

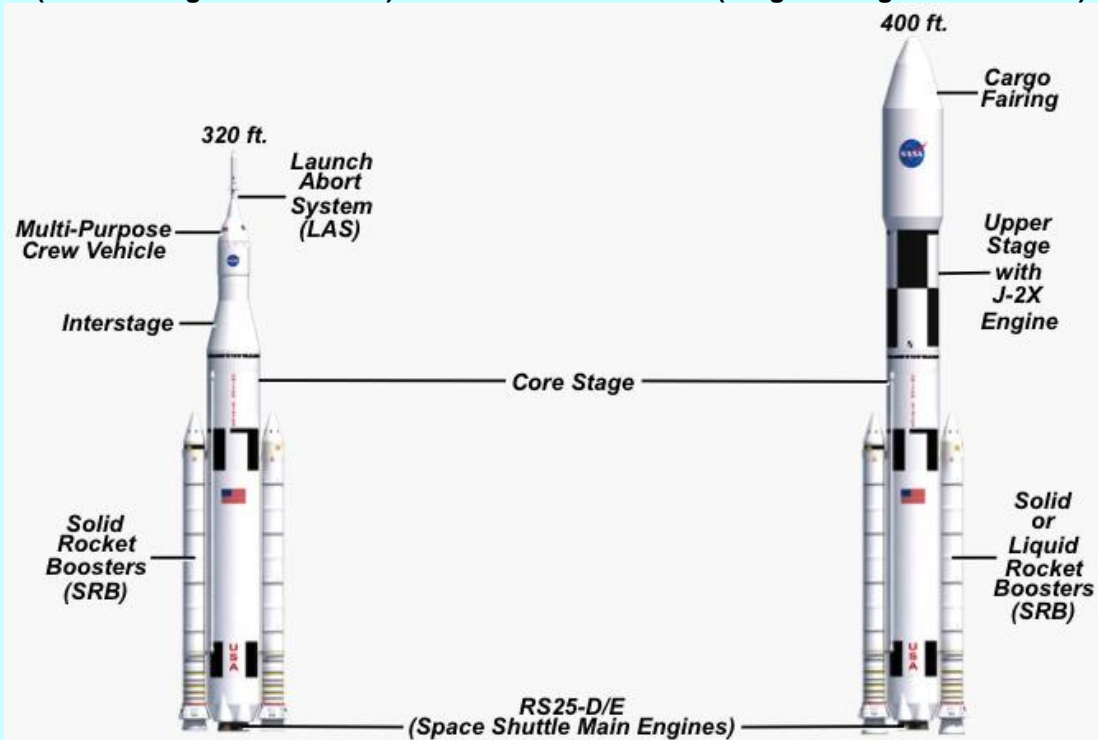
# U.S. Space Launch System (SLS) Fun Facts

*The Biggest, Most Capable Rocket Ever Built,  
for Entirely New Human Exploration Missions Beyond Earth's Orbit*

- Designed to be flexible and evolvable for crew or cargo missions
- Safe, affordable, and sustainable to advance America's exploration of space

## SLS Initial Lift Capability

*More than double any operational vehicle today.  
(Crew Configuration Shown)*



## SLS Evolved Lift Capability

*More than any past, present, or future vehicle.  
(Cargo Configuration Shown)*

### Liftoff Weights & Sizes

Weight: 5.5 million pounds

- Equivalent to 24 fully-loaded 747 jets

Height: 320 feet

- Taller than the Statue of Liberty

### Payload

70 metric tons (154,000 pounds) to orbit

- 77 one-ton pickup trucks' worth of cargo
- Equivalent of 12 fully grown elephants

### Thrust/Power

At liftoff, has 8.4 million pounds of thrust, more than 31 times the total thrust of a 747 jet.

Produces horsepower equivalent to:

- 160,000 Corvette engines
  - 13,400 locomotive engines
- 10 percent more thrust than the Saturn V at liftoff.

Weight: 6.5 million pounds

- Equivalent to 29 fully-loaded 747 jets

Cargo Volume:

- Could carry 9 school buses

Height: 400 feet

- Tall as a 40-story building

130 metric tons (286,000 pounds) to orbit

- 143 one-ton pickup trucks' worth of cargo
- Equivalent of 21 fully grown elephants

At liftoff, has 9.2 million pounds of thrust, more than 34 times the total thrust of a 747 jet.

Produces horsepower equivalent to:

- 208,000 Corvette engines
  - 17,400 locomotive engines
- 20 percent more thrust than the Saturn V at liftoff.

## Engines

### Solid Rocket Boosters (SRBs)



- If their heat energy could be converted to electric power, the two SRBs firing for 2 minutes would produce 2.3 million kilowatt hours of power, enough to supply the entire power demand of over 92,000 homes for a full day.
- Each burns 5 tons of propellant per second.

### RS-25D/E (Space Shuttle Main Engine)



- Power generated by 3 engines is equivalent to the output of 12 Hoover Dams.
- If water, rather than fuel, were pumped by 3 SSMEs, they would drain a family-sized swimming pool in 25 seconds.

### J-2X Upper Stage Engine



- Produces the equivalent power of 2 Hoover Dams.
- Uses 217 gallons (821 liters) of propellant per second.