AMERICAN ROCKETRY CHALLENGE 2025
QUALIFYING/SELECTION FLIGHT REPORT

TEAM'S SCHOOL/ORGANIZATION: _____

AIA TEAM NUMBER: _____ ADULT SUPERVISOR: _____

DATE OF THIS FLIGHT: _____ QUALIFICATION ATTEMPT # (Circle) 1 2 3

FLIGHT REQUIREMENTS (ALL MUST BE CIRCLED "YES" OR THE FLIGHT IS DQ)

Did this rocket weigh less than 650 gm at takeoff, with egg and motors, was it 650mm or more long, and did it use two body tubes with the required diameter constraints, each at least 6 inches long? YES / NO

Did it use motors from the ARC approved list containing a total of no more than 80 N-sec total impulse? YES / NO

Did it contain two Grade A large, raw hen's eggs oriented sideways and an ARC-approved altimeter? YES / NO

Did the rocket separate into two parts for recovery, each with parachute recovery? YES / NO

Did this rocket make a safe flight under the ARC 2025 rules & NAR Safety Code? YES / NO

Did the rocket land safely and without any human intervention? YES / NO

Did both eggs carried by the rocket remain uncracked after the flight? YES / NO

SCORING

TIMER # 1 (NAR OBSERVER): _____ . _____ SEC HUNDREDTHS

TIMER # 2 (OTHER ADULT): _____ . _____ SEC HUNDREDTHS

OR

AVERAGE TIME: _____ . _____ SEC HUNDREDTHS

ALTIMETER ALTITUDE: _____ FEET

EXCESS ABOVE 44.00 SEC: ___ . ____

MULTIPLY EXCESS BY 4: ____ . ____

SHORTFALL BELOW 41.00 SEC: ___ . ____

MULTIPLY SHORTFALL BY 4: ___ . ____

DIFFERENCE FROM 790 FEET: _____ (NO NEGATIVES)

FINAL SCORE (SUM) ____ . ___
Put <u>only</u> "DQ" if any answers above are "no"

SUPERVISING TEACHER/ADULT CERTIFICATION

I certify that the student members of this team designed, built, and flew this rocket without my assistance and, to the best of my knowledge, without the assistance of any other adult or any person not on the team. I also certify that no more than the allowed number of official qualification flight attempts were made by this team, and that the team information on file at AIA is current. I understand that team membership can no longer be changed and only team members on file at AIA with valid parent consent forms are eligible to receive prizes.

SIGNATURE: _____ PRINT NAME: _____

ADULT N.A.R. MEMBER OBSERVER CERTIFICATION

I certify that I am an NAR member age 21 or older who personally observed this flight, and the above initials and scores are mine, based on my observations. I certify that I am not related to any team members or affiliated with their school or non-profit organization, that this flight was conducted in compliance with the rules of the ARC competition, and that this flight was declared to me to be an official qualification flight before its liftoff.

SIGNATURE: _____ PRINT NAME: _____ PHONE: _____

NAR NUMBER: _____ CITY, STATE: _____ EMAIL: _____

SUBMIT USING ONLINE PORTAL AT ROCKETCONTEST.ORG (Successful flights only)
OR E-MAIL SCANNED COPY TO QualificationFlights@aia-aerospace.org
NO LATER THAN MIDNIGHT (EST) APRIL 7, 2025
Team submits this form if flight is successful, NAR observer submits for DQ flights

GUIDELINES FOR N.A.R. OFFICIAL FLIGHT OBSERVERS

The American Rocketry Challenge program and the NAR count on the local NAR flight observers to be impartial and honest in the way that they score official ARC qualification flights, and to understand and enforce the rules and requirements consistently. Here are some guidelines for this duty:

1. **Be an NAR member**. You must be a current dues-paid adult (age 21 or older) member of the NAR as of the day of a flight in order to observe a flight. Membership in other organizations does not count. This is your responsibility to get right; the team trusts you and has no way to know your status. Joining or renewing online the morning of the flight, before the flight, is OK. We check observer membership status in the NAR database for every score report.

2. **Be impartial.** You cannot be related to any member of the team or employed by the organization that sponsored the team. If you are their mentor (which is permissible, but only if there is no other choice) you must not bend any rules for "your" team.

3. **Report all flights.** Teams only get three official qualification flight attempts. Any attempt must be reported to AIA except as noted in #4 below: by the team if successful, by the NAR observer if a DQ. No do-overs due to disappointing performance, weather issues, etc.

4. **All flights count.** Qualification flights must be declared before motor ignition, and must be counted and reported to AIA if the motor ignites, with the following exceptions:
    1. Flights that stick on the launch pad and fire the motor without lifting off do not count.
    2. Flights that experience a catastrophic motor failure do not count. Such failures are explosions that blow out either end closure or rupture the casing. Inaccurate delay times, "chuffing" ignition start-ups due to igniter mis-installation, or failures of reloadable motors due to user mis-assembly are not catastrophic failures and flights that experience these still count as official attempts.
    3. Flights that land in a place too dangerous for recovery or that drift away and are not recovered on the day of flight do not count, and cannot subsequently be counted even if found, once this basis for non-counting has been claimed by the team or declared (for safety reasons) by the NAR observer.

5. **Time accurately**. Two people must time the flight, using digital stopwatches accurate to 0.01 seconds, and one of these timers must be the official NAR observer. Timing is from first motion on the pad until the moment the first part of the rocket's payload section with the eggs and altimeter touches the ground (or tree or building!) or is lost from direct visibility due to distance, terrain, trees, etc. If one timer's stopwatch malfunctions, use the single remaining time.

6. **Report the apogee altitude based on the altimeter's external signal (beeps, flashes, or screen display) only**. Apogee altitudes interpreted off a digital download to a computer post-flight can be used for flight analysis, but the official altitude score must only be what the altimeter beeps, flashes, or displays on its screen.

7. **Disqualify if you have to**. If a rocket drops off a part in flight, goes unstable, streamlines in dangerously on recovery, or cracks either egg then the flight must be disqualified. The NAR observer takes custody of the score report for such flights and must send it in to AIA.