



Educational Product	
Educators and Students	Grades 9-12



Virtual Skies is an interactive Web site in which students in grades 9-12 use the metaphor of air traffic management to engage in real-life decision-making scenarios in the areas of: geography, meteorology, statistics and aeronautics.

Site Features:

- Tutorials: background information
- Take Control: interactive multimedia activities
- You Decide: problem-based scenarios
- Certification: online, multiple choice quiz
- Career Radar: affinity checks, biographies
- Lesson Plans

Standards Addressed:

- Careers
- Technology Design
- Weather
- Forces and Motion
- Geography
- Mathematics



<http://virtualskies.arc.nasa.gov>

How might flight be different in the future?





What careers will

contribute

to future flight?



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Virtual Skies

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Using this Poster

Off-line:

Discuss with students:

1. How does air transportation benefit you?
2. Looking at the pictures inside, what do you notice about the aircraft?
How are they different from aircraft today?
3. What are the potential benefits of these aircraft?
4. What are the different areas of research/careers that will contribute to future flight?

Online:

Students research on virtualskies.arc.nasa.gov:

- The different areas that contribute to air transportation systems and current research.
- A career in one of the areas that most intrigues them. Students describe the career, qualifications and why it's a good fit for them.

Off-line:

Students report:

- Share information on the area that most interests you and current research in this area.
- Share your career of interest and why it suits you.
- Report how you might go about pursuing such a career.

Answer Key

1. Answers may include: Air transportation benefits us by allowing us to travel long distances more quickly and transporting mail more quickly including items that we might order online or from catalogs.

2./3.



This aircraft combines efficient, high-lift wings and a wide airfoil-shaped body, generating lift and minimizing drag. This commercial aircraft could carry up to 800 passengers and freight while cruising at high subsonic speeds on flights up to 7,000 nautical miles (12,965 km) and consume 20 percent less fuel than jetliners of today!



This aircraft will have the ability to morph its wings to mimic the natural flight of a bird. This will allow the craft to change its shape for different speeds, to control forces for extreme maneuvers, and to improve efficiency.



This aircraft can take off like a helicopter and then fly like a plane. It won't need a runway, so more aircraft will be able to take off and land at the same time.



This aircraft is small and would fly autonomously, using Internet communication technologies.

4. The following areas of research/careers will contribute to future flight:

Airport Design	Air Traffic Management
Aeronautics	Communication
Aviation Weather	Aviation Research
Aviation Navigation	

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