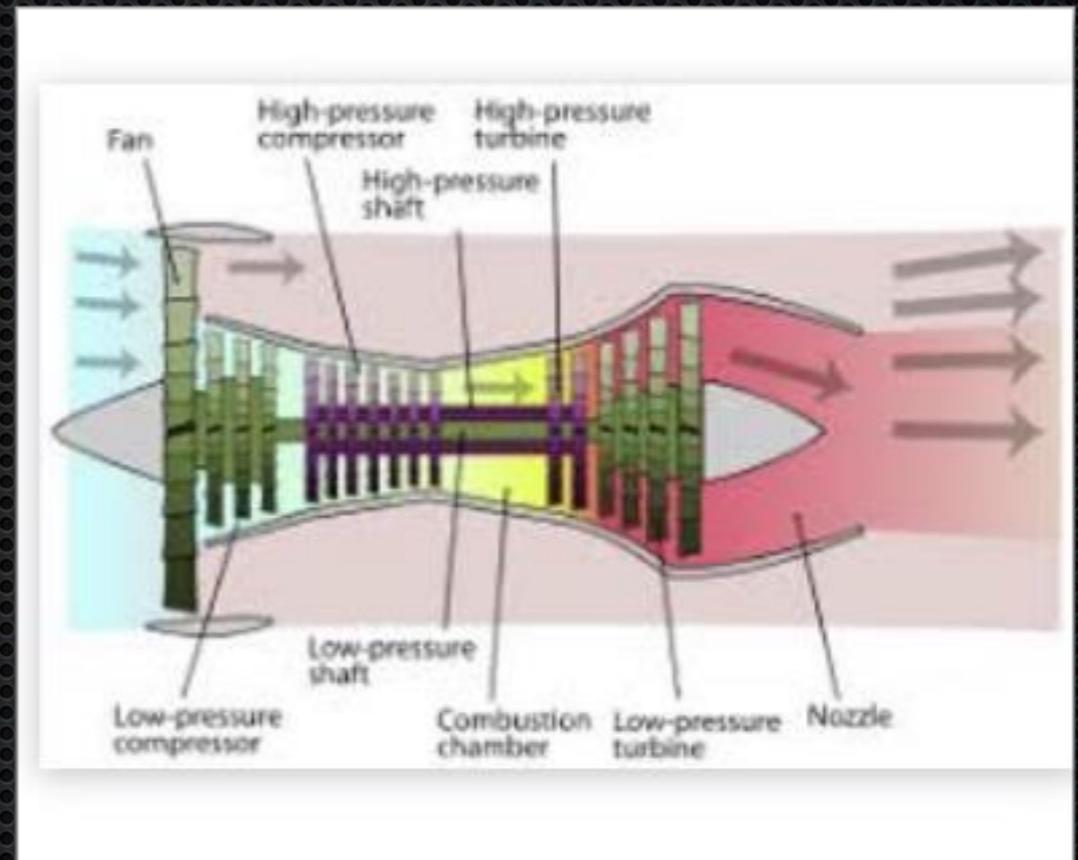
Ergonomics

- Comfort and ease of use
- Passenger satisfaction
- Reduces injuries



Biofuels/Efficiencies

- Energy industry is always developing newer and better fuels
- Cost of fuel is huge part of operating
- Weight of fuel affects how many people we carry

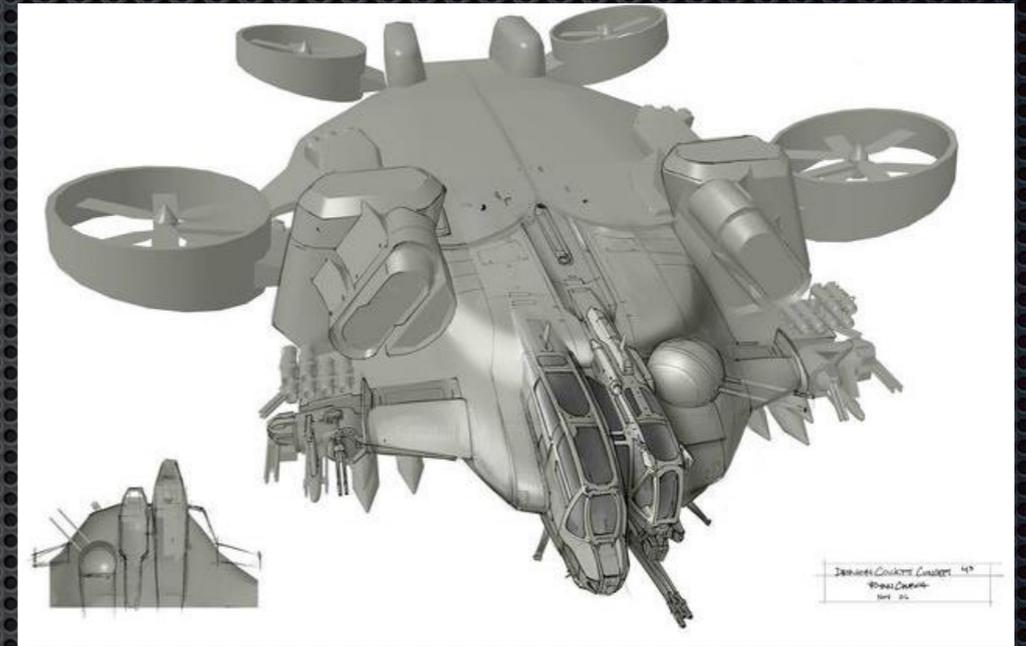


Communication

- Using data links to send information to the cockpit
- Reduces readback errors, radio noise
- Satellite radio communications for emergencies
- Expanded team



Completely changing the game???



Technological Revolution

- We want to make a difference
- Satisfaction comes from being a part of something
- Technology gives more people an opportunity to brainstorm, model, innovate
- Curiosity, tenacity, collaboration are key attributes

Pitfalls

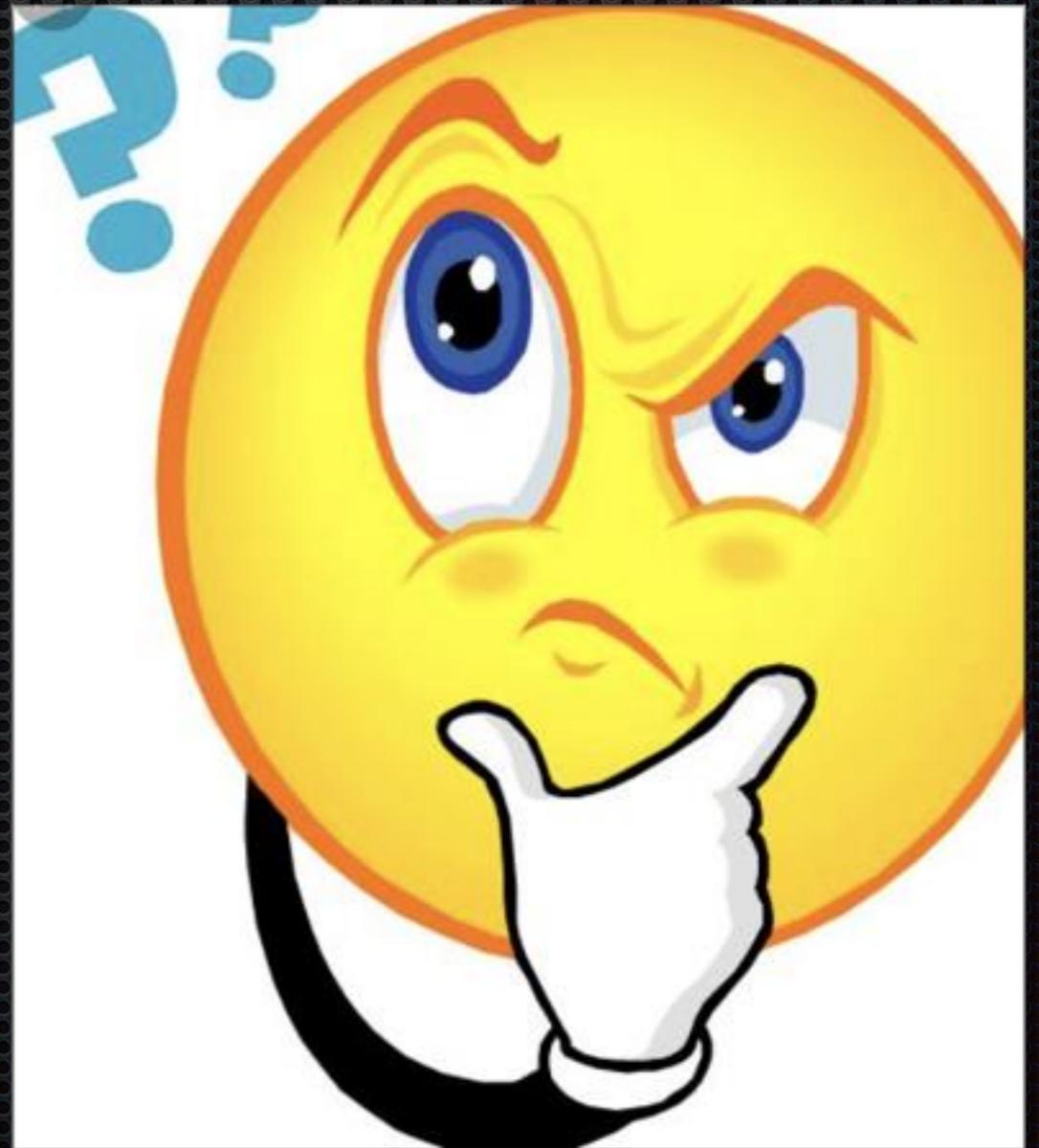
- Not all information is good or real
- It is EASIER to let someone else do the work
- It is EASIER to be entertained
- It is EASIER to let emotions make decisions, to believe what we want

Recipe for Success

- BE CURIOUS
- Ask “WHY?” and “WHY NOT?”
- Don’t limit yourself to how things have always been done
- Be willing to work and to FAIL—learn from it

So How Do You Fit In??

- Be CURIOUS !!
- Use your imagination
- Use technology to make things better
- Don't let technology use you



15 Minutes a Day 

BE CURIOUS    

Group 1—Engineering at Home

- Kitchen ideas
- Garage ideas
- Play space ideas
- Sleep space ideas
- Too hot? Too Cold?
- Energy conservation



Group 2—Engineering at School

- Classroom ideas
- Technology ideas (devices, Edmodo, connecting)
- Communication
- Connections
- Lunchroom



Group 3—Engineering in the Community

- Cars, trains, airplanes
- Bikes, strollers, wheelchairs
- Traffic management
- Neighborhood design
- Parks, recreation areas

Apple



Google



Microsoft

