
SEMAA/AEL DEDICATION

Lawson Hall

November 17, 2004

Local Students become NASA Researchers for the Day

SEMAA Press Release

Just Imagine...

Nashville – Possessing the capability to access actual satellite images to study and predict the local weather; just imagine using a computer aided design program to design your own jet aircraft and then using a computer and a working wind tunnel to test the flight worthiness of your design. Imagine climbing into the cockpit of a flight simulator and piloting your aircraft through a *VIRTUAL ENVIRONMENT!* Area students do not have to imagine anymore!! Recently, SEMAA, the Science, Engineering, Mathematics, and Aerospace Academy, announced plans to build a world class, state-of-the-art, computerized classroom on the campus of Tennessee State University. The classroom, known as the *Aeronautics Education Laboratory*, will allow middle and high school students to utilize 21st century technology to explore aeronautics.



About the Aeronautics Education Laboratory...

Designed as a state-of-the-art, electronically enhanced computerized classroom, the Aeronautics Education Laboratory (AEL) puts cutting-edge technology in the hands of young people.

At nine unique workstations, students can explore these technologies through “hands-on/minds-on” activities that model real-world challenges in aviation. An aeronautics theme ties the workstations together as participants’ work collectively to gather

SEMAA-Family Connection...

Appreciating parents, grandparents, and guardians as the primary educators in the lives of children, SEMAA works in partnership with families to ensure life-long learning for children. Classroom explorations are developed to encourage family involvement within the classroom, while take-home explorations and Family Cafe workshops and seminars foster the parents’ role outside the classroom with the aid of our Family Café coordinator, Tracy Cummings. Family cafes begin soon on Saturday mornings.

SECME and TSU unite with NASA to bring SEMAA to Nashville

SEMMA Press Release

Funded by NASA Glenn Research Center and based at Cuyahoga Community College, the Science, Engineering, Mathematics, and Aerospace Academy (SEMAA) was established in 1993 with the mission of fostering understanding and enthusiasm in school age children for science, math, and technology-related fields. Committed to serving underrepresented female and minority students, program instructors facilitate a culturally sensitive, cooperative environment in which students explore and discover science, math, and technology wonders in the global world around them.

At each grade level students are immersed in technology enriched classrooms and laboratories that, when combined with the carefully crafted curricula, is both fun and engaging. Through a set of unique classroom activities that promote critical thinking and problem-solving skills, SEMAA students are empowered to become leaders and decision-makers.

In addition to cognitive advancements, the students experience social, emotional and communicative growth as they discover the significance of communication and teamwork in facilitating partnerships with peers for the investigation and development of their work. They learn to demonstrate respect and compassion when evaluating the work efforts of others and to appreciate constructive feedback as it elates to their own performance.

The optimum goal is that the students will develop an intrinsic motivation and passion for their learning, and a strong sense of hope for their future as they experience success in the classroom/laboratory, and listen to the inspiring stories of esteemed community mentors and

For more information, contact:

- *TSU/SECME NASA SEMAA Headquarters* - Dr. Jennifer Stewart-Wright @ 615-963-5335
- *AEL Coordinator* – Ms. Tarra M. Beach @ 615-963-5323 or tbeach@tnstate.edu to schedule tours and workshops
- Or visit www.semaa.net & www.orc.nasa.gov/WWW/MAFI.

the data necessary to plan and complete a simulated cross-country flight across the United States. see page 2

About the Aeronautics Education Laboratory...

These stations include:

Air Traffic Control: Provides behind the scenes look at air traffic control challenges, tools, and careers.

Meteorology/Weather: Participants gather weather information pertinent to a cross country flight from a series of remote weather tracking stations.

Virtual Reality Flight Station: Enables participants to experience a Virtual Reality in a simulation cockpit and in an immersive environment.

Wind Tunnel Control Station: Student researchers test the lift and stall characteristics of an airfoil mounted inside the wind tunnel.

Remote Sensing: Students interpret aerial and satellite photographs.

GPS/Amateur Radio Communications: Using a sophisticated amateur radio receiver and a working hand-held global positioning system (GPS), students gather aviation and geographic information.

Internet/World Wide Web: Using the internet, student researchers gather important information about each of NASA's aeronautics research facilities, as well as making hotel and restaurant reservations for the entire group.

Aircraft Design Station: Researchers are challenged to redesign an existing commercial jetliner using a computer aided design (cad) that will cut fuel cost and lower the purchase price of plane tickets.

Aeronautics Interactive: Provides a multimedia database that highlights aviation history, NASA aeronautics, flight research, and career information.

The AEL is an adaptation of the Mobile Aeronautics Education Laboratory (MAEL), a mobile classroom developed through a partnership between Cuyahoga Community College and NASA's Lewis Research Center. The MAEL was designed to be a test-bed to study the impact of technology on the teaching of math and science. The mobile lab also provided a demonstration vehicle for new technologies as they emerged and offered teachers, administrators and families an extraordinary glimpse into the future of education.

Based on the phenomenal success of the mobile lab, NASA awarded Cuyahoga Community College's SEMAA program a grant that made the replication of the mobile lab possible. The AEL features many changes to the Mobile Lab's software and hardware.

About The AEL Curriculum...

The curriculum was developed by a highly skilled team that included: SEMAA educators from Cuyahoga Community College and the Center for Applied Research in Education at Cleveland State University, Cleveland-area teachers, and a dedicated group of NASA engineers from the Lewis Research Center. The curriculum is based on the Learning Cycle model, which uses activities to explore materials, share ideas and to apply key concepts to help students develop the critical thought and decision making processes that are essential for life-long success. The activities were carefully designed to support the National Proficiency Standards for Mathematics and Science. Field-tested across the United States, the AEL curriculum actively engages young people of

SIDEBAR ARTICLES

This sidebar article was created by inserting a text box and then changing the color and line formatting. You can use a sidebar article for any information you want to keep separate from other articles or information that highlights an article next to it. These could include a list of contributors, addresses or contact information, a smaller self-contained story, a preview of the next issue, or a calendar or schedule. The example below shows a Calendar of Events

CALENDAR OF EVENTS

SPECIAL EVENT

PLACE

TIME

Type a description of your event here.

SPECIAL EVENT

PLACE

TIME

Type a description of your event here.

SPECIAL EVENT

PLACE

TIME

Type a description of your event here.

SPECIAL EVENT

PLACE

TIME

Type a description of your event here.

guest speakers.

Using Styles in This Template

To change the Style of any paragraph, select the text by positioning your cursor anywhere in the paragraph. Select a Style from the drop-down Style list at the top-left of your screen. Press Enter to accept your choice.

The styles available in this template allow you to change the look of your headlines and other text.



See Page 4 to learn how to edit or replace this picture.

The following is a list of some styles and their uses:

Body Text - Use this style for the regular text of an article.

Byline - Use this style for the name of the author of an article.

Byline Company - Use this style to type the author's company.

SIDEBAR HEAD - Use this style to type a second-level heading in a sidebar article.

SIDEBAR SUBHEAD - Use this style to type a third-level heading in a sidebar article.

Sidebar Text - Use this style to type the text in a sidebar article.

SIDEBAR TITLE - Use this style to type first-level headings in a sidebar article.

Footer - Use this style to type the repeating text at the very bottom of each page.

Heading1 - Use this style to create headlines for each article.

Heading2 - Use this style to create section headings in an article.

Jump To and Jump From - Use these styles to indicate that an article continues on another page.

Mailing Address - Use this style in a mailing label to type the destination address.

POSTAGE - Use this style in a mailing label to type postage information.

Return Address - Use this style in a mailing label to type your

MORE WAYS TO CUSTOMIZE THIS TEMPLATE

FOOTERS

To change the text at the very bottom of each page of your newsletter, click Headers and Footers on the View menu. Use the Header and Footer toolbar to open the footer, and replace the sample text with your own text.

INSERT SYMBOL

It is a good idea to place a small symbol at the end of each article to let the reader know that the article is finished and will not continue onto another page. Position your cursor at the end of the article, click Symbol on the Insert menu, choose the symbol you want, and then click Insert.

CONTINUED TEXT

To let the reader know that an article will continue on another page, insert a small text box under the text box, choose the Continued To style, and then type the words "Continued on Page".

QUESTIONS AND ANSWERS

Q: I would like to change some of the text box shading to improve the print quality. Can that be done?

A: Yes. To change the shading or color of a text box, select it and double click its borders to open the Format Text Box dialog box. Click the Colors and Lines tab and then choose the new color from the Color drop-down list in the Fill section.

Q: What's the best way to print this newsletter?

A: Print page 2 on the back of page 1. Fold in half and mail with or

without an envelope. For best results, use a medium to heavyweight paper. If you're mailing without an envelope, seal with a label.

Q: I would like to use my own clip art. How do I change the art without changing the design?

A: To change a picture, click on the picture, then point to Picture on the Insert menu and click From File. Choose a new picture, and click Insert.

Q: How do I change the text and borders that appear at the bottom of every page?

A: Click Headers and Footers on the View menu. Use the Header and Footer toolbar to navigate among headers and footers, insert date or

Inserting and Editing Pictures

Type your sub-heading here

You can replace the pictures in this template with your company's art. Select the picture you want to replace, point to Picture in the Insert menu, and click From File. Choose a new picture and then click Insert. Select the Link to File box if you don't want to embed the art in the newsletter. This is a good idea if you need to minimize your file size; embedding a picture adds significantly to the size of the file.

To edit a picture, click on it to activate the Picture toolbar. You can use this toolbar to adjust brightness and contrast,

Choose a new picture, and click the Link to File box if you don't want to save the art with the newsletter.

change line properties and crop the image. For more detailed editing, double-click on the graphic to activate the drawing layer where you can group or ungroup, re-color, or delete picture objects. ❖

time, or format the page numbers. To change the text in the footer, select it and type your new text. To change the border, click Borders and Shading on the Format menu.

Q: Can I save a customized newsletter as a template for future editions?

A: Yes. Type your own information over the sample text and then click Save As on the File menu. Choose Document Template from the Save as type drop down list (the extension should change from .doc to .dot). Save the file under a new name. Next time you want to create a newsletter, click New on the File menu, then choose your template.

