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 **Good to Know**

**Steps to Get Started**

**Connect with STEM Groups**: Join aerospace clubs, engineering societies, and online communities.

* **STEM Events and Fairs**: Attend events like AeroDiscover or engineering career fairs to explore the field.
* **Get Practical Experience**: Consider internships or volunteer in engineering-related fields.
* **Explore Apprenticeships and Graduate Schemes**: Look for opportunities with aerospace firms to gain on-the-job training and real-world experience.

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**Pilot Fact Sheet**

**Aeronautical & Aerospace Engineering: A Future in Flight & Space Exploration**

**Explore an exciting career that blends creativity, problem-solving, and technical skills to shape the future of air and space travel. Aeronautical and aerospace engineers work on innovative projects, designing everything from sustainable aircraft to cutting-edge spacecraft.**

**Qualifications and Pathways to Becoming an Aerospace Engineer**

1. **GCSEs:** Aim for strong grades in Maths, Physics, and Chemistry.
2. **A-Levels or Level 3 Qualifications**: Choose subjects like Maths, Physics, Further Maths, or Engineering.
3. **University Degree**: Most aerospace engineering roles require a bachelor’s degree (BEng or MEng) in aerospace engineering, aeronautical engineering, mechanical engineering, or a related field.
4. **Apprenticeships**: Higher and degree apprenticeships offer an alternative pathway, combining work with study for qualifications.
5. **Professional Development**: Joining institutions like the Royal Aeronautical Society (RAeS) and Chartered Engineer status can support career growth.

**Typical Day in Aerospace Engineering**

Aerospace engineers work in diverse settings, including offices, labs, and airfields. Here's a glimpse of a typical day:

* **Design & Testing**: Collaborate with teams to design new aircraft and test parts in simulators or wind tunnels.
* **Problem Solving**: Troubleshoot technical issues in live projects, from engine tests to materials research.
* **Research & Development**: Innovate sustainable materials, efficient engines, and advanced navigation systems.
* **Field Work**: Some engineers conduct tests and gather data on aircraft, rockets, or drones out in the field.

**Lifestyle and Benefits**

* **Job Stability**: The aerospace industry is expanding globally, offering long-term opportunities.
* **High Salary Potential**: Entry-level salaries start around £28,000-£32,000 in the UK, with higher earning potential as experience grows.
* **Travel Opportunities**: Aerospace projects often involve international travel to collaborate with global teams.
* **Impactful Work**: Engineers in aerospace contribute to life-changing technology, from safer planes to future space exploration.

**Career Progression and Salaries**

* **Graduate Engineer**: Starting salary of £28,000–£32,000, focusing on foundational skills and hands-on training with real-world engineering tasks.
* **Junior Aerospace Engineer**: £32,000–£45,000. Engineers in this role work more independently, handling small projects or specific design aspects within a larger team.
* **Experienced Aerospace Engineer**: £45,000–£60,000. By this stage, engineers may lead technical teams, oversee large project components, and are often responsible for coordinating between departments.
* **Senior Aerospace Engineer/Team Lead:** £60,000–£80,000. With leadership roles, engineers manage entire projects or teams, handle client relationships, and shape strategic direction.
* **Chief Engineer/Director**: £80,000–£120,000+. Top roles involve overseeing company-wide engineering decisions, setting industry trends, and leading the next generation of engineers.

**Career Prospects and Industry Growth**

The demand for aerospace engineers is robust and expected to keep growing. Key drivers include:

* **Sustainable Aviation**: A focus on greener aircraft and fuel-efficient engines.
* **Space Exploration**: Expanding programmes from agencies like NASA and ESA, as well as private companies.
* **Defence and Security**: Innovation in unmanned vehicles and surveillance aircraft.
* **Urban Air Mobility**: Development of air taxis and drones as urban transportation options.

**Workplace Environment and Opportunities**

Aerospace engineering offers both hands-on and research-focused roles in various environments, from high-tech labs to open-air testing fields. You could work with airlines, aerospace manufacturers, government agencies, or space exploration companies. Top Employers include Airbus, BAE Systems, Rolls-Royce, NASA, SpaceX, and the European Space Agency (ESA).