



FIELD TRIPS, EXCURSIONS AND OTHER STUDENT TRIPS

*Copy to
AB
LW 3/18/25
CW*

Students are to submit permission slips signed by parent(s)/guardian(s) prior to going on the scheduled trip and must be appropriately dressed. A teacher(s) and/or other qualified individual(s) must accompany every group.
NOTE: A detailed itinerary is to be submitted with this form. Including a breakdown of total anticipated costs; showing itemized expenses (transportation, ticket prices, etc.) and method(s) of payment.

Teacher(s) Making Request: Carl Nielsen Grade Level: 11/12 Request Date: _____
Date(s) of Proposed Trip: May 20-22, 2025 Event Name: DIS 2025 Championship Race
Phone number(s) for 24 hour contact in case of EMERGENCY: 781-831-3417 Destination: George R. Brown Convention Ctr.
Address: Houston, TX

NOTE: If this is an OVERNIGHT or OUT-OF-STATE field trip, has it been approved by the Plymouth School Committee within the last 3 years? YES NO
If YES, indicate the date of School Committee approval: _____

IF THERE IS A CONTRACT INVOLVED WITH THE TRIP, IT MUST BE REVIEWED BY THE BUSINESS ADMINISTRATOR.

- Relevance of the "proposed" field trip - *(Please attach a detailed response to the following 3 questions):*
- 1.0 How does this proposed field trip focus on helping students acquire the knowledge and skills described in the Common Core of Learning established by the Board of Education?
 - 2.0 How the proposed field trip is integrated into the curriculum, or are content materials reflective of one of the core subject areas as described in the Common Core of Learning established by the Board of Education?
 - 3.0 How does the proposed field trip have learning outcomes consistent with the knowledge and skills described in the Common Core of Learning established by the Board of Education?

Education Follow-Up by ALL Students: _____

Provisions for Students NOT Participating: _____

Number of students NOT participating: Number of students who are participating: Do any students require medication? * YES NO
TBD

*If any student requires medication, state the provisions for attending to their medical needs: _____

Estimated
Cost/Student: Cost/Teacher: Cost/Chaperone: District Cost:

Type of Transportation: Van, Plane Adult/Chaperone: TBD
Departure Time/Place: 3/20 5 AM from PNHS Return Date/Time: 11 PM 3/22

RECOMMENDATIONS:
Dept. Head: [Signature] Approved Disapproved Date: 3/13/24
Principal: [Signature] Approved Disapproved Date: 3/12/24
Business Administrator: [Signature] Contract - YES Contract - NO Date: _____
Superintendent: [Signature] Approved Disapproved Date: _____

If there is not contract required, you MUST write "NO CONTRACT" in place of signature.

COMMENTS: _____

I am requesting approval for travel with our PNHS Drone Racing Team (members of our PNHS Robotics Team) to the 2025 Drones In School National Championship Race in Houston, TX. The student lead team has finished the season in the Top 10 of High Schools nationally, and received an invitation to Championship Race after placing 1st in a Wildcard Simulator Race.

This opportunity supports student learning by immersing them in a real-world STEM competition that integrates engineering, technology, problem-solving, and teamwork. The Drones In School National Championship requires students to apply skills in mathematics, physics, computer science, and engineering design, directly aligning with the Board of Education's emphasis on critical thinking, problem-solving, and technical literacy. Students gain hands-on experience in manufacturing, system assembly, aerodynamics, electronic circuitry, programming, and data analysis for troubleshooting. Additionally, the competition format fosters collaboration, communication, and leadership, as students have worked in defined roles including Project Manager, Design Engineer, and Marketing Coordinator to develop and present their work throughout the season. These skills are transferable across multiple disciplines and prepare students for higher education and career pathways in STEM fields.

The field trip is directly integrated into the goals of our Robotics Team, as well as the Engineering Technology curriculum (of which the four students on the team are currently studying) through its emphasis on applied physics, CAD design, and systems engineering. Additionally, the competition requires students to develop a portfolio, team display, and marketing video, which aligns with English Language Arts (ELA) standards related to technical writing, digital communication, and presentation skills. The mathematical principles involved in drone flight mechanics and race strategy also support algebra, geometry, and physics concepts, making this a cross-disciplinary learning experience.

The learning outcomes of the Drones In School competition align with scientific inquiry, engineering design, computational thinking, and technical communication, which are all key components of the Common Core of Learning. Specific learning outcomes include:

- **Engineering & Design Process Mastery:** Students have applied problem-solving and iterative design skills as they build, test, and refine their drones based on performance data throughout the season.
- **Technical Proficiency:** Students have demonstrated knowledge of aerodynamics, electronics, and flight mechanics, reinforcing principles from physics and engineering coursework.
- **Mathematical Application:** Students have utilized data analysis, measurement, and optimization strategies to improve drone performance.
- **Collaboration & Communication:** The competition structure promotes teamwork, leadership, and professional communication, preparing students for college and career success.
- **Real-World Application of STEM Skills:** By competing in a national-level event, students experience high-level problem-solving under pressure, mirroring professional engineering and business environments.

Sincerely,
-Carl Nielsen
Engineering Technology Instructor