



HCLS Savage Branch & STEM Education Center VISION / FACTS

Howard County Government:	Ken Ulman, County Executive
Howard County Library System Board of Trustees:	Bruce I. Rothschild, Chair
Howard County Library System:	Valerie J. Gross, President & CEO
Architects:	Grimm + Parker Architects
Building Contractor:	Kane Construction
Landscape Architect / Site Contractor:	Biohabitats
HCLS Savage Branch Location:	9525 Durness Lane in Laurel

*Welcome to the very best in education,
21st century style!*

Vision

Welcome to Howard County Library System's latest destination for the future.

The renovated and greatly expanded **HCLS Savage Branch & STEM Education Center** further positions HCLS as a 21st century educational institution, delivering 21st century public education for all.

A launching point for the STEM career pipeline, the contemporary branch centers on science and technology, tripling classroom space for the delivery of the enhanced HCLS STEM curriculum for children and teens.

Nearly doubling the size of the venue, every inch of this cutting-edge epicenter of learning advances the caliber of the curriculum HCLS delivers under its three pillars: Self-Directed Education, Research Assistance & Instruction, and Instructive & Enlightening Experiences.

The HCLS Savage Branch & STEM Education Center introduces state-of-the-art equipment, and showcases an outdoor environmental instruction lab, complete with a biohabitat garden and grounds that demonstrate bioconservation, green technologies, and Maryland's water life-cycle.

Highlights

Around every corner, the HCLS Savage Branch & STEM Education Center offers a new delight.

Customers are greeted by an expanded and welcoming *Customer Service & Research Desk* and inviting, modern seating.

The vibrant children's center is anchored by the whimsical *Abacus Classroom*, where young ones are welcomed through a magic *hiHouse* arch into a fun-filled, sun-bathed nook for structured play, reading, and fun-filled activities. Books abound throughout this area for our youngest customers through fifth grade students.

Transition into the main hub of the Branch to experience more than 50 computers for general use, and a brand new collection of popular materials in myriad genres on a vast array of subjects. This light-filled area features plenty of study and lounge seating, including the enticing garden-view *Galileo Laptop Bar*.

Stroll through the *Marie Curie Cafe* to see where technology truly takes off! Wind your way through the *Engineering Enclave*—a dynamic space for teens—into the HiTech Headquarters (see below). Tucked away in this same area are the *Sally Ride*, *Benjamin Franklin*, and *Jamie Escalante Study Rooms*.

A must-see community destination, the venue's array of spaces and highlights is conducive to studying, conducting research, attending classes and events—and the sheer enjoyment of reading in such a wonderful space.

STEM Education–HiTech Headquarters

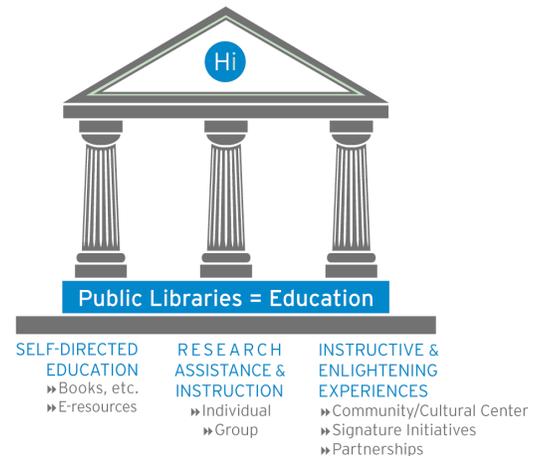
The HCLS Savage Branch & STEM Education Center includes dedicated space for HiTech headquarters. This area includes the *HiTech Classroom* that invites exploration and experimentation as students create all manner of robotic projects and apps, using the latest software development tools and hands-on hardware. Science comes alive in the *George Washington Carver Lab*, while teens learn all about video creation and audio recording in the cutting-edge *Oscar Micheaux Audio/Video Classroom*, complete with sound booth.

When is the Grand Opening?

The HCLS Savage Branch & STEM Education Center will open on Tuesday, July 22, 2014 at 12:30 pm.

Facts–General

- Total Square Feet: 24,000
- Project Cost: \$6.1M (funded by Howard County Government)
- Number of Parking Spaces: 104



Facts–Curriculum-Related

- *Self-Directed Education*
 - 100,000 items (a brand new collection of materials, including books, audiobooks, e-books, films, music, and specialized online research tools)
 - 51 public computers (a 100 percent increase)
 - Three study rooms (new)
- *Research Assistance & Instruction*
 - The Customer Service + Research Desk greets customers at the entrance
 - Abacus Children’s Classroom: 250 sq. ft.
 - Einstein Classroom: 750 sq. ft. (seats 60)
 - George Washington Carver Lab: 200 sq. ft.
 - Two outdoor classrooms
- *Instructive & Enlightening Experiences*
 - HiTech Classroom: 625 sq. ft. meeting room (seats 45)
 - Leonardo da Vinci Meeting Room: 750 sq. ft. (seats 60)
 - Carl Sagan Conference Room: 325 sq. ft. (seats 20)

Unique Building Features

- **Lighting:**
 - Tubular skylights harvest natural light into the public reading and staff area
 - Additional exterior windows allow natural light to flood the entire building
 - New energy efficient light fixtures, plumbing fixtures, and sustainable materials used throughout the renovation
- **Reading nooks:** corner window reading nooks in the children’s center
- Three study rooms:
 - **Sally Ride** Study Room
 - **Benjamin Franklin** Study Room
 - **Jamie Escalante** Study Room
- **Abacus Children’s Classroom** and **hiHouse**: a children’s classroom with child sized entrance (the *hiHouse*) and windows overlooking a butterfly garden
- **Galileo Laptop Bar**: a laptop counter overlooking the courtyard
- **Engineering Enclave**: a dynamic space for teens with specialty seating and computers
- **HiTech Classroom**: a dedicated classroom for HiTech, HCLS’ STEM education initiative for teens
- **Marie Curie Café**: a vending café furnished with tables and lounge seats

- **George Washington Carver Lab + Classroom**
- **Oscar Micheaux Audio/Video Classroom** (with sound booth)
- **Leonardo da Vinci Meeting Room and Carl Sagan Conference Room:** a suite of spaces for events and community meetings
- **Einstein Classroom:** a classroom chiefly for children’s classes, and a backup to the da Vinci Meeting Room
- Outdoor classrooms:
 - **Boulder Amphitheater + Classroom**
 - **Courtyard Classroom**

The Courtyard

The courtyard presents an environmental, ecological, functional, and educational site design that includes:

- Elevated water reservoir bio retention system (the reservoir collects the water runoff from the roof, channeling the water into a trough; the first trough allows students of all ages to follow its journey into a decorative trough before it returns to the water table)
- Native habitat planting
- Tree canopies that:
 - beautify the courtyard and parking areas while reducing surface heat
 - provide shady outdoor areas, enhancing the customer experience
- Permeable paving
- Outdoor classroom area
- Outdoor seating
- Spheres/sculptures

Stormwater Management Features

- Bioretention basin at intersection of Gorman and Knights Bridge roads
- Pervious paving parking strips
- Landscape composed of plants native to the Chesapeake Bay region
- Habitat for birds, pollinators, frogs, bats, and other wildlife

Salute to STEM Pioneers

HCLS Savage Branch & STEM Education Center

Meeting rooms and gathering spaces at the HCLS Savage Branch are named to honor some of the best and brightest figures in the fields of science, technology, engineering and math. The stories of these innovative individuals and daring trailblazers serve as inspiration to students of all ages.

- **George Washington Carver Lab:** An African American scientist, teacher, and agricultural researcher, George Washington Carver (1864-1943) is best known for developing a wide variety of uses for the peanut. However, throughout his prolific career, he was also dedicated to studying the ways in which people should interact with the natural world. Carver's research and innovative educational extension programs were aimed at inducing farmers to use available resources to replace expensive commodities. He published bulletins and gave demonstrations on such topics as using native clays for paints, increasing soil fertility without commercial fertilizers, and growing alternative crops along with the ubiquitous cotton. His ideas of sustainable agriculture based on renewable resources were out of step with his times, but perhaps not with the future.
- **Marie Curie Café:** Marie Curie's (1867-1934) discoveries in radiation changed the world. She became one of the most important women in science, and her research is still important to scientists and doctors today. She was the first person to receive two Nobel Prizes for science, and her work still influences our understanding of physics, medicine, and chemistry. Born Marja Skodowska in Poland, she studied in Paris, France, where she changed her name to Marie. In 1895, she married Pierre Curie, and the couple's pioneering work on the invisible radiation given off by uranium lead to the discovery of radioactivity. Marie Curie later discovered the elements radium and polonium. She died following extensive exposure to radioactivity.
- **Leonardo da Vinci Meeting Room:** Often hailed as the archetypal Renaissance Man, Leonardo da Vinci (1452-1519) was a creative genius equally adept at art, engineering, architecture, and invention. Perhaps best known for paintings such as the *Mona Lisa* and *The Last Supper*, his artistic breakthroughs in perspective and shading quite literally changed the vision of future painters. da Vinci also wrote a treatise on art and left thousands of pages of drawings on architecture, the human face, botany, physics, engineering, cartography, and anatomy – a rich treasure trove which modern-day researchers still consult. What remains of his work – from futuristic designs and scientific inquiry to artwork of ethereal beauty – reveals the ambitious, unpredictable brilliance of a visionary and a timeless dreamer.
- **Einstein Classroom:** The German-born American physicist Albert Einstein (1879-1955) revolutionized the science of physics. He is best known for his theory of relativity. His insights into the nature of the physical world made it impossible for physicists and philosophers to view that world as they had before. He formulated theories that laid the foundation for nuclear energy, laser technology, televisions, and computer chips. His heart was as large as his famous brain, and his love for humanity equaled his fascination with the universe.

- **Jamie Escalante Study Room:** A math teacher at East Los Angeles' Garfield High School, Jamie Escalante (1930-2010) refused to write off his inner-city students as losers. He pioneered the use of Advanced Placement, a program of college-level courses and tests designed for high-achieving private schools, to raise standards in average and below-average public schools. His success at Garfield High School, where 85 percent of the students were low-income and few parents had more than a sixth-grade education, suggested that more time and encouragement for learning could trump educational disadvantages.
- **Benjamin Franklin Study Room:** Of all of the patriots who helped found the United States, Benjamin Franklin (1706-1790) is probably the most respected and most revered. Franklin was a self-made man of many talents who prospered in the diverse arenas of politics, science, religion, education, and international diplomacy. As a writer, he is remembered for both his unfinished Autobiography and Poor Richard's Almanack. As a person, he is remembered for his character, his accomplishments, and his role in creating the United States of America.
- **Galileo Laptop Bar:** Italian scientist and scholar Galileo made pioneering observations that laid the foundation for modern physics and astronomy. Born in Pisa, Italy, Galileo Galilei (1564-1642) was a mathematics professor who made pioneering observations of nature with long-lasting implications for the study of physics. He also constructed a telescope and supported the Copernican theory, which supports a sun-centered solar system. Galileo was accused twice of heresy by the church for his beliefs, and wrote books on his ideas.
- **Oscar Micheaux Audio/Video Classroom:** One of the most original and successful filmmakers of all time, Oscar Micheaux (1884-1951) was born into a rural, working-class, African American family in mid-America. Between 1913 and 1951 he wrote, directed, and distributed 43 feature films, more than any other black filmmaker in the world. Micheaux's work was founded upon the concern for class mobility, or uplift, for African Americans. He rejected the stereotypical roles for blacks and worked to create on-screen images that would counter the racist representations of black Americans. Among Micheaux's discoveries were Paul Robeson and Robert Earl Jones, father of James Earl Jones. He made films outside Hollywood that were tailored to black audiences using his own stars. His accomplishments in publishing and film are extraordinary, including being the first African American to produce a film to be shown in "white" movie theaters.
- **Sally Ride Study Room:** Both scientist and professor, Sally Ride (1951-2012) made history as the first American woman in space. A member of the first astronaut class to include women, she broke through a quarter-century of white male domination when NASA chose her for the seventh shuttle mission. By cracking this celestial ceiling she inspired several generations of women. After a second flight, Ride served on the panels investigating the Challenger explosion and the Columbia disintegration that killed all aboard. Ride wrote about space travel and exploration, and co-founded a company promoting science and education for children, especially girls.
- **Carl Sagan Conference Room:** Science's first authentic media superstar, Carl Sagan (1934-1996) popularized scientific discovery and space exploration on television and in bestselling books and articles. A Pulitzer Prize-winning author, Sagan was involved with every major U.S. expedition to the planets. Sagan, who believed the universe rich with extra-terrestrial life, gained international prominence in 1980 as host of the 13-week public television series *Cosmos*. He became instantly recognizable, offering entrée into the mysteries of both the cosmos and science in general to people around the world.

Abacus Children's Classroom: The Chinese abacus was developed about 5000 years ago. It was built out of wood and beads. It could be held and carried around easily. The abacus was so successful that its use spread from China to many other countries. The abacus does not actually do the computing, as today's calculators do. It helps people keep track of numbers as they do the computing.