

THIS IS ROCKET SCIENCE

The following is a timeline for a space shuttle launch. Use the launch sequence on the right to complete the three missions on the following page.



Note: T Refers to the time of launch. So if it says T-3 hrs., that means that it is 3 hours **before** the launch. If it says T+9 min, that means that it is 9 minutes **after** the launch.

T - 3 hrs: Crew departs for launch pad

T - 9 min: Start automatic ground launch sequence

T - 31 sec.: On-board computers take over launch sequence

T - 6.6 sec: Shuttle's main engines ignite

T - 3 sec: Shuttle's main engines in lift off position

T - 0 sec: Launch - Solid Rocket Boosters ignite and Shuttle lifts off the pad

T + 20 sec: Shuttle rolls right

T + 60 sec: Shuttle engines are full throttle

T + 2 min: Solid Rocket Boosters separate at an altitude of 28 miles

T + 8.5 min: main engines shut down

T + 9 min: External tank separates from the orbiter

T+ 45 min: Engines fire to reach a higher orbit at an altitude of 250 miles

Missions usually last around 9 days.

