Ways to organize an informative speech

SR71 Blackbird

The **topical** organization pattern follows a division of a topic into coordinate parts or main points. It is the most common type of division used in speech making.

The SR71 boasted many design innovations. Let's look at three of them.

1. Loose skin - the skin was designed to "tighten up" at seams when the plane flew faster and faster, thus getting hotter from friction. While on the ground, JP7 jet fuel poured from the fuselage.

2. Air inlets - At the front of each inlet was a pointed, movable cone called a "spike" that was locked in its full forward position on the ground and during subsonic flight. As the aircraft accelerated past Mach 1.6, an internal jackscrew withdrew the spike up to 26 inches.

3. Because the heat of flight would have caused a smooth skin to split or curl, the SR71 had titanium-alloy corrugated skin. This could expand vertically and horizontally and facilitate a stealthy profile. Entirely new fabrication methods were developed for this applicaton.

A **chronological pattern** of main points represents the evolution of the main idea over time.

The launch sequence for an airplane from an aircraft carrier is a carefully practiced dance in six steps:

1. The flight deck crew moves the plane into position at the rear of the catapult and attaches the towbar on the plane's nose gear to a slot in a shuttle. The crew positions the holdback between the back of the wheel and the shuttle.
2, The flight crew raises the jet blast deflector (JBD) behind the plane
3. When the JBD, towbar and holdback are all in position, and all the final checks have been made, the catapult officer gets the “catapults ready” signal from the catapult control pod.
4, The catapult officer opens valves to fill the catapult cylinders with high-pressure steam from the ship's reactors.
5. When the cylinders are charged to the appropriate pressure level, the pilot the plane's engines to full power.
6. The catapult officer releases the pistons, and the force causes the holdbacks to release. The steam pressure slams the shuttle and plane forward and away.

In the **problem-solution** ordering of the body of the speech, a problem is identified, followed by a solution to the problem.

Problem: A Russian surface-to-air missle in 1960 downed Francis Gary Powers's U-2.

Powers was a 31year old former Air Force pilot who was flying for the CIA. His mission was to fly at 70,000 feet and to photograph military installations.

His U-2 had long glider-like wings married to the fuselage of a Lockheed F-104 Starfighter. To save weight, the U-2 had no conventional landing gear, taking off from a dolly and landing on skids.

Powers was flying over Sverdlovskat, a Russian city of 1.3 million people. At 70,000 feet he was hit by a Russian SA-2 surface-to-air missle, which destroyed the plane

Powers was captured, shown to the world, and imprisoned.

Russia's capacity to shoot down the high-flying – but slow – U2 meant the USA was without a reliable way to overfly guarded airspace.

Enter: Kelly Johnson and Lockheed's Skunk Works

Johnson was an aircraft designer and head of Lockheed's design program. He is responsible for numerous advances in airplane design, including the P-38 Lightning, P-80 Shooting Star, and F-104 Starfighter.

Johnson was the first team leader of The Skunk Works, a super-secret, high-priority design and test unit of Lockheed. Engineers were not encumbered by bureaucratic rules, and they were able to accelerate projects to very fast production schedules.

Solution After several years of secret work, the first SR71 went wheels up in 1964. It served until 1998, and in this period none was lost to enemy action.

Since 1976, it has held the world record for the fastest air-breathing manned aircraft.

Containing many innovations in materials, design and construction, the SR71 could cruise at mach 3, easily outrunning any Russian SAM.

Spatial or geographic

The aircraft carrier USS Intrepid has been converted from a war ship to a museum.

It is permanently moored in the Hudson River on Manhattan's west side.

You can tour this storied ship. **Four** decks are open to the public and populated by exhibits and docents.

1. The topmost deck is the FLIGHT DECK. That is the open-air takeoff and landing deck that supports the Intrepid as a seaborne airport.

   On the FLIGHT DECK you can see an SR-71, an F-14 Tomcat, a MIG-21 and more.

2. Below the FLIGHT DECK is the HANGER DECK. That's where aircraft are stored when not engaged in flying missions.

On the HANGER DECK you can see the huge catapault that launches airplanes from the Flight Deck, aircraft elevators that raise planes up to the Flight Deck, and more.

3. Below the HANGER DECK is the GALLERY DECK. Here all the ordnance is prepared for use, and in the heart of the ship are Air Control rooms, Radar room, and Radio room.

4. And finally, at the deepest level of the ship, is the THIRD DECK. Here is where sailors live.

On the THIRD DECK are the First Class Mess, the Galley, the General Mess and Ward Rooms.

Although not providing the greatest in creature comforts, the Intrepid served to care for its men and for the United States of America at war. Quite a lot to expect from an airport.

Cause-Effect

The wheels up rotation of an airplane has remained constant on every airplane since the Wright Brothers' 1903 Flyer.

A propeller **causes** air to flow over a specially-designed wing. The propeller also creates thrust, causing the plane to move forward.

The distance over the wing from a spot at the front to a spot at the back Is farther than the distance between the two spots under the wing.

That means an equal amount of air spread over a larger distance would maintain a lower air pressure above the wing than would the air below the wing.

The **effect**, of course, is the creation of **lift**.

The two ratios which must be managed for all airplanes are (1) lift must exceed weight, and (2) thrust must exceed drag.

Question-Answer

Each time I fly from Akron-Canton airport, I wonder what would happen if we were to lose power while climbing.

Military airplanes have ejection seats, of course. I always thought those would be a cool ride. Until I went to NASA flight school.

Did you ever wonder what it would be like to pop out of an airplane in an ejection seat?

Well, the answer is, “It ain’t pretty.”

A. The pilot experiences an acceleration of about 12–14 g

> A typical person can handle about 5 g before losing consciousness

B. Compression fractures of vertebrae are a recurrent side effect of ejection.

C. Finally, when an aircraft is equipped with the Zvezda ejection seat and the pilot is wearing special protective gear, heor she is able to eject at airspeeds up to 870 mph and altitudes of 82,000 feet. But it’s like being in a high-speed head-on collision of your Toyota with a fully loaded tractor rig.

Nope, nothing at Akron-Canton is like military aircraft.