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The phenomenon of airplanes.

Have you ever wondered how airplanes are assembled, how much they cost, and how many parts there are? Well it's simple. They come from airplane part manufacturing companies and there are up to 1800 of them all over the world. People just buy plane tickets without thinking about how complex the airplanes are.

For example, the Boeing 787 is made from about 2.3 million individual parts (787 news). What are these parts? These parts include tiny bolts, screws, fasteners, wires, electronics, seats, cabin equipment, hydraulic systems, landing gear, and engines. Some of these parts are small, but have an immense impact on the plane. Well what is the most expensive part of the plane? That is of course the engine which can cost up to 20-30 millions dollars. They cost this much because they are extremely advanced machines that produce huge amounts of thrust, are very fuel-efficient, work reliably for thousands of hours, and handle extreme heat and pressure. (Boeing). All these pieces come from companies all around the world.

How long do airplanes take to assemble? Well, the time it takes to assemble an airplane depends on its model, but modern commercial airplanes are designed to be assembled surprisingly fast.

For example, the Boeing can be assembled for up to 9-10 days. This can be assembled so quickly because they use a system where large sections of the planes are already built and then are shipped to a spot where a bunch of workers assemble all the pieces together like a lego set. When thinking of a normal job you'd think there are like 100 workers but for assembling airplanes, there are up to 800-1200 workers for 1 plane! (American Copper).

What are airplane manufacturing companies? Airplane manufacturing companies design and build aircrafts for travel, cargo, and military purposes. These companies work with thousands of suppliers and engineers to produce very complex machines with millions of parts. 3 of the largest ones are Boeing which is in the US, then there is Airbus which is located in Europe, and the last one is Embraer which is in Brazil. Boeing is one of the largest aircraft manufacturers in the world and builds commercial airplanes like Boeing 737 and Boeing 787 Dreamliner. To add, they also produce military aircraft, satellites, and space technology. Next we have Airbus which is Boeing's biggest competitor and makes aircraft like the Airbus A320 and Airbus A350. Also, the planes are assembled in huge factories and the pieces come from all around the world. At last is Embraer which is known for making smaller commercial jets and regional aircrafts and airlines often use these planes for shorter routes between cities. (Boeing, Airbus, Embraer).

Now that we've talked about the complex part about airplanes, let's talk about the cool and interesting facts about airplanes. How many airplanes fly everyday, hour, and year? There are 4,000 flights every hour, over 100,000 flights everyday and 60-70 million per year which means there are up to 4-5 billion passengers traveling every year!(scimyst) How much fuel is used by airplanes every year? Every year there are 438-470 billion liters used in flying every year which means that they use up to 250 billion dollars every year on jet fuel. A fun fact is while I'm writing this paper right now there are 8000-12000 people in the air currently. The busiest airport in the world is the Hartsfield-Jackson Atlanta international airport in Atlanta handling about 100 million passengers a year.(atag) So the next time you step onto your next flight, think about the complexity of the airplane and airplane business.

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