Prioritize Your Flight: PROS and CONS of Airplane Features

- **Personal Overhead Lighting**
  - Pros: Provides comfort to passengers when reading and can dim during nighttime flights.
  - Cons: Each light, switch, and wiring add additional weight to the aircraft. Running individual lights is also less energy efficient than running larger cabin lights.
  -

- **Fuel Efficiency**
  - Pros: Decreases the amount fuel and the emissions used by the aircraft.
  - Cons: Requires tradeoffs such as fewer cabin luxuries, slower flight times, and more weight restrictions on the aircraft.
  -

- **Hot Water System**
  - Pros: Makes washing hands in restrooms possible.
  - Cons: Requires separate plumbing, holding tank, and power systems that add weight to the aircraft and requires additional power usage.
  -

- **Drinks**
  - Pros: Provide comfort to passengers, especially during long flights.
  - Cons: The drinks, cups, ice and service carts all add weight to the aircraft. More drinks than needed are stored on the aircraft to give passengers variety. Single use containers add to waste.
  -

- **Structural Design**
  - Pros: New designs, materials, and manufacturing techniques can produce aircraft that are lighter and have less drag, decreasing their overall fuel use.
  - Cons: Designing and building new aircraft is very expensive. Replacing aircraft before the end of their life can be costly.
    -

- **Bathrooms**
  - Pros: Provide comfort to passengers and may be necessary for some passengers, especially on longer flights.
  - Con: The electrical, structural, and plumbing systems that must be used in aircraft add weight, take up a large amount of the cabin room, and add to maintenance costs.
    -

- **Number of Passengers**
  - Pros: Additional passengers on each aircraft increases the efficiency of each flight and lowers the costs for each passenger.
  - Cons: Additional passengers on each aircraft decreases passenger comfort by limiting each passenger's space and individual attention from flight crew.
  -

- **Aisle Lighting**
  - Pros: Helps passengers when using aisle when lights are dimmed, also directs passengers to exits during an emergency.
  - Cons: Each light and its wiring add weight to the aircraft and uses energy, lowering its efficiency.
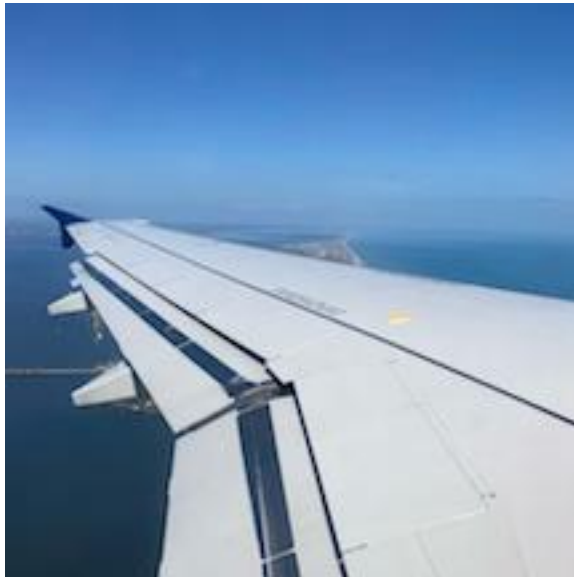 -

- **Arrangement of Seats**
  - Pros: Provides comfort to passengers by allowing them to sit in groups.
  - Cons: Unable to fit as many passengers on each aircraft.
  -

- **Wing Design**
  - Pros: Changes in wing design can increase lift and reduce drag, increasing the efficiency of an aircraft.
  - Cons: Changes in designs can be expensive and may have other tradeoffs, such as stability of the aircraft.
  -

- **Coffee/Tea Maker**
    - Pros: Hot drinks provide comfort to passengers, especially during long flights.
    - Cons: The equipment needed to heat, store, and serve these drinks increases the overall weight and energy use of the aircraft.
    -

- **Alternative Fuel**
    - Pros: Alternative fuels give out less emissions and reduce the need for petroleum fuel. They are also designed to be more reliable, reducing the time and costs of maintenance.
    - Cons: Electric propulsion alone may not offer enough thrust for larger airplanes at takeoff.
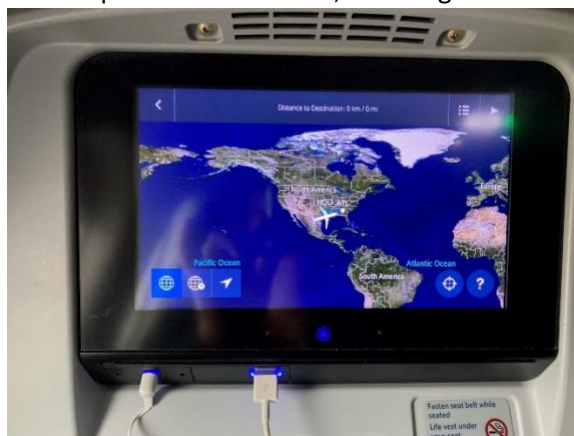   -
- **Intercom System**

- o Pros: Allows aircrew to communicate with and give updates to passengers. Aircrew and give instructions to passengers during an emergency.
- o Cons: The speakers and wiring required for the intercom system add weight to the aircraft that decreases its efficiency.
  - o

- **Screens in Seatbacks**
  - o Pros: Provides comfort to passengers by giving flight data, shopping, and in-flight entertainment.
  - o Cons: The screens, its wiring, and wireless data equipment, add weight and power consumption to the aircraft, reducing its efficiency.
    - o

- **Cost Per Carryon Bag**

- o Pros: Low cost of carryon bag allows passengers to feel comfortable packing items needed for short trips.
- o Cons: The additional weight of baggage decreases the efficiency of the aircraft, and the space required to store carryon baggage limits interior space of the aircraft.

- o

- **Personal Overhead Fan**
  - o Pros: Gives additional comfort to passengers by providing fresh air and allowing passengers to adjust personal temperature.
  - o Cons: The additional vents and plumbing for each passenger adds to the overall weight and complexity of the aircraft, decreasing its efficiency.

  - o
- **Less Noise Pollution**

- Pros: Decreased noise or aircraft improves the quality of life of people who live in areas of high air traffic, especially near airports.
- Cons: The technology to decrease the noise of aircraft is currently expensive and decreases the efficiency of aircraft.
  -

- **Reclining Seats**
  - Pros: Provides comfort to passengers by allowing them to recline into a more comfortable position during flights.
  - Cons: The seat reclining feature adds additional weight to each of the seats and the aircraft as a whole.
  -

- **Cost of Ticket**
  - Pros: Lower ticket costs make air travel more accessible to travelers.
  - Cons: Lower ticket costs may decrease the number of amenities provided by the airline and decrease an airlines investment in advanced technology.
  -

- **Snacks**
  - Pros: Provides comfort to passengers during flights by providing something light to eat.
  - Cons: The individually packaged snacks provided on aircraft add to the waste created by each aircraft as well as the weight of the aircraft.
  -

- **Charging Outlets**

- o Pros: Provides comfort and a service to passengers by allowing them to power and charge their personal electronic devices.
- o Cons: The equipment and wiring needed for the charging outlets adds to the weight and power use of the aircraft.
  - o

- **Cost Per Checked Bag**
  - o Pros: Lower checked bag prices allow passengers to pack extra belongings for longer stays at their destinations.
  - o Cons: Lower prices for checked bags encourage passengers to bring additional baggage and weight on aircraft, increasing its overall weight and lowering its efficiency.
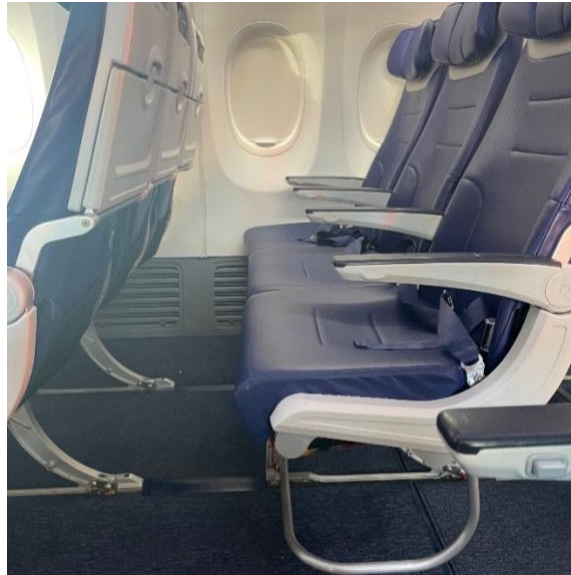   - o

- **Fewer Emissions**

- o Pro: Decreasing the number of emissions per amount of fuel used lowers the environmental impact of air travel.
- o Cons: Currently, decreasing aircraft emissions requires expensive investment in technology as well as lowering the fuel efficiency of each aircraft.
  - o

- **Leg Room**
  - o Pros: Increased leg room provides additional comfort to passengers by allowing more personal space and more comfortable seating positions.
  - o Cons: Increased leg room decreases the number of passengers that can be placed on each flight, lower the overall efficiency of air travel.
    - o

- **Meal Options**
  - Pros: Providing meal options to passengers provides comfort by allowing passengers with different dietary preferences to have a meal on longer flights.
  - Cons: The additional weight needed for several different meal options as well as all the space and equipment needed to prepare the meals adds weight to the aircraft and lowers its efficiency.
  -