



**Science Olympiad
2021 National Tournament
Wright Stuff Additional Information**

- For the 2021 National Tournament, Wright Stuff will be a Trial Event not counting towards overall team standing.
- This event will be conducted through document and video submission.
- The link to submit materials and the “Event Code Word” that must be spoken at the start of the video will be released in Scilympiad at 4:00 AM PDT/MST on Friday, May 14th.
- All logs, materials, and videos must be uploaded within 48 hours of teams logging into Scilympiad and first accessing the “Event Code Word” but no later than 11:59 PM PDT/MST on May 19th.
- The coach is advised to review his or her team’s video prior to submission to ensure that all the items presented here are covered and all rules have been followed.
- All rules published in the 2021 Science Olympiad Division C Rules Manual for Wright Stuff apply, except that the teams will be providing measuring devices and doing the measurements on video to demonstrate compliance. Timing will remain the responsibility of the Event Supervisor based on video provided.
- Teams will provide one continuous video (e.g.; no editing, no multiple takes) with the following content:
 - All videos from a cell phone will have the phone in a vertical not horizontal attitude. If not, ***videos sent in sideways or upside down attitudes may not be accepted.***
 - Participants should state the “Event Code Word” found by logging into the event in Scilympiad.
 - Show conformance to rule **3. Construction Parameters** particularly:
 - Plane mass
 - Wingspan and chord length
 - Stabilizer Span
 - Propeller size
 - Please confirm how the plane meets the dimensions and measure models while on a flat, darker surface for contrast.
 - Please demonstrate how the plane meets additional bonus scoring.
 - For rule **4. The Competition**:

- Flight logs as prescribed (rule 4.c) need to be provided as a separate file in Excel, Word, plain text or PDF format along with the video. It is the team's responsibility to ensure that all documentation submitted is legible. Illegible Flight Logs (due to miniscule size or poorly handwritten) **may be deemed incomplete.**
 - The flying portion of the competition should be videoed as if the team were competing in an in-person event. The flight portion of the video should come after all the previous steps.
 - Make sure the student can be heard declaring if practice or official.
 - If the plane flies stably please zoom in slightly for the launch with a view of the model then pan away for the flight. Videos that do not show the launch and landing will be discarded.
 - Please announce any intentions before the first launch if the aircraft will be flown in opposing orbits.
 - Feel free to show your timers, but the official times will be made by the Event Supervisor based on the video.
- As part of the data verification for your plane, please complete the Wright Stuff checklist found in these resources (or on the National website, soinc.org) . The complete checklist should be submitted with your video and other documentation. Make sure to record flight times on the checklist as well.



WRIGHT STUFF C

Team Checklist – 2021

Rank:	_____
Tier:	_____
Final Score:	_____

Team Number: C School & Team Name: _____

Student Names: _____

PLANE A PLANE B ← CHECK-IN (UP TO 2 AIRPLANES)

Construction & Competition Parameters:

T	F	T	F	3.a. If kits are used, the airplane does not contain any pre-glued joints or pre-covered surfaces.
T	F	T	F	3.b. Boron filaments are not used in the construction of the airplane.
T	F	T	F	3.c. Total airplane mass throughout flight (excluding rubber motor) ≥ 8.00 g.
T	F	T	F	3.d. The wing(s) have horizontally projected wingspan ≤ 30.0 cm and wing chord ≤ 8.0 cm.
T	F	T	F	3.d. The horizontal stabilizer has horizontal projected span ≤ 12.0 cm and chord ≤ 6.0 cm.
T	F	T	F	3.e. The diameter of the propeller is ≤ 8.0 cm.
T	F	T	F	3.e. Variable-pitch propellers that include mechanisms to actively change the blade diameter or angle are not used.
T	F	T	F	3.f. A rubber motor of any mass is the sole power for the airplane after release.
T	F	T	F	3.h. The airplane is labeled so that the Event Supervisor can easily identify to which team it belongs.
T	F	T	F	4.b. Participants do not receive outside assistance, materials, or communication once they enter the cordoned off competition area to practice, to trim, for inspection, or to compete.
T	F	T	F	4.m. Participants do not steer the airplane during flight.

1. T F 3. T F **PLANE MEETS ALL CONSTRUCTION AND COMPETITION PARAMETERS ABOVE**

Bonus:

<u>2. T</u>	<u>F</u>	<u>4. T</u>	<u>F</u>	5.c. The airplane has the surface of the wing between at least 2 ribs of the leading and trailing edges or at least one of the wing tip fences completely marked with black marker or black tissue, or the whole surface is black if no ribs are present.
<u>5. T</u>	<u>F</u>			5.b. Is the first airplane flight, trim or official, launched within 3 minutes of the return of motors?

FLIGHT LOG

6. Complete Incomplete (10% deduction) Not present (30% deduction)	5.e-f. Is flight log complete, incomplete or not present? (Circle one) <i>Complete means including 6 or more parameters (including motor size before windup, number of turns on the motor or torque at launch, flight time, and 3 additional) for 10 or more test flights prior to the competition.</i>
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1ST FLIGHT 2ND FLIGHT ← OFFICIAL FLIGHTS (IN 8 MIN.)

7. A B 11. A B Which airplane from above was used?

8. ____:____.____ 12. ____:____.____ **Timer 1**

9. ____:____.____ 13. ____:____.____ **Timer 2** ← **Flight Times**
(minutes:seconds)

10. ____:____.____ 14. ____:____.____ **Timer 3**

5.d. **Bonus:** The team uses the same airplane for both flights (all airplane components, except for the rubber band from the first flight, are used on the second flight), and on the first flight the airplane completes at least one orbit (360-degree horizontal turn) in either a clockwise or counterclockwise direction and the team makes adjustments to the airplane such that it completes at least one orbit in the opposite direction on the second flight. (If “True,” flight times will be added together for official score.)

15. T F

16. T F General Rule: The team is disqualified. (Notify the team and their coach as soon as possible.)