



UMES SUMMER TRANSPORTATION INSTITUTE (UMES STI)

2013 ANNUAL REPORT

TABLE OF CONTENTS

PART I: PROGRAM INFORMATION

SECTION I: PROGRAM ADMINISTRATION 3

SECTION II: PROGRAM CURRICULUM 9

SECTION III: PRELIMINARY FINANCIAL REPORT 18

SECTION IV: RECOMMENDATIONS 19

PART II: APPENDIX 20

PART I: PROGRAM INFORMATION

*The Summer Transportation Institute (STI) Project Director is responsible for preparing and submitting an annual report to their State Transportation Agency and Federal Highway Administration (FHWA) Division Office. This report is due to FHWA Headquarters Civil Rights Office on or before **October 15 of each year**. The report includes the results of activities associated with the STI. One (1) electronic copy in MS Word, Font Size Times New Roman 11.5 - 12 pt is sent to each agency via electronic mail. The following components are included in the report.*

SECTION I: PROGRAM ADMINISTRATION

Host Site Name and Address

University of Maryland Eastern Shore
Department of Technology
11931 Art Shell Plaza
Princess Anne, Maryland 21853

Program Director

Dr. Joseph O. Arumala

Length of Program

The UMES STI program is a 2-week non-residential program

Type of Program

Non-Residential

Grade Levels

Levels 7-8

Number of Student Applications Received

Number of applications received was 23

Number of Students Selected for Program

Number selected was 23

Number of Students to Complete Program

Number that completed the program was 21

ABSTRACT

The purpose of the UMES Summer Transportation Institute is to create awareness and stimulate interest among middle school students on the Lower Eastern Shore of Maryland about the vast transportation careers available and provide them with the opportunities to explore the exciting

field of the Transportation Industry. The students went through a course of studies in Mathematics, Science, English and transportation systems and participated in regularly scheduled trips to local transportation related facilities. The Institute was for two weeks from June 24th to July 5th 2013. Each participant was provided lunch for the period and a TI-83 Scientific Calculator. Each student made transportation arrangements to and from UMES. The program went from 8.00 am to 5.00 pm daily

COMMITTEE, PARTNERS AND STAFF INFORMATION

1. **Intermodal Advisory Committee (IAC):** *Provide the names, titles and affiliations of members of the advisory committee.*

They are:

- A. Gregory Murrill
Program Manager
Federal Highway Administration
Office of Human Resources
Student Outreach and Career Entry Programs Group

HAHR-40, Room E63-312
1200 New Jersey Avenue, SE
Washington, DC 20590

Office: 202-366-2535
Gregory.murrill@dot.gov

- B. Al Pollard, A.A.E.
Director
Martin State Airport
Box 1, 701 Wilson Point Road
Baltimore, MD 21220
(410) 682-8800 . (410) 682-8822
e-mail: apollard@martinstateairport.com
Maryland Department of Transportation
Maryland Aviation administration

- C. Rudolph Cane, Maryland Delegate
Maryland Port Authority
(410) 749-1142

- D. Dr. Joseph D. Dodo
Department of Natural Sciences
University of Maryland Eastern Shore
410 651-6030

2. **Partners/Sponsors:** *Provide names, titles and affiliations of STI partners/sponsors (other than IAC members and their role/contribution(s) to the STI.*

Kimberly Conway Dumpson, Esq.
Vice President for Intuitional Advancement
University of Maryland Eastern Shore
410 651 6676

Mrs. Dumpson supplied pull-ups and other recruitment materials to student participants and Instructors

Bill Robinson
Director - Office of Public Relations
2102 Bird Hall
University of Maryland Eastern Shore
Princess Anne, MD 21853
410 621-2355 - office
443 397-8860 – cell

Mr. Robinson assisted in disseminating news and information about the STI in the University and local community.

a. **Program Faculty and Staff:** *Provide the names, STI position titles, and affiliations of **all** STI faculty and staff.*

Dr. Joseph O. Arumala, Project Director
Professor
Department of Technology
University of Maryland Eastern Shore

Jeremy Michalski, M. Ed.
Science Teacher
Salisbury Middle School

Karen M. Carroll
English Teacher
Salisbury Middle School
627 Terrapin Lane
Salisbury, Maryland 21804
(410) 677-5143

Laura Karns
Mathematics Teacher
6th Grade RELA (Reading English Language Arts) Teacher
RELA/History Tutor (Wednesdays 7:00-7:45 am)

Salisbury Middle School, ext. 4703

Joseph W. Drummond II
Civic Rights, Environmental Design & Stewardship Teacher
Salisbury Middle School
P.O. Box 277
Sharptown, Maryland 21861

Ronald Dyda,
Salisbury Middle School
Recreation Teacher

PROGRAM OBJECTIVES

Provide a list of the STI objectives and explain the method used to measure whether or not the *objectives were accomplished. (The method of measuring accomplishments should be based on weekly evaluations submitted by participants). If objectives were not met, then an explanation of the barriers that prevented accomplishment should be provided.*

Students participating in the program will perform hands-on and practical activities, field trips, and participate in other activities that will expose them to careers, academic programs, and personnel in the transportation industry. Each student will:

- Explore safety, innovative trends, and career opportunities that exist in transportation systems;
- Become knowledgeable of the federal, state, and local governing agencies of the transportation modes;
- Develop understanding of importance of positive attitudes about learning math and science and the opportunities for advance studies;
- Exposure to college campus and opportunity to meet faculty members and college students that are involved in academic programs that lead to transportation careers;
- Development of computer, professional, and communication skills needed for successful study.

The Institute was designed to:

- Impact middle school students
- Improve oral and written communication skills
- Improve critical thinking
- Introduce intermodal transportation systems
- Encourage collaboration by working in teams on projects

The participants used prepared Questionnaires to evaluate the effectiveness of the Institute's activities weekly. The overall outcome of the evaluations was that these objectives were met.

STUDENT SELECTION PROCESS

Briefly describe the methods used and results for recruiting and selecting students.

We used a combination of visitation to schools, personal contacts and emails to recruit students for the Institute. Institute participants were selected by a Selection Committee made up of Dr. I. K. Dabipi – UMES, Brian Burrows-McElwain – UMES, Troy Parham/Linda Bloodsworth – SHA, Karen M. Carroll – Salisbury Middle School and Dr. Joseph O Arumala – UMES. The Committee used several factors including written essay, Grade Point Average (GPA) and current marking term results for selecting participants. The committee received 23 applications and all met the criteria for selection. All 23 students were selected but 21 of them actually participated in STI program. The other 2 dropped out because they did not have transportation to the campus.

MARKETING

Summarize the strategies used to market the STI.

The strategies used to market the STI included:

- Visitation to schools, youth groups and churches
- Newspaper & Newsletter publications
- Via emails and letters
- Word of Mouth
- Town Hall Meetings
- Flyers
- In addition, a webpage and marketing brochures upgrades were implemented and used.

The application was made available on the STI web page www.umes.edu/UMESSTI

DEMOGRAPHIC SUMMARY REPORT

Complete the attached demographic summary sheet.

FY 2013	
National Summer Transportation Institute Program - Demographics Data Sheet	

State:	Maryland	Project Director:	Dr. Joseph O. Arumala
Host Site:	University of Maryland Eastern Shore	Program Dates:	June 24-July 5, 2013
		Program Length:	2-Weeks

Select Grade Level		Applicant Data	
High School		Number of Applications Received:	23
Middle School	X	Number of Participants Selected:	23
Select Program Classification		Number of Participants that Completed the Program:	
Residential		21	
Non-Residential	X	Geographic Representation	
		Number of Cities: 4	Number of Counties: 3
		Congressional District Number(s): 1	

	Race/Ethnicity							Gender		Disability	Grade Level					
	African American	Caucasian	Hispanic American	Native American	Asian American	Pacific Islander	Other	Male	Female	Targeted Disabilities*	6	7	8			
Number Of Participants:	21							9	12			X	X			
Provide Type(s) of *Targeted Disabilities:																

Schools Represented	
Name/City/State	Name/City/State
Bennett Middle School, Salisbury, MD	Washington High School
Mardela Middle and High School, Mardela Springs, MD	Wicomico Middle School
Salisbury Middle School, Salisbury, MD	Stepping Stones Learning Academy
Washington Middle High School, Princess Anne, MD	Snow Hill Middle School
Parkside High School	Salisbury Scristian School
Wicomico High School	Somerset Intermediate School
* Targeted Disabilities Includes the following: Deafness, Blindness, Missing Extremities, Partial/Complete Paralysis, Convulsive Disorders, Mental Retardation, Mental Illness, And Distortion Of Limbs And/or Spine. Reference Secretary Mary E. Peters, Memorandum Dated 4/2/07 To Departmental Officers, Assistant Secretaries, And Heads Of Operating Administrations; Subject: Fiscal Year 2007 Hiring Goals For Persons With Targeted Disabilities, Washington, DC.	

SECTION II: PROGRAM CURRICULUM

ACADEMIC PROGRAM

Describe the multi-modal academic program. Information on field trips and speakers should be included. Highlight significant accomplishments and innovations. An academic program calendar is also necessary.

The academic program consisted of oral and written communication and critical thinking components interweaved with transportation activities and studies, English, Mathematics, Science Sports/ Recreation sessions. The English, Mathematics and Science studies were geared towards preparation of the students for taking standardized tests. The lesson plans for each module are shown below:

ENGLISH

The 2 week Communications program was designed to provide students with opportunities to enhance their skills in reading, writing, and researching as they explored career choices in the field of transportation-aviation, land, and water.

Objective of reading curriculum-

To incorporate Core Curriculum Standards into relevant lessons on career readiness in the field of transportation

To better understand the methods of transportation, related careers, skills needed for employment in different areas of transportation and equity in access.

Core Curriculum Language Arts Standards for Middle School 6-8

****7.RIT.4 Determine the meaning of words and phrases as they are used in a text...***

****7.RIT.8 Trace and evaluate the argument and specific claims in a text to assess whether the reasoning is sound***

****7.W.2 Write informative texts to examine a topic and convey ideas...***

****7.W.4 Produce clear and coherent writing...that is appropriate to the task...***

7.W. Gather relevant information from multiple print and digital sources...

7.W.9 Draw evidence from text to support analysis, reflection, and research

8.SL.1 Engage effectively in a range of collaborative discussions...

8.SL.5 Present claims and findings... in a focused, coherent manner with relative evidence and use appropriate eye contact, adequate volume, and clear pronunciation

Process -

Transportation Webquest with emphasis on equity of access through ADA for public and private transportation systems.

Materials-

Computer access to webquest and ADA websites, notepads, pencils,

www.createwebquest.com/cratliff/transportation-fundamentals

www.access-board.gov/transit/html/vguide.htm#AP

www.maryland.gov/ada/index.html

DAY 1

Introduce topic for the class using Powerpoint.

Students will log on computers and open webquest- Transportation Fundamentals (address listed above) they will work through the 12 questions with a partner. Notes will be taken for use in developing presentation at the end of the program.

DAY 2

Students will discuss the different types of transportation with which they are familiar. They will work with a partner to list and think about accessibility to each type of transportation. After allotted time to brainstorm, they will share with whole group.

Pass out slips of paper with physical/medical disabilities that might restrict a person's access to transportation. Research disability and share with class. Be ready to answer how that disability might hamper a person's use of transportation. What type of accommodation would be needed on that vehicle?

After discussion, students will return to webquest and complete with a partner.

DAY 3

Students will select a disability discussed on DAY 1 and write a prediction on how it might affect their ability to manage on the field trip to the Baltimore Railroad Museum tomorrow. While on the trip, they should be aware of the modes of transportation and how accessible it was. Selection of two questions from the webquest for presentation will be done. Students will work with partners to create slides and practice oral presentation of information.

DAY 4

Field Trip to Baltimore & Ohio Railroad Museum

DAY 5

Students will write a reflection about the field trip. Included in the reflection will be an opportunity to check their prediction- was the prediction accurate, what modifications were needed, if any, to the transportation that they used? Did they see people who needed accommodations and were they available? After allotted time, students will share their observations.

DAY 6

Students will work on presentations for end of program ceremony.

DAY 7

Field Trip to Norfolk Air and Space Museum

DAY 8

Students will practice presentations and critique each other for program in the afternoon.

MATHEMATICS

Setting Up Edmodo:

1. The teacher will help students navigate to our classroom webpage: Wicomico.edmodo.com.
2. With the teacher's guidance, students will log in and begin to familiarize themselves with Edmodo.

Pretest:

1. Students will use Edmodo to access online pretests that are appropriate for their respective grade levels.
2. Students will submit their pretest scores through the assignment function of Edmodo so that only the teacher may see their scores.
3. Upon finishing their pretests, students will come up to the login sheet to register their usernames and passwords.

Vacation Location:

1. After finishing their pretest assignments, students will create a post on Edmodo to share with the class what city they intend to plan their vacation to later in the week.

Building A Bridge:

1. Students will work cooperatively to build a bridge using the knowledge they acquired in their transportation lessons earlier in the day.
2. Students will be given a set amount of "building supplies" (marshmallows and toothpicks) to cross a "river" (blue construction paper).
3. Students will also be given a "budget" (fake money) to purchase additional supplies as needed. Each marshmallow costs 10 cents and each toothpick costs 25 cents. The catch is that the "bank" does not make change for anything less than one dollar. This requires student to use multiples and budget funds at the same time.

Railroad Math:

1. In order to prepare for their field trip to the B & O Railroad museum, students will work in pairs to translate a word problem, which uses real facts about the Transcontinental Railroad, into morse code and "send a telegram" to the partners across the room from them.
2. Each pair will then try to crack the code in the "telegram" that they have received in order to solve the riddle.
3. Each group that successfully sends a code and solves their problem will receive payment for the day (fake money).

Renting A Car:

1. Students will use the organizer provided to conduct online research to figure out how much it will cost them to rent a car to get them to their destination city.

Booking a Flight:

1. Students will use the organizer provided to conduct online research to figure out how much it will cost them to book a flight to get them to their destination city.

Time to Travel:

1. Students who finish “booking their flight” will complete “Time to Travel”, an assignment that requires students to use Time Zones to plan flights by adding and subtracting across time zones.

Recreation:

1. Students will use the “funds” they have collected from being productive through their time in Math class to fund recreation activities in their destination city. They will post the cost and

Travel in Style:

1. Students who finish “recreation” will design and construct a mode of transportation to cruise around their destination city in (construction supplies will be marshmallows and toothpicks as they were for the “Building Bridge” lesson on Day 2).

Students were able to apply algebraic concepts and models to solve real-world transportation problems. Students were able to use algebraic concepts and models to solve transportation problems related to water travel, land transportation, and air travel.

SCIENCE

The scope of the class, Science in Action, was to introduce rocket propulsion and road construction. These two areas of science are pivotal to the transportation industry. Day one was spent discussing various topics on rocketry and types of road and strategies for dealing with variables such as speed and drainage.

Our first project was to construct water rockets from 2 liter bottles and launch them using water pressure. Each student built and decorated their rockets. The students constructed fins and affixed them to the rocket. The final day of the project was spent launching the rockets and the kids truly enjoyed this project.

The second project was to create concrete block and paint them. The purpose of this was to demonstrate the process involved in concrete road construction. After the students poured their concrete, we let it cure for 48 hours. When the concrete was hard, the students painted the blocks and took them home. The students all successfully completed this project.

Overall, I would say that the students enjoyed the course Science in Action. If I were to teach this course again, I would use the same model but use templates for the rocket fins instead of allowing the students to design their own. Fin templates allow for a more stable and efficient rocket. I would continue the concrete project but would have the students paint road lines first, then add their own personal touch instead of allowing them to paint anything they wanted. This would keep the idea behind the project in their heads. Thanks so much for the opportunity.

SPORTS AND RECREATION PROGRAM

Briefly describe the sports and recreation program activities.

Our goal for the UMES STI Recreation and Fitness component is to expose students to sports and recreation, rules and regulations, and to encourage good sportsmanship.

Every activity we participated in utilized and reinforced four cornerstone rules: Safety, Honesty,

Respect, and Effort. Each of these rules were practiced and applied in every activity because each of these rules are applicable to everyday life and future employment, especially in the transportation industry.

Our week began with circle activities to teach and reinforce our four rules. In these activities, students boundaries and barriers are addressed and opened. Each student is required to perform tasks that are physically, emotionally, and mentally engaging without directly addressing our 4 cornerstone rules. These activities progress from walking and clapping to running and touching each other appropriately. By teaching these 4 rules through games, the students apply the rules, reinforce the rules, and are better prepared to hold themselves and each other accountable as we progress through our time together.

On our Tuesday and Wednesday activities, we played multiple games that addressed physical disabilities. Through our exploration, we watched videos in different formats to highlight the disability of deafness or language barriers, we researched famous people with disabilities, and we limited ourselves through the use of one hand or wearing gloves while working to simulate fine motor skill loss. As we progressed through our lessons, we had team-building activities (building a tower with tape and straws) while each member of the group must be involved and each member had a unique disability. After all of our activities over the two day period, the students debriefed verbally with our group and in a written format with Mrs. Carroll in the writing portion of the STI program.

Our Friday activities were modified from using the UMES Pool to setting up a variety of water games that continued to emphasize teamwork and our 4 rules. We played relay games with water balloons, water soaked sponges, and a water themed volleyball match. The kids were actively engaged and they were able to enjoy themselves immensely in the heat while applying our goals of Safety, Honesty, Respect, and Effort.

The following Monday, we hosted a family fun day in the activities center of UMES. In this center, we were able to play ping pong, billiards, and bowling. Several parents took part in the bowling as well and our students were able to share their enjoyment of being active with their families.

FHWA Electronic Newsletter

The UMES Summer Transportation Institute was recommended for interview for the FHWA Electronic Newsletter by Judy A. Perkins, Ph.D., PE, Professor, Prairie View A&M University, Department of Civil & Environmental Engineering. The recommendation reads in part “As a follow up to my conversation with Dr. Dabipi, I'm recommending you to be interviewed for the FHWA electronic newsletter that is published by the Nebraska Transportation Center (NTC). The FHWA electronic newsletter will spotlight K-12 and post-secondary (community college and/or university level) programs/projects that are making significant contributions to the overall transportation community. Due to your leadership and involvement with the University of Maryland-Eastern Shore's Summer Transportation Institute program over the years, it would be great to have you and your programs featured in a nationwide newsletter. Again, thanks for agreeing to be interviewed and the NTC representative (Mrs. Valerie Lefler) or one of her staff members will get in contact with you over the next few days.”

As a result of this, a Skype video conference interview took place on Wednesday, July 3, 2013. In addition to the Director, four student participants (two male and two female) and three parents

were interviewed.

FHWA Officials Planned Site Visit

F. Edwin Gonzalez, FHWA Civil Rights Specialist and a Headquarters Civil Rights staff member planned to visit UMES during the 2-week period of the Institute. However, owing to scheduling conflicts, the visit was not possible this time.

Civil Rights, Environmental Design & Stewardship, Follow-Up Survey Of Participants

This year we included a new module on Civil Right and Environmental Design and Stewardship. With civil rights being such a broad area, the idea of diversity and the philosophy behind the Americans with Disabilities Act (ADA) were examined as a means of educating the students on how to tolerate and coexist with people different from them. This was an avenue to make them reflect on how they want to be treated and why the government makes such laws for the safety of all its citizens..

Environmental Design & Stewardship

Where applicable in the projects, environmental stewardship was integrated in a way that gives the students an understanding of their role in protecting the environment. As an example, with the West Point Bridge software, while designing the bridge, the students will be introduced to the requirements for maintaining the water ways in which the bridges are built. This involved the coverage of environmental topics such as waste management, pollution control and recycling of materials to save the earth. These themes were integrated into other academic areas as well as discussion during and after field trips as students were asked to suggest how the areas they had visited can be environmentally improved.

Follow-up Survey of Participants

The UMES Summer Transportation Institute is designed to attract middle school students to the transportation industry. It will therefore seek to track the academic performances and interests of the alumni of the Institute by keeping relevant data as they move into high school and eventually entry into college and the workforce. Base data will be collected through the application and selection process. At the end of each summer session an exit survey will be administered on the participants to determine whether their interest is still in the transportation industry. Thereafter, an annual survey will be sent out to alumni to find out if their interests are still in the transportation industry or other STEM related careers. To assist students in exploring scholarship and career opportunities in the transportation industry, links will be provided to local and federal sources on the Institute's webpage. When enough data has been collected, this follow-up exercise will be part of the annual report.

We plan to use Exit Survey to produce base data that will be used to create a plan to keep the STI alumni interested in the Transportation Industry. It is planned to produce a Newsletter on STI activities that will be distributed to participants. Finally, we plan to create a monitoring system to track the interest of participants in Transportation as they progress through high school to college.

The results of the Exit Survey are shown in the Appendix.

ENHANCEMENT PROGRAM

Describe the enhancement program activities and highlights with objectives and accomplishments

The Enhancement Program activities addressed land, air and water transportation systems. The activities included hands-on components and field trips. The following areas were covered:

Highways – Road Construction

The students were introduced to highway and bridge construction with highlights of students measuring elevation using the automatic level. They were shown the typical cross-section of a road with typical components of sub-grade, sub-base, base and the riding surface.

Surveying

The students used the Automatic Level and Level Rod to measure elevations. Elevations are important in highway construction. A road pavement must be built at predesigned elevation (height) above the mean sea level to insure optimum performance. They also measured distances and angles using the Total Station.

Bridges

The students used the West Point Bridge software to simulate the building of a bridge over a river. The students built and tested the bridge. When some truss members failed during the load testing, they were able to go back to the drawing board and strengthen those members that failed.

Air Transportation

In this section the participants were exposed to the Flight Simulator where they learnt the basics of how to fly a plane and to Air Traffic Control activities. The areas covered included:

- Topics: Airports, Aerodromes, Water Aerodromes, Define Aircraft.
- Instructional tools: PowerPoint Presentation and Internet Assignments
- Topics: Aeronautical Charts Familiarization and Introduction to Aviation Navigation.
- Instructional Tools:
 - Visit the UMES Air Traffic Control Simulator
 - PowerPoint Presentation
 - Maryland Aviation Administration Aeronautical Chart
 - Navigation Plotter
 - Flight Computer – E6B
 - Navigation logs
- Topics: The Flight Training Process and Airplane Nomenclature
- Instructional Tools
 - PowerPoint Presentation
 - Visit and Fly the UMES Flight Simulator
 - P-51 Model Airplane

Field Trips

We made field trips to Baltimore and Ohio Railroad Museum, Baltimore, MD and the Virginia Air & Space Center, 600 Settlers Landing Rd, Hampton, Virginia.

Speaker

We invited Maurice C. Ngwaba, Ph.D., AIA, AICP, CCS, Asst. to Vice President, Administrative Affairs/Facilities, University of Maryland Eastern Shore, Princess Anne, Maryland, to give the Key Note Address during the Closing Ceremony. The motivational address covered many areas of the Transportation Industry encouraging the students to be focused in their studies and pay special attention to STEM courses that will lead to the many careers available in the Transportation Industry.

EVALUATIONS

Summarize the results of the overall evaluations. Participant evaluations may be included as an appendix.

The participant evaluations of the Institute's activities were generally widespread. However, the overall evaluations were good.

ORIENTATION AND CLOSING AWARDS PROGRAMS

Summarize the orientation and closing programs, including information on awards and certificates presented. Include a list of "dignitaries" and a copy of the press announcement of the Closing Awards Program, if applicable.

The 2013 Summer Transportation Institute's Opening Ceremony started at 9.00 a.m. on Monday, June 24, 2013 with opening activities which included the sharing of information about the program with parents and guardians with all program workers (Teachers and Student Assistants) in attendance. The Director welcomed the student participants and their parents/guardians and gave a brief overview of the Institute's activities. A formal introduction of students, parents/guardians, and Institute's staff and faculty followed. The schedule for the program was then distributed and the Director went over it highlighting the activities for each day of the two weeks duration of the Summer Institute. The Director answered questions about the schedule. Daily transportation was a concern for some parents. The opening ceremony lasted for one hour after which the regular activities went on as scheduled.

The Closing Ceremony was on July 3, 2013 at 3:30 p.m. This was different from the scheduled date of July 5, 2013 because the University of Maryland Eastern Shore was closed on July 5, 2013 and July 4, 2013 was a holiday. The key note address was given by Dr. Maurice Ngwaba, Assistant to the Vice President of Administrative Affairs/Director of Facilities, UMES. The students made presentations in three groups. Each group researched career opportunities on one of the transportation modes: Land, Water and Air. Following this, the participants were presented with certificates of attendance and a package including the TI-83 scientific calculator. Six Trophies were awarded to outstanding students in the Overall Best Student category, Transportation, Mathematics, Science, Communication and Recreation/Sports. A Trophy was also presented to the Best Teacher as selected by the STI participants.

In addition to the parents, those who attended the closing ceremony included:

1. Dr. Ayodele J. Alade
Dean, School Of Business and Technology
University of Maryland Eastern Shore
2. Dr. Maurice Ngwaba
Assistant to the Vice President Administrative Affairs/Planning
University of Maryland Eastern Shore

Trophy Awards

Seven Trophies were awarded as follows:

Mathematics – Faruq Al-Smadi

Reading – Akrem Abdelwahab

Science - Alannah Bratten

Recreation – Muerio Cotton

Transportation – Sokira Ward

Overall Best Student – Jessica Greene

Best Teacher Award – Mr. Jeremy Michaski – Science Teacher

SECTION III: PRELIMINARY FINANCIAL REPORT

Provide a report of the STI account activity that details reimbursement requests and expenditure of funds to date.

See enclosed Financial Report

Budget			
Categories	Approved	Expended*	Unexpended
Personnel	\$16,000.00	\$16,000.00	\$0.00
Fringe Benefits	\$1,248.00	\$1,248.00	\$0.00
Recruitment	\$100.00	\$100.00	\$0.00
Contractual Services	\$7,000.00	\$7,000.00	\$0.00
Food	\$2,822.16	\$2,822.16	\$0.00
Travel	\$900.00	\$900.00	\$0.00
Supplies	\$10,550.00	\$10,550.00	\$0.00
Room & Board	\$0.00	\$0.00	\$0.00
Stipends	\$0.00	\$0.00	\$0.00
Indirect Cost	\$1,379.84	\$1,379.84	\$0.00
Totals	\$40,000.00	\$40,000.00	\$0.0

Balance = \$0

***SOME CATEGORIES ARE STILL BEING UPDATED**

SECTION IV: RECOMMENDATIONS

Provide any recommendations for enhancing operations and accomplishments of the STI.

It is recommended that funds be made available early enough to allow time for adequate preparations for all the activities of the Institute including hiring of staff and preparation and approval of contracts, securing on-campus facilities and procurement of supplies and materials.

PART II: APPENDIX

This section may include documentation such as photographs, journal entries, participants' papers, participants' reports, graphics, etc.



Figure 1 Launch of Water Rocket



Figure 2 Surveying Activity



Figure 3 More Surveying Activity



Figure 4 Participants at the Baltimore & Ohio Railroad Museum



Figure 5 Participants in the Classroom



Figure 6 Field Trip to the Virginia Air And Space Center



Figure 7 Parents and Participants at the Closing Ceremony



Figure 8 Dr. Maurice Ngwaba delivering the Key Note Address at the Closing Ceremony



Figure 9 Participants making Presentations at the Closing Ceremony



Instructors and Teachers



UMES Student Assistants

Figure 10 Some STI Staff

Civil Rights and Environmental Design & Stewardship

The 2013 UMES Summer Transportation Institute also shows its students how the topics of Civil Rights and Environmental Design & Stewardship are important to the transportation industry. The Institute used an exit survey to produce base data, which will be used to create a plan to keep its alumni students interested in the transportation industry.

The Institute welcomed twelve female and nine male students. All the participants were Blacks/African-American students. Nineteen of the Institute's students hailed from Wicomico County, Maryland. Sixteen of the Institute's students were either twelve or thirteen years old.

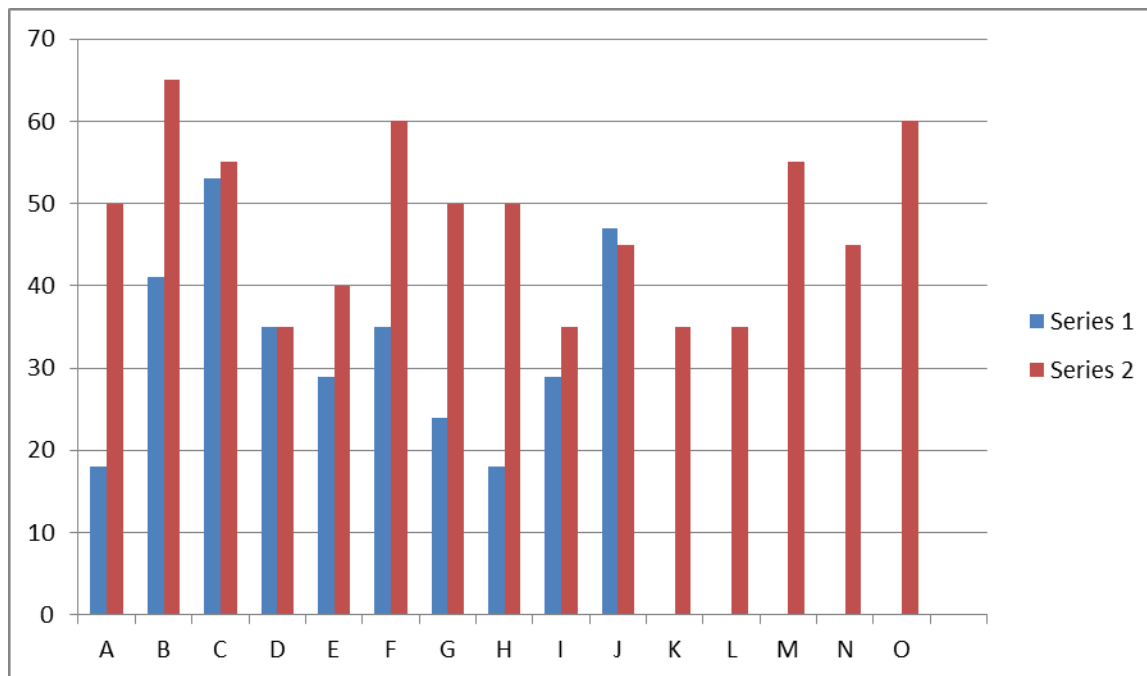
The students were taught how the topics of Civil Rights and Environmental Design & Stewardship are important to the transportation industry. Some of the Civil Rights topics discussed were the Montgomery Bus Boycott and the Americans with Disabilities Act. Some of the Environmental Design & Stewardship topics included soy biodiesel, hybrids, and the Occupational Safety and Health Administration.

An exit survey was administered to the participants. 44% of the students have passed an Algebra I course. 61% of the Institute's students have passed a Life Science course, 50% of the Institute's students have passed a Physical Science course, and 47% of the Institute's students have passed an Environmental Science course. In addition, the 2013 Summer Transportation Institute's students were asked if they were interested in specific occupations of the transportation industry. The three occupations which featured the greatest percent of increase are the following:

Truck Driver	18% to 50%	32% Increase
Airport Security Officer	18% to 50%	32% Increase
Air Traffic Controller	24% to 50%	26% Increase

Based on the data, the Institute's students' favorite three occupations were Bridge Architect (60%), Airline Pilot (60%), and Careers in Robotics (60%).

The 2013 University of Maryland Eastern Shore's Summer Transportation Institute will use an exit survey to produce base data, which will be used to create a plan to keep its alumni students interested in the transportation industry. Based on the pass rate of the middle school STEM courses, it is imperative for the UMES Summer Transportation Institute to track its students. This is important to make sure that these students are able to take the necessary STEM high school courses that will provide the students the best opportunities in the transportation industry. Secondly, it is important to continue to ask what occupations the Institute's students are interested in. This will give the UMES Summer Transportation Institute an opportunity to find experts in these occupational fields to create activities that will continue to keep the interest of these students in the transportation industry. Finally, the UMES Summer Transportation Institute may use this data to create strategies to increase the enrollment of its students. It is imperative for everyone to remember that the University of Maryland Eastern Shore's Summer Transportation Institute is a program designed to attract all middle school students to the transportation industry



2013 UMES STI SURVEY DATA

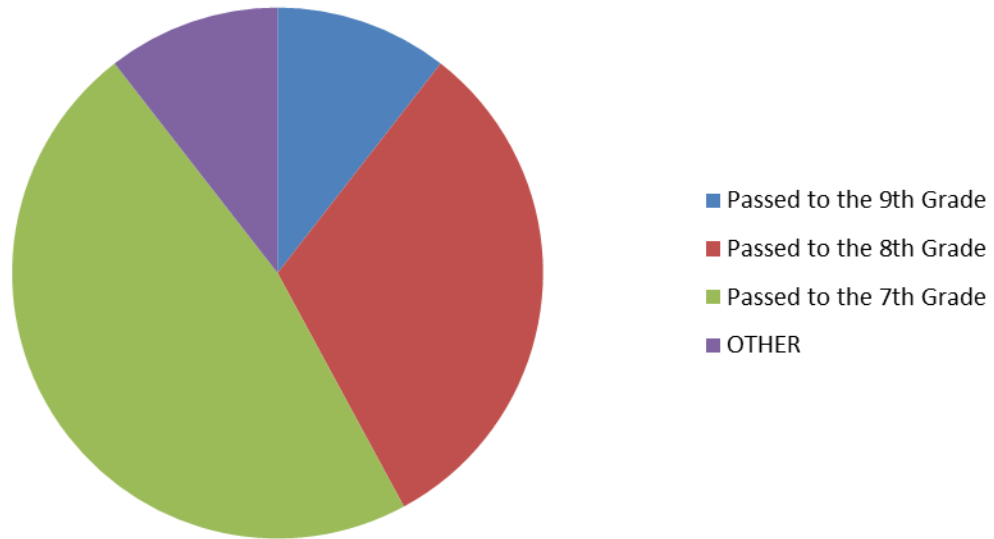
KEYS

Series 1: Survey #1

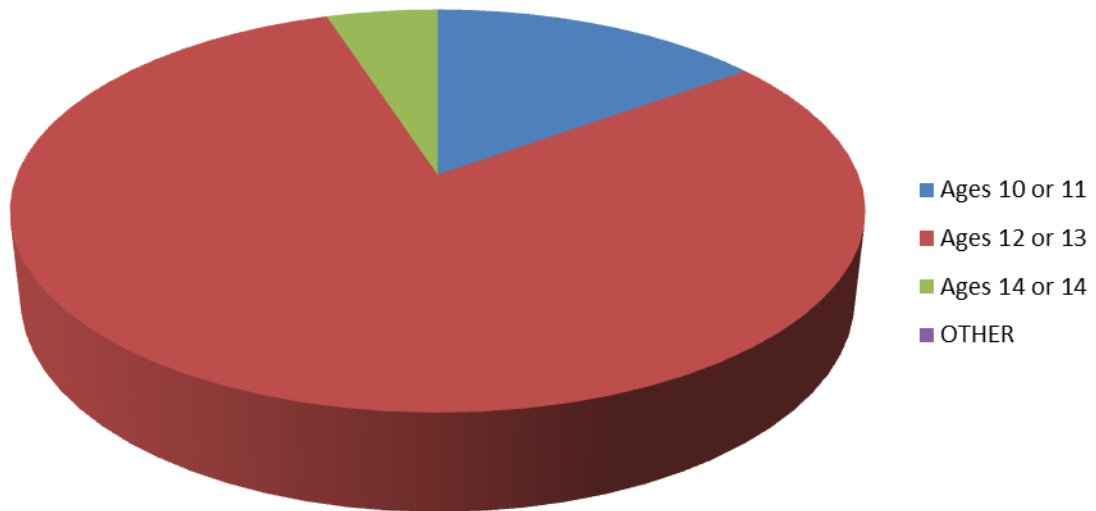
Series 2: 2013 UMES STI Closing Ceremony Survey

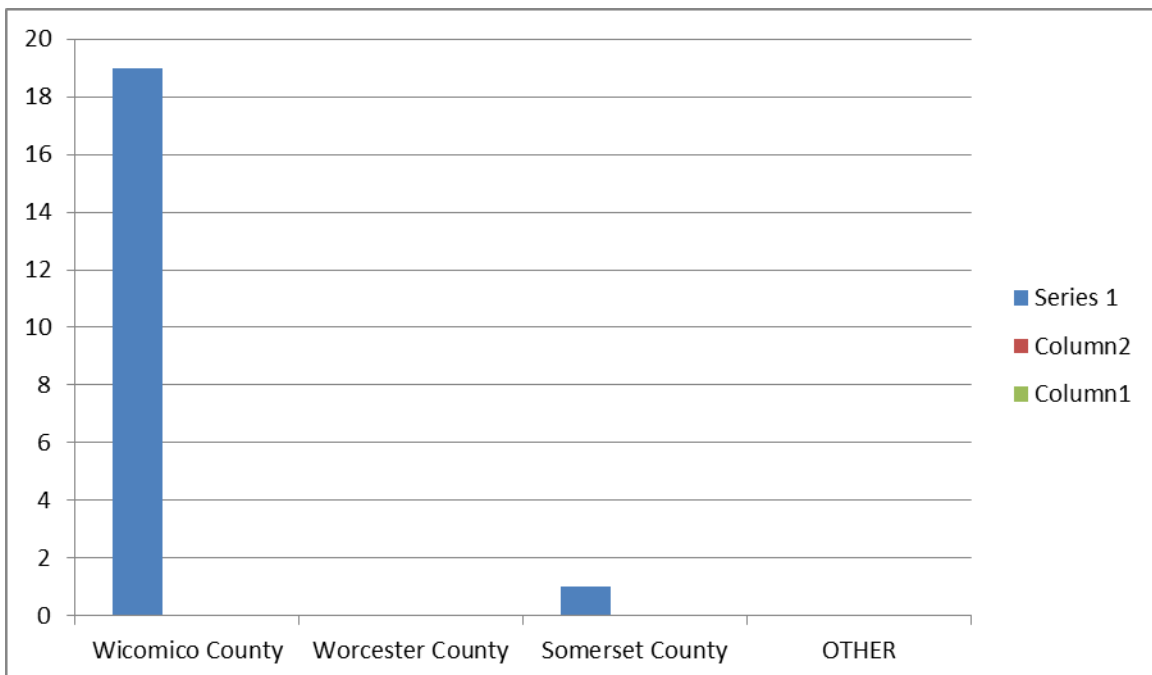
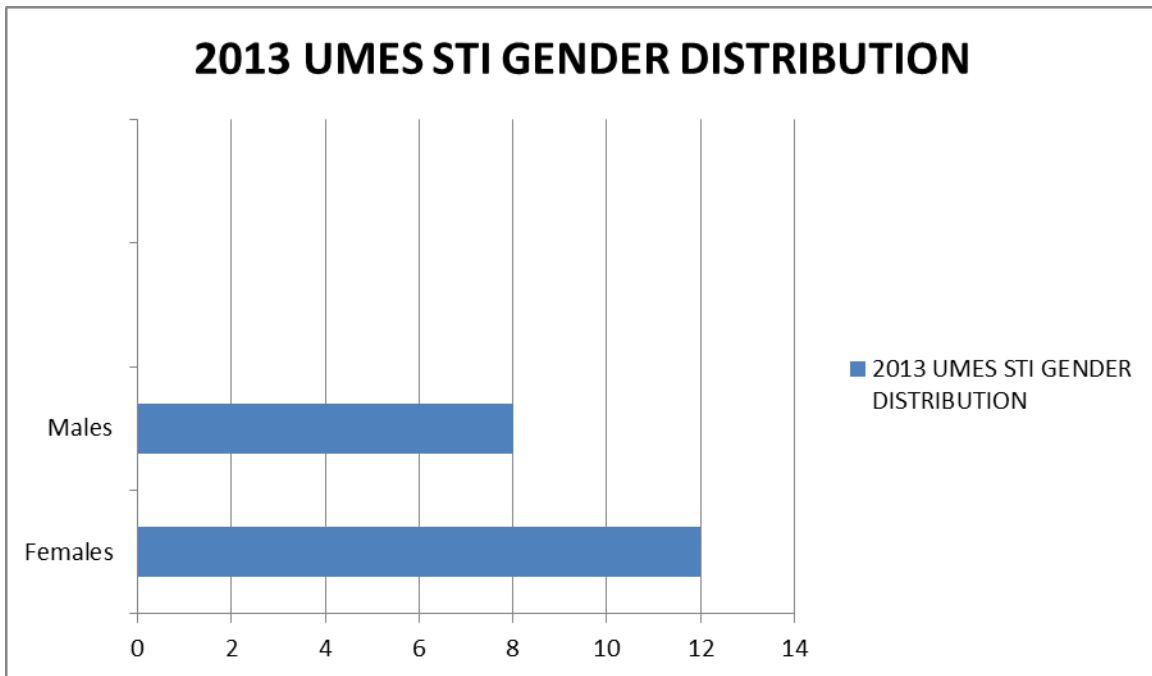
- A – Truck Driver
- B – Bridge Architect
- C – Auto Designer
- D – Auto Mechanic
- E – Cruise Ship Captain
- F – Airline Pilot
- G – Air Traffic Controller
- H – Airport Security Officer
- I – State Highway Patrol Officer
- J – EPA Officer
- K – Astronaut
- L – Commercial Bus Driver
- M – Agricultural Scientist
- N – Career in Construction Management
- O – Career in Robotics

2013 UMES STI GRADES DISTRIBUTION



2013 UMES STI AGE DISTRIBUTION





2013 UMES STI GEOGRAPHIC DATA