



Aerospace Engineer



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Most of my work is done at my desk—doing project planning, making test plans for wind tunnel or water tow tank testing, analyzing data, and writing and presenting technical papers and reports. When I'm in testing, I'll usually work for several weeks (if not months) straight in the wind tunnel or at the tow tank. My work is always interesting because I do different things every day.

Areas of expertise:

- Airplane aerodynamics
- Fluid mechanics
- Wind tunnel testing

How I first became interested in this profession:

I have always loved airplanes, and I knew from my earliest days that I would either fly airplanes for a living or study them for a living and fly them for fun. I have also been an avid supporter of the space program since my youth, and every mission has been a source of inspiration to me to dream big and be a part of NASA's spirit of exploration.

What helped prepare me for this job:

It all started when I was a kid. I built model airplanes and hung them from my bedroom ceiling. I read books about airplanes and rockets, and I launched model rockets out in the desert. Then in college I studied aerospace engineering, and also turned my flying dreams into reality by taking flying lessons.

My role models or inspirations:

My dad was my greatest role model and inspiration. He encouraged me to pursue every dream I had, and he was very active in helping me with my hobbies. Legends like Chuck Yeager and Neil Armstrong showed me that one's possibilities are endless if one puts his mind to it.

My education and training:

- B.S., Aerospace Engineering, California State Polytechnic University, Pomona (aka Cal Poly Pomona)
- M.S., Aeronautical & Astronautical Engineering, Stanford University

My career path:

1979-1988: Supersonic V/STOL fighter aerodynamics
1988-1991: Temporary management at Advanced Aerodynamic Concepts
1991-1993: Sonic boom propagation and loudness predictions
1993-2000: Project manager for High Wing Transport Project
2000-present: Project manager for wake vortex alleviation studies

What I like about my job:

I like having a good variety of fun projects to work on. I started my career testing supersonic fighter models and now I'm focusing more on the details of aerodynamics in studying vortices from wing tips. I've shot some really cool videos of the vortex interactions. I get a kick out of presenting these videos to audiences and watching their faces light up in wonder.

What I don't like about my job:

I don't like all the paperwork required to get things done. Fortunately, much of that is being streamlined now by doing things electronically, but there is a fair amount of administrative overhead associated with every job.

My advice to anyone interested in this occupation:

Let your imagination run wild and lead you to pursue your interests. If you get your training and education in something that fascinates you, it will come that much more easily to you.

Additional Resources:

- American Institute of Biological Sciences
<http://www.aibs.org>
- American Physiological Society
<http://www.faseb.org/aps>
- American Society for Biochemistry and Molecular Biology
<http://www.biophysics.org/biophys/society/biohome.htm>
- American Society for Microbiology
<http://www.asmsusa.org>
- Astrobiology Summer Academy
<http://academy.arc.nasa.gov/>
- Biotechnology Industry Organization
<http://www.bio.org/welcome.html>
- Graduate Student Researchers Program
<http://spacelink.nasa.gov/Instructional.Materials/NASA.Educational.Products/Graduate.Student.Researchers.Program.Brochure/.index.html>
- MATHCOUNTS Competition
<http://mathcounts.org/>
- Minority University Research and Education Programs
<http://mured.nasaprs.com/>
- NASA Cooperative Education Program for college students
<http://spacelink.nasa.gov/Educational.Services/NASA.Education.Programs/Student.Support/NASA.Cooperative.Education.Program/.index.html>
- NASA Jobs
<http://nasajobs.nasa.gov/>
- NASA Office of Life and Microgravity Sciences and Applications
<http://www.hq.nasa.gov/office/olmsa/>
- NASA SHARP Internship Program for high-schoolers
<http://www.mtsibase.com/sharp/>
- NASA Student Employment
http://nasajobs.nasa.gov/stud_opps/employment/index.htm
- NASA Student Involvement Program student contests
<http://www.nsip.net/index.cfm>
- Order NASA career videos such as "Engineers: Turning Ideas into Reality," "Careers: Aerospace Engineer" or "Reaching for the Stars" from NASA CORE.
<http://core.nasa.gov>
- Student's Guide to Astrobiology
<http://www.astrobiology.com/student.html>
- Tech-Interns.com
<http://www.tech-interns.com/>

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