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**MOORESTOWN HIGH SCHOOL**

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**TO:** S. MCCARTNEY  
**FROM:** A. SEIBEL  
**SUBJECT:** OVERNIGHT TRIP APPROVAL REQUEST  
**DATE:** 4/9/18  
**CC:** J. D'ANGELO

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Per the memo, I am requesting Board of Education approval for the following potential overnight trip. This trip is similar to the trips in the past few years to NASA in Virginia, where students shared projects with scientists and engineers at NASA, as well as participated in other career and scientific experiences. Please see the attached documents that support the summaries below.

**MHS FIRST Robotics:**

Lead:	Rich Wilczewski
When:	June 7-10, 2018
Where:	Kennedy Space Center Cape Canaveral FL
Cost to Student:	up to \$480 plus food

Please feel free to let me know if any additional information is necessary.

**Destination: Innovative Conceptual Engineering Design Conference at Kennedy Space Center Cape Canaveral FL**

**Date of Trip: 6/7/18 – 6/10/18**

**TRIP CHECKLIST (to be completed for single day and out-of-state overnight trips)**

- Chaperone(s) will inform students that all school policies and rules will be in effect. Any student found to be in violation will be subject to the consequences specified in the Student / Parent Handbook as well as board policy and the law.
- Chaperone(s) will provide a detailed itinerary to which all students will adhere. Changes during the trip that are beyond the control of the chaperone will be documented.
- Chaperone(s) will provide name, location and phone numbers of attractions and/or hotels.
- Chaperone(s) will obtain the home and cell telephone number of school administrators not on trip.
- Chaperone(s) will be available on site and provisions made in the event of an emergency.
- Chaperone(s) will be given a detailed set of responsibilities from the trip organizer.
- Chaperone(s) will conduct an attendance check any time the group boards a means of transportation.
- Chaperone(s) will identify required provisions for handicapped and medical conditions
- Chaperone(s) has/ have contacted administration for students unable to pay for the cost of the trip.
- Chaperone(s) will have a list of emergency phone numbers for all chaperones on the trip and parent home, cell, and/or work phone numbers
- Chaperone(s) will check with the nurse prior to departure regarding student medical emergency forms.
- Chaperone(s) will acquire from students and parents a completed and signed trip permission form and medical information release form.
- Chaperone(s) will inform students they are not permitted to leave the hotel or designated area of activity at any time unless with, or having the permission of, one of the chaperones.
- Chaperone(s) will confirm student photo identification (if applicable Visa and/or Passport.)
- Chaperones) will review the appropriate attire required for the trip. This applies to day and overnight trips.
- Chaperone(s) will inform students of their required participation in all trip activities with the exception of students with medical conditions which may prevent them from participating.
- Chaperone(s) will document any student damage to public and private property.
- Chaperone(s) will document any existing damage to public or private property (i.e. bus, hotel room).
- Chaperone(s) inform students of the requirement to be on time for all activities (departures, meals, events, etc.).
- Chaperones(s) informs students of their requirement to be in small groups during un-structured activities (such as, but not limited to: shopping, lavatory use and other chaperone approved activities). At no time is a student to be alone at any activity.
- Chaperone(s) will use Board of Education insured drivers (if applicable)
- Male and female chaperones will be required for trips that include male and female students.

- Board of Education will approve faculty to student ratio (If overnight coed trip, appropriate male and female chaperones are required).
- Board of Education non-employee chaperones driving/transporting students has been verified.
- Chaperones will provide location and telephone numbers of nearest medical facility.
- If the trip involves interaction with a body of water, (i.e. canoeing, rafting, tubing) an individual certified in CPR is required to attend.

**OVERNIGHT TRIPS**

- Chaperone(s) will perform a bed check evening. **Once bed check has occurred**, no student is permitted to leave the room until wake-up the next morning.
- Chaperone(s) has provided and reviewed with each student a list of approved/unapproved items for airport security. (If applicable)
- Luggage check sign-off form has been completed.

**INTERNATIONAL TRIPS**

- MEDICAL- Student immunizations have been obtained.

**OVERNIGHT TRIP COST INFORMATION**

Item Description	Subtotal	Total Budget
Airplane		\$3,500
Ground Transportation (Van Rental, Charter Bus)		\$1,522
Lodging 3 Nights		
Male Chaperone Rm	514	
Female Chaperone Rm	514	
2 Rooms for up to 5 Male Students	1,028	
1 Rooms for up to 4 Female Students	514	\$2,570
Kennedy Space Center Admission and Activities	1250	\$1,250
	TOTAL	\$8,842

**Estimated cost per student is \$480.00 plus food costs**

**NOTE: FOR OVERNIGHT AND OUT OF STATE (NOT INCLUDING PHILADELPHIA) FIELD TRIP REQUESTS ARE TO BE SUBMITTED TO THE PRINCIPAL NO LATER THAN THE INDICATED DATE FOR OPERATIONS & FACILITIES COMMITTEE REVIEW AND BOARD OF EDUCATION APPROVAL.**

## OVERNIGHT TRIP INFORMATION

### FOR BOARD OF EDUCATION APPROVAL

**TEACHER/ADVISOR:** Mr. Rich Wilczewski

**CLUB/SPORT/ACTIVITY:** Innovative Engineering Design Class Students

**PLACE OF ACTIVITY** (Include contact name, phone numbers(s) and other pertinent information):

NASA Kennedy Space Center,  
**Address:** SR 405 Kennedy Space Center, FL 32899  
**Phone:** 855 433 4210  
**Website:** <https://www.kennedyspacecenter.com/>

**CONTACT:** Dr. Charles Camarda  
**Phone:**(757) 864-1000 Main Number  
**Phone:**(757) 864-8836 Direct Line

**HOUSING ACCOMMODATIONS** (Include contact name, phone numbers(s) Subject to Availability

**Best Western**  
Jun 7, 2018 to June 9, 2018  
5600 North Atlantic Ave.  
Cocoa Beach, FL 32931  
Direct: 321.783.7621

**DATES:** June 7 to June 10, 2018

**DATE BAGGAGE CHECK:** June 7, 2018

This date may be subject to modification by Dr. Charles Camarda or NASA.

**NUMBER OF SCHOOL DAYS MISSED:** 2 days

**NUMBER OF STUDENTS ATTENDING** 8

**NAMES AND/OR NUMBER OF ADULT CHAPERONES:** (Male and female chaperones will be required for trips that include male and female students)

Mr. Rich Wilczewski  
Mrs. Dana Church Williams

**HOW IS TRIP FUNDED:** MEF Grant, and student contributions

**COST TO STUDENTS;** \$480.00 plus cost of meals. (Three dinners and three lunches estimated to be \$90 - \$100). We have received an MEF grant. The above student cost is based upon eight students paying and participating. The total cost of the trip is budgeted to be \$ 8,842.

**MODE OF TRANSPORTATION:**

Airplane from Philadelphia to Orlando

Ground transportation: Depending on the number of participants and the cost factor, We will rent either a 5 – 7 person car or a 10 person van to be driven by an approved chaperone or we will be chartering a 10 -12 passenger coach from the bus company that will provide a licensed commercial driver. The 10-passenger bus has seat belts but does not have a bathroom.

**NAME OF NEAREST MEDICAL FACILITY AND TELEPHONE NUMBER**

Health First Cape Canaveral Hospital  
701 W Cocoa Beach Causeway,  
Cocoa Beach, FL 32931  
(321) 799-7111

**NAME OF BOARD OF EDUCATION APPROVED LICENSED DRIVERS:**

Mrs. Dana Church Williams

**ITENERARY** (from time of departure to time of return in Moorestown):

- Thursday June 7: Travel to Orlando & Drive to Kennedy Space Center in time for the 6:00 PM Welcoming Ceremony
- Friday June 8: Conference and Presentations at KSC 8:00 AM to 6:00 PM, 6:00- 9:00PM World Language Meeting
- Saturday June 9: Tour of Kennedy Space Center facilities including possible behind the scenes & launch pad tour 9:00 AM to 6:00 PM , 6:00- 9:00PM mini Golf / escape room
- Sunday June 10: Travel Day

**LIST OF ACTIVITIES APART FROM THE ITERARY**

Moorestown High School students in the Innovative Engineering Design class have been working with NASA for the past four years to help them solve the challenges associated with the Colonization of the Planet Mars. This year NASA has invited students from only three high schools from around the country to present their ideas to NASA in person. For the fourth year in a row, Moorestown was one of those schools.



\_\_\_\_\_  
Teacher / Advisor

3/14/2018

\_\_\_\_\_  
Date

APPROVAL

\_\_\_\_\_  
Supervisor

\_\_\_\_\_  
Date

\_\_\_\_\_  
Principal

\_\_\_\_\_  
Date

## **Justification for Moorestown Students of Participating in the Full Engineering Conference Program At Kennedy Space Center**

### **Student Benefits of Participating in This Program**

This is a chance for Moorestown Students to be recognized internationally.

Students who get to experience NASA in this way will reap many benefits. The foremost benefit is the opportunity to do real science with real scientists in an area that is intrinsically important to the individual student. In the process of discovering the ideal research question for them the students have learned much about who they are and who they are to become. One of the key reasons that this program is so successful is because it is driven by an obvious but often underutilized truth, that when a student cares deeply about a question they will learn whatever they need to learn to answer that question. When students get to interact with real scientists in their work place, it peaks the student's interest. But when those same scientists are interested in the students' work it is empowering. Students experiencing this kind of empowerment will have a distinct advantage in college, in their career and in life.

### **STEM In Practice**

By actually touring and experiencing the facilities at Kennedy Space center the students experience real STEM in a real life environment. This is a once in a lifetime opportunity that goes beyond any possible learning experience that could be fostered in the classroom. It gives the students the opportunity to live STEM and to be a part of Human Kind's quest to always continue exploring and expanding into new planets and new worlds. This experience infuses the Science and Engineering Practices, Cross Cutting Concepts and the Core Ideas in all the STEM related courses, into the students' everyday lives. Very few experiences can come close to this one in its ability to positively impact a student's life, college choices and career direction.

### **Once in a Lifetime Opportunity.**

An important part of our job as educators is to expose students to other opportunities that they cannot experience in the classroom. This is a once in a lifetime opportunity. This is an opportunity to visit Cape Canaveral with Dr. Charles Camarda astronaut and PhD who not only rode to space in the space shuttle and stayed in the International Space Station but also engineered the solution to the heat tile problem that almost grounded the Space Shuttle Program.

(<https://www.jsc.nasa.gov/Bios/htmlbios/camarda.html>).

By participating in this unique experience Moorestown students will see real scientists doing their science. Dr. Camarda is a master at inspiring students by helping them realize that their contributions matter to our efforts to explore new worlds. Imagine as a high school student you are standing near the launch pad used by the Apollo mission to take humans to the moon with an astronaut and PhD who is interested in your ideas on how to colonize Mars.

## **College Acceptance Opportunity**

Participation in the ICED program and Epic Education Foundation Conference will often add a unique dimension to a student's college application. In fact one student was told by an admissions director at a prominent engineering university ( Embry Riddle) that his grade point average was the lowest that they have ever accepted but they were motivated to accept him due to his having presented his research finding at NASA's Langley Research Center. A student from Moorestown High school who participated in this conference in a previous year received a letter of recommendation from Dr. Charles Camarda, the Senior Advisor for Innovation and director of the ICED Program. That letter played a role in that student being accepted into the school of his choice.

## **Good for the Students, the School and the Community**

Participating in the event helps distinguish Moorestown Schools as a leader and an innovator in education. It is good for the students, the school, and the community. It is likely to receive positive press coverage. This is only possible because the Moorestown school district goes beyond to provide our students with new opportunities that were not even imagined in the past.

## **Student-Scientist Mentorship**

Our students have been taught the skill of finding a mentor in their area of interest. They have reached out to actual scientists who work on the same or similar questions that the students have embraced. The mentors have responded to the students with emails offering their assistance.

One of our Moorestown students has reached out to Dr. Raymond Wheeler, a renowned NASA scientist who works at Kennedy Space Center on the challenge of growing food in space. By attending the full conference, we expect to have the time for the student to actually meet Dr. Wheeler face to face. If we only go on the weekend those chances will be greatly diminished.

## **Last Year for the Grant**

This is the last year for the MEF grant. It would be a shame not to fully utilize the Grant

## **Innovative Conceptual Engineering Design is an Interdisciplinary/Cross-Curricular Pedagogy**

The Innovative Conceptual Engineering Design Pedagogy (Called ICED) is not limited to STEM courses. It is truly Interdisciplinary and Cross-Curricular across almost every course. Teachers in this program are both encouraged and inspired to involve other teachers from all other disciplines.

Teachers from other courses are asked if they are willing to help students enrolled in their classes, who are also enrolled in the ICED based science / engineering course, to see the connections between difference disciplines. They can accomplish this just by being available to answer questions from their students concerning their research projects that are related to the teacher's class and area of expertise.



Some teachers fill this roll just by being open to answer the students question when and if they come to them. This cross-curricular approach is not intended to make extra work for the already over-burdened teachers. Although they are free to do so, they are not asked to construct additional assignments or plan new lessons or grade students' work.

On their own initiative, some teachers use this opportunity to harness the intrinsic motivation of students who are already engaged in the self-identified ICED project to discover the connections between the student's passion and the teacher's course. The teacher refocuses the student's intrinsic motivation to include their discipline. Students often discover renewed motivation to learn in all their courses once they are taught how to identify connections between disciplines and to see how those connections are related to the student's own passionate lifelong interests.

Visiting with the Kennedy Space Center makes it all solid and real. It demonstrates in a real way that the skills acquired in all their classes contribute to their success; and that the questions that our students care about are important not only to them but also to the professionals that will work besides them one day.

### **Interdisciplinary/Cross-Curricular Teaching**

These students have been asked to present their research findings to professionals at Kennedy Space Center in Cape Canaveral Fl. Including Ph.D.'s, astronauts and engineers who have not only put objects in space but have also gone into space themselves.

The students have been exploring a research question that they have personally selected that directly impacts the formation of the next Human Colony, which, according to NASA, will be on the Planet Mars in the 2030's. The students involved in this field trip will be the right age to be among those human beings who will colonize Mars.

The students' work in writing their reports, researching their questions, and presenting their findings via an oral presentation goes beyond their engineering class and has involved their teachers from many other disciplines, including but not necessarily limited to the following

- AP Physics C (Mechanical)
- Algebra II
- Calculus
- Digital Design
- English III
- Honors Calculus
- Honors Computer Assisted Drafting
- Honors Engineering Design
- Honors Entrepreneurship
- Honors Programming

- Personal Finance
- Physics
- Precalculus
- US History II
- Theater

Teachers of the above courses have students in their classes that are also in the engineering class. These teachers have volunteered to help the students see the connections between their area of expertise and skills and content in the students engineering class project.

### **More Detail on Other Disciplines**

Students will see in person what can be done if they learn the math and the science. In addition, it is not only math and science that is important. The other disciplines are equally important. World Language is important for scientists all over the world to communicate. We are a global community today. No nation is by itself. Good English skills are critical to the scientist. The great ideas in the world will go unheard if the scientist cannot express them in a clearly written paper. Grant money is only awarded to those that can articulate their ideas both in writing and in person. That is why speaking skills are important also. The study of History plays an important role. We need to know how we got here to move forward and make the right choices that will benefit from past mistakes instead of repeating past mistakes.