

!!!!!!! MUST READ !!!!!
SPRING 2024 Green Prix
Advisor Guidance for F24 Presentations

It is important to remember that a primary goal of the GreenPrix is to advance STEM principles and concepts, which is the primary reason that the presentation score makes up 33% of the overall team score for the event (33.3% race 1, 33.3% race 2, 33.3% presentation).

In order to enhance the STEM content of the race, the presentation format has been completely changed for the Spring 2024 event. Rather than the unstructured and hard-to-judge presentations of the past couple of events, we are trying a different method to engage the students. Rather than an oral or multi-media style presentation, we are implementing a demonstration method where the students will be challenged to demonstrate their skills associated with their F24 race cars.

The basic formula consists of the team being faced with a set of challenges related to the race-worthiness of an F24 car. GreenSpaces will provide a representative F24 car (not your car) at the presentation tent. There will be separate tents and cars for High School and Middle school teams. Each team will be scheduled to arrive at the tent prepared to inspect the F24 car and make it race ready. The subject car will be modified ahead of time by the presentation judges, implementing a number of faults to be detected and corrected by the team. The subject car will be a stock F24 car.

The [F24 Race Prep Checklist](#) will be provided to the team to guide their inspection of the car. Any checklist line item that is found to be deficient during the inspection will need to be investigated, the fault determined, corrective action defined and, time permitting, implemented. Simple faults like loose nuts and bolts, tire pressures, minor wiring issues, blown fuses and so on should be corrected (marked "FIXED" on checklist). More complicated issues like front wheel alignment, burned out motor and such will need a detailed verbal explanation from the team as to how they would go about fixing the problem (marked "DEFERRED" on checklist).

Scoring of the team's performance will be based on several criteria as outlined in [Spring 2024 Green Prix F24 Presentation Rubric.docx](#).

Detailed Procedure

1. Each team will be allotted 15 minutes to perform their presentation demonstration. **The clock starts at the scheduled time and stops 15 minutes later. If the team arrives late for their scheduled time, they will **not** have the full 15 minutes to complete their demonstration.**
2. The team will select two (2) to five (5) students who will be the "over the wall" (OTW) inspection crew. One (1) of the crew should be selected to be the "Crew Chief". The Crew Chief's job is to coordinate the other OTW crew members while they progress through the [F24 Race Prep Checklist](#) identifying and correcting any discrepancies or deficiencies. A minimum OTW wall crew is 2; a Crew Chief and one other. The maximum OTW crew is 5; a Crew Chief and four others.
3. The remainder of the school team may be present in the tent during the exercise, and can offer suggestions and encouragement. However, only the OTW crew members can actually work on the car.
4. The advisor(s) may be present in the tent during the exercise, but are requested to remain as observers only. The exercise is for the students to demonstrate the skills and knowledge they have gained during the Green Prix race car build and preparation.
 - a. The advisors are encouraged to prepare their team in preparation for this exercise by guiding the selection of the OTW team members and the Crew Chief.
 - b. Assigning each OTW member a responsibility for part of the car, and providing instruction and guidance on how their part operates and is maintained, what can go wrong, and how to fix it, will greatly aid the team.
 - c. Performing mock demonstrations with the OTW team using the [F24 Race Prep Checklist](#) ahead of time will be beneficial to achieving a high presentation score on race day.
5. The team will be required to bring their own tools to use for fixing the car if faults are found during the inspection process. We did this so that the teams will be familiar with their own tools, especially things

like Multimeters and tire pressure gauges. We will provide compressed air for the tires. The list of necessary tools is as follows:

- a. Multimeter
 - b. Tire Pressure Gauge
 - c. Wrenches: 10, 13, 14, 15, 17 mm
 - d. Ratchet with sockets: 10, 13, 14, 15, 17 mm
 - e. Metric hex key set (“allen wrenches”)
 - f. Adjustable (“crescent”) wrench
 - g. Pliers
 - h. Wire cutters
 - i. Wire stripper
6. The demonstration exercise will be timed with a hard stop at the completion of the time slot. The state of the car at the hard stop time will be taken into account in the scoring. Teams who finish all the required steps before the hard stop will have that accomplishment reflected in their score.
 7. Teams who arrive late will have the amount of time that they are late subtracted from their exercise time allotment.