

Aircraft Weight

Activity Objectives

- To compute the weight of two airplanes
- To compare the weight of the two airplanes

Materials

- ✓ Pencil
- ✓ Worksheet

Background

All airplanes have a limit to the amount of weight they can safely carry into the air. This is called Maximum Gross Weight. The pilot must figure the weight of the passengers, baggage, and weight of the aircraft including fixed equipment, engine coolant, hydraulic fluid, unusable fuel and oil. All the weight must be added to the empty weight of the airplane. **Decide whether Airplane A or B is over the maximum gross weight of 2,300 pounds.**

Airplane A

1,200 pounds empty weight

8 quarts of oil (7.5 lb. per gal)

50 gallons of fuel (6 lb. per gal)

Front seat passengers (2) 340 lb.

Rear seat passengers (2) 244 lb.

Baggage 200 lb.

Airplane B

1,200 pounds empty weight

8 quarts of oil (7.5 lb. per gal)

40 gallons of fuel (6 lb. per gal)

Front seat passengers (2) 400 lb.

Rear seat passengers (2) 256 lb.

Baggage 190 lb.