



AMERICAN ROCKETRY CHALLENGE 2027

6 DECEMBER 2026

**REGISTRATION
DUE**

4 APRIL 2027

**QUALIFICATION
FLIGHTS DUE**

15 MAY 2027

**NATIONAL
FINALS**

CHALLENGE SPECIFICATIONS

- Teams must be made up of at least three but no more than ten 6th through 12th graders from a US school or host organization (national youth organization, incorporated youth-focused non-profit, incorporated homeschool association).
- Rockets will have the usual overall limits: no less than 650 millimeters overall length, no more than 650 grams liftoff weight (with rocket motor), and single-staged using no more than 80 N-sec of combined total impulse of ARC-approved model rocket motors.
 - Note: A number of Aerotech motors have been discontinued recently by the manufacturer, including all those using the 24/40 reloadable casing, and these discontinued motors have been removed from the 2027 ARC-approved list.
- Rocket airframe must use at least two different-diameter body tubes, one of which must be a 12-inch or greater length of T-80 tube (66 millimeter diameter) and all others must be no less than 10 millimeters different from that (larger or smaller) in external diameter.
- Recovery must use one or more parachutes and all parts of the rocket must remain tethered together during recovery.
- Payload will be two large eggs, 55 to 63 grams in mass, carried in any orientation.
- Altitude target for qualification flights will be 800 feet, as measured by one of the ARC-approved altimeter types. Finals targets will not be 800 feet but will be between 775 and 825 feet.
- Duration target for qualification flights and the Finals will be 37 to 40 seconds.