

THE OCTAGON



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Lehigh Valley Section of the American Chemical Society

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Meeting Announcement: 784th LVACS Meeting: The Da Vinci Center of Science and Technology - Student's Night -

*LVACS has reserved the Da Vinci center
exclusively for our members!
No crowds - just fun!*

**Please come out and support your local section
- bring your family and have fun!
An evening for adults, and family too.**

Please see the Da Vinci center website,
www.davinci-center.org for information about the Valley's
exciting new science center - just opened October 30, 2005 !

This is an exciting opportunity to explore the brand new Da Vinci center, interact with the directors and your colleagues.

Date: Tuesday, January 24, 2006

Location: Da Vinci Discovery Center of Science & Technology, 3145 Hamilton Blvd Bypass, Allentown

Self- paced exploration of the Da Vinci Center with open access to fabulous catered food and beverage stations located throughout the center: 5:45-7:30 PM

Meeting & organization: 5:30-5:45 PM Foyer Da Vinci Center

Poster Session: 7:30-8:30 PM Cedar Crest College Science center

-- see CCC student research and chat with the students

Cost: \$25.00 adults; \$12.50 retirees, children and students; ACS student affiliates* FREE!

(Price includes admission, dinner and beverages, Cash bar available.)

(*student affiliate applications will be available. Any student joining the Student Affiliate will receive free admission!)

Contact: Tara Baney - tara_baney@merck.com, 215-652-7486 by Wed. Jan 19, 2006

Directions: <http://www.davinci-center.org/directions.html>



Da Vinci Center Mission

(adapted from www.davinci-center.org)

The mission of the Da Vinci Discovery Center of Science and Technology is to advance inquiry-based learning in science and technology for children in Leonardo Da Vinci's image – thereby promoting academic excellence in these crucial disciplines.

The Center provides every young person with fun, hands-on educational opportunities through its demonstration facility, its classroom outreach initiatives, and its professional development programs for teachers. In doing so, the Center also seeks to become a learning laboratory for the exploration and demonstration of best practices for teaching with scientific inquiry.

This mission is unique because the principles that Leonardo applied in his own life provide the Center's framework for the development of habits of mind that increase the effectiveness of inquiry-based learning.

This mission is based on the understanding that each young person, like Leonardo, is insatiably curious about the world around them, uses multiple modes of investigation, embraces creativity, and seeks to make connections among all the things they are learning.

There is a tremendous need for the Center and its work:

Firms throughout the region report that they cannot hire the skilled workers they need. Meanwhile, employers are requiring increased levels of mathematics and scientific competency for all positions and our community's lifestyle is increasingly dependent on technology.

The number of students pursuing associate and bachelors' degrees in science and technology is stagnant, and many of our best and brightest students are leaving the region.

State science standards establish rigorous expectations for student achievement in science as they progress through school. In 2007-2008, PSSA testing in science will be mandatory for students in grades 4, 7, and 10.

The Seven Principles

Today, the Da Vinci Discovery Center of Science and Technology uses these "Seven Principles" as its framework

in promoted inquiry-based pursuit of knowledge.

The "Seven Principles," as named by Gelb in Da Vinci's native Italian, are:

Curiosità - An insatiably curious approach to life and an unrelenting quest for continuous learning

Dimostrazione - A commitment to test knowledge through, experience, persistence, and a willingness to learn from mistakes

Sensazione - The continual refinement of the senses, especially sight, as the means to enliven experience

Sfumato - Literally meaning "Going up in Smoke"; A willingness to embrace ambiguity, paradox, and uncertainty

Arte/Scienza - The development of the balance between science and art, logic and imagination; also known as "Whole-brain" thinking

Corporalita - The cultivation of grace, ambidexterity, fitness, and poise

Connessione - A recognition of and appreciation for the interconnectedness of all things and phenomena; also known as systems thinking



Special Exhibits

The new Da Vinci Discovery Center will host special feature exhibits throughout the 2005-2006 year, including:

Strange Matter

This traveling blockbuster exhibit examines the always amazing and sometimes bizarre world of modern materials, providing a glimpse of where the future of materials research might take us. Materials scientists are creating entirely new types of materials, such as buckyballs and nanotubes, which are very tiny spheres or cylinders made of carbon atoms. Aerogels are extremely lightweight porous materials made almost entirely of air! Nanotechnology is taking materials science into a new dimension, as scientists create new materials atom-by-atom and molecule-by-molecule, leading to properties and performance never before imagined.

About Leonardo's Horse

In 2003, the Discovery Center of Science and Technology

and Leonardo Da Vinci's Horse, Inc. merged to form the Da Vinci Discovery Center of Science and Technology.

The merger was desirable for both organizations. The Discovery Center was a growing, hands-on science center and Leonardo da Vinci's Horse Inc. was a non-profit organization working to develop young people's curiosity, imagination, and creativity whose original mission - to complete construction of a 24-foot bronze horse statue based on original designs by Leonardo da Vinci - had been realized in 1999.

Also, as then-Board Chairman J. Robert Lovett, Ph.D., said in announcing the merger: "It's obvious to the organizers of this merger that each of our organizations can do much more together than we ever could on our own. Both our capacities for encouraging curiosity and imagination among young people are expanded. As a united force, we have the potential to develop future Da Vinci's who will shape our community in the years to come."

With the merger, the new Da Vinci Discovery Center adopted Leonardo da Vinci as its role model and his accomplishments as its framework. Inspired by Da Vinci's unrelenting quest for knowledge, the organization's mission is to provide experiences inspiring curiosity about science and technology, appreciation for its importance, and understanding of the interconnectedness of all things and phenomena. Central to its mission will be the promotion of hands-on, inquiry-based science learning. Using this research-supported approach, students are to become scientists like Leonardo investigating the world around them.

They will learn to apply the Seven Da Vincian Principles, described in the book *How to Think Like Leonardo* by Michael J. Gelb, to build their understanding of fundamental science concepts while deepening their appreciation for the interconnectedness of all things and phenomena.

Leonardo's scientific pursuits included the study of light and optics, flight, hydraulics, mechanics, and the engineering of structures, amongst others. Leonardo's experiments show today's students that deep understanding can emerge from modest technology combined with careful observation and unfettered curiosity. Leonardo's ideas can inspire tomorrow's inventors, scientists and artists.

Leonardo da Vinci was one of the greatest scientific minds in history. A brief examination of his sketches reveals his ability to conceptualize. He made incredible contributions to the development of science in the fields of anatomy, botany, geology and physics. A programmable automaton he developed is said to be the precursor of today's computer, and Leonardo himself encouraged young people to examine their own artistic works in order to find inventions imbedded in them.

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T. Michelle Jones-Wilson (see above)

Octagon Editor & Webmaster
T. Michelle Jones-Wilson (see above)

2005-2006 Tentative Meeting Schedule

February 22 - Muhlenberg University
March - Albright
April - Moravian (Student Poster session)
May - DeSales (H.S. Teacher's night)