



COLD SPRING HARBOR CSD • A LOOK INSIDE OUR SCHOOLS

CONNECTIONS

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DISCOVERING *and* EXPLORING *the* FUTURE THROUGH



**Cold Spring Harbor
Central School District**
*is the starting point
for students to create
their own futures.*

Through vision, a robust academic experience, exploration in STEAM technologies and a supportive environment, students explore their own pathways and are prepared with the skills to succeed in a world that is beyond our imagination.

The Future Begins With a Solid Foundation

Discovery, *Exploration* **AND** *Achievement*

Education is a fundamental cornerstone of society and the pathway to success. The Cold Spring Harbor Central School District plays a crucial role in shaping students' academic experiences and aspirations for the future.

Cold Spring Harbor has a rich history of nationally recognized educational excellence providing a solid foundation for our students to build upon. By building upon past successes while preparing for the future, CSH will continue to lead the way, ensuring that our students receive a high-quality education that prepares them for success in tomorrow's modern world.

As a school district with a rich history of educating the whole student and a legacy of academic excellence, strong community engagement and a commitment to student success, our record provides a valuable foundation for future generations to build upon and will help inspire students, teachers and administrators to continue striving for greater excellence.

Cold Spring Harbor fosters a sense of pride and community among students, parents and staff. When students feel connected to their schools, they experience a sense of belonging and become invested in their own academic success. Belonging leads to higher levels of student engagement, motivation, collaboration, self-confidence and achievement.

Cold Spring Harbor has been blazing the way in STEAM education (science, technology, engineering, art, music). Looking toward the future, Cold Spring Harbor will continue to anticipate and adapt to the changing needs of our students and society.

Cold Spring Harbor CSD must proactively identify emerging trends and technologies that can improve teaching and learning. This may involve investing in new programs and collaborating with community partners to develop new initiatives. This requires a commitment to innovation, creativity and a

willingness to take intelligent risks.

We will continue to focus on STEAM education. Teaching students real-world critical thinking, speaking, writing and problem-solving skills, while encouraging intellectual curiosity, collaboration and more, is at the foundation of this focus. At the same time, Cold Spring Harbor will continue to strive to prepare students to be lifelong learners who are adaptable, resilient and possess the skills and confidence to navigate a rapidly changing world.

In meeting these challenges, Cold Spring Harbor is committed to providing students with access to cutting-edge technology, resources and opportunities for hands-on learning and real-world experiences.

Cold Spring Harbor is committed to creating a safe and inclusive environment for all students to learn and grow. By learning from the past and looking toward the future, Cold Spring Harbor can ensure our students receive a high-quality education that prepares them for success in the modern world. Excellence requires a commitment by everyone to seek innovation and work collaboratively and a willingness to adapt to the changing needs of our students.

Together we will succeed so our students will achieve their dreams.



DISCOVERY

EXPLORATION

ACHIEVEMENT





The Possibilities Are Endless

New STEAM Wing at Cold Spring Harbor High School



It was more than just a ribbon-cutting ceremony when the new STEAM Wing at Cold Spring Harbor High School was revealed. It symbolized the completion of the joint commitment by the school district and the community to provide a state-of-the-art innovation center where the possibilities for students to collaborate and expand their knowledge and research skills will be taken to the next level.

Cold Spring Harbor has always been a community that values a high-quality education for all students and strives for academic excellence. In partnership with families and the community, the Board



of Education, administration and staff are committed to providing students with the skills needed to achieve their goals. The district's new STEAM Wing will enable students to take advantage of all the equipment there to develop the skills needed to become tomorrow's innovators and leaders.

This extraordinary, three-room STEAM Wing, which was funded through a 2019 bond, will offer something for all students. Three adjoining suites connect Room A11, known as the new Family and Consumer Science Center, Room A12, which houses the new Art STEAM suite and Room A13,



which is the new Technology Center housing innovations in robotics and engineering. This configuration will provide cross collaboration and multipurpose versatility for STEAM projects for the junior high students as well as master chef and elective classes for high school students.

Superintendent of Schools Jill M. Gierasch, past and present members of the Board of Education, administrators and staff joined with community residents at the ribbon-cutting ceremony to see this state-of-the-art facility come to fruition after many years of planning. Thank you to the community for your support of this project.

Creating a Districtwide Found

Success is a journey that begins early in childhood and continues through adulthood. The pathway to success in STEM (science, technology, engineering, art and math)? Many are familiar with the term STEM (science, technology, engineering, art and math) has allowed educators to expand the benefits of hands-on education and collaboration in v

It All Begins at Goosehill Primary School

In Cold Spring Harbor, the first step on the pathway to educational excellence and success begins at Goosehill Primary School. Incredibly, even at the ages of 5 and 6, children learn and discover the foundational skills of STEAM. Teachers work with students to foster a strong use of the six-step engineering design process.

This inquiry and exploration process consists of a set of research and evidence-based practices designed to create safe, joyful and engaging learning and school communities for both students and teachers. To blend learning with real-world, hands-on experiences, in the winter of 2022 one of the amazing projects students did was to design and build individually designed light-up greeting cards complete with

circuits and LED lights. The students shared this project while teaching their parents how the process was done during a dedicated STEAM week at Goosehill Primary School.

Beginning in kindergarten, students learn how to solve problems and code using robots



and block codes. With Beebots, which are small programmable robots designed specifically for young children to teach sequencing, estimation and problem-solving, students learn how to create an algorithm and how to debug their programs. Using KIBO robots, they explore computer science concepts, create programs, learn algorithms, write programs, troubleshoot errors, debug and decompose. Students even



learn to create their repeat loops and if/then statements.

Even the concept of digital citizenship education starts early in CSH.

Students learn about media balance, information literacy, online safety, digital responsibility, and health and emotional wellness in the digital world through lessons designed by Common Sense Media. They also learn how to create strong passwords to keep their information safe.

Students also use their technology skills to care for class pet turtles by partnering with the Cold Spring Harbor Fish Hatchery. Students and teachers care for the turtles by monitoring the temperature of the tanks, filters and equipment to keep their pet turtles happy, warm and properly fed. Using their technology and data-gathering skills, the students become responsible caretakers until it is time to release the turtles back at the Cold Spring Harbor Fish Hatchery in the spring.



Education in STEAM Technology

is shaped by various factors, with education being the backbone all else relies upon. What exactly is STEAM (science, technology, engineering and math). Why does Cold Spring Harbor add the "A" for arts? Integrating the arts into STEM learning in various ways, promoting creativity and curiosity in a multitude of educational settings.

Students problem-solve and code using the web-based platform KidOYO to learn multiple languages, culminating with the use of Python in grade six. The students use their acquired knowledge along with problem-solving and code-developing programs that utilize loops, sequencing and events. Robotics with Lego teaches students how to develop code to maneuver a device in our 3D world. All grade levels use the Creative Learning Labs at the K-6 buildings to create

projects ranging from models of the Hubble telescope to 3D printing to designing and creating robots. Student coders participated in multiple hackathons throughout the year, learning to work collaboratively to solve complex challenges. These competitions challenged our students to expand their coding skills by testing and retesting their ideas and knowledge.

Thinking like a scientist starts at a young age. Students in second grade begin to learn about the properties of matter. They observe and interact with various materials to describe and compare their varying

characteristics – texture, size, hardness, color, weight, elasticity and translucency. Third grade students investigate fossils by being given a bag with a mystery object inside using tools, such as hand lenses and rulers, to record data about their object's properties and patterns. Fourth grade students explore energy and fuels that are derived from natural

students to analyze Otzi's stomach and intestines, and learn how pollen types were revealed and studied to help scientists learn when Otzi died. The exhibit also includes skulls dating back six million years, skeletons, bones and more. DNA educators work collaboratively with CSH schools both on-site at the DNA Learning Center as well as during

in-district visits to the elementary schools, where they conduct experiments to explore how antibiotics work.

Students districtwide had the once-in-a-lifetime experience

resources by analyzing how their uses affect the environment, as well as alternative energy sources and their pros and cons.

Students in fifth and sixth grade participate in hands-on-learning field trips to the CSH Laboratory DNA Learning Center, where a remarkable exhibit of Otzi the Iceman allows

of meeting and working with an astronaut and the founder of the International Space Museum for NASA. During the 2022-2023 school year, students in grades K-12 worked with their science and art teachers and astronaut Nicole Stott to recycle materials and create new artwork.

STEAM INSTRUCTION EXPLORATION AT THE ELEMENTARY LEVEL

"At LHS STEAM is fun; we work together to learn new skills and make things. In my previous district we used technology; here at Cold Spring Harbor we use technology to make things. This is so much better. "Life is a string of code, ever evolving for what we learn and what we put on it."

-William Morin 5th grader LHS





"The competition fosters learning in the STEM field working with the design process, trial and error, sparking team creativity. We worked around the clock improving our robot design. One week before the World Competition we completely redesigned the claw, not fully testing and installing the unit until we were in Houston."

-Senior Milan Lustig



STEPPING UP TO CSH JR. SR. HIGH SCHOOL WITH STEAM

At the Jr. High School level, students work in an environment that nurtures ingenuity and creativity, develops problem-solving skills, and provides ample opportunities to explore modern technological tools. As an example of real-world learning, during the 2022-2023 school year, students created mini-golf courses, including all obstacles and equipment at each hole, which was tied to a food truck that shared ethnic foods and structures. The food trucks were collaboratively designed and built, including advertising, food, physical structures and more. Students also conducted experiments and solved complex problems, including building bridges, as part of their physics design challenge.

ONE OF THE KEYS TO SUCCESS IN HIGH SCHOOL *Take Challenging Courses*

At CSH Jr./Sr. High School, students make important decisions about their future as they are guided and encouraged to explore their interests and passions and to refine the skills they will need to succeed in college and the workforce. Adaptability to a rapidly changing world is one of the most important skills for success. Students need to have the skills to adapt to new technologies, work environments and challenges. Effective communication skills are also critical.

High school is a time when students can start building a strong resume. Rigorous courses enable students to develop their higher-level critical thinking skills and prepare them for academically challenging college-level courses. STEAM classes include Advanced Computer Programming Honors, Cybersecurity, Engineering and Design in Technology, Foundations of Research Honors, Graphic Design I, Robotics, and Television Production and Broadcasting.

CSH FIRST ROBOTICS TEAM

The CSH First Robotics team developed a fully functioning robot that won the 2023 Long Island Regional 1 competition at Hofstra University in March 2022. This win earned them a trip to compete in the FIRST Robotics World Championship in Houston. This competition welcomed a record-breaking 45,000 spectators to witness more than 600 teams worldwide competing across eight competition divisions.

The experiences at the FIRST Robotics competition in Houston will last forever. We worked with students from around the world.

PRESTIGIOUS NATIONAL LEMELSON-MIT INVENTEAM GRANT

Cold Spring Harbor Jr./Sr. High School is the only high school in New York State and one of only eight high schools nationwide to be selected as this year's recipient of the highly competitive national Lemelson-MIT InvenTeam grant. A grant

of \$7,500 was awarded to create an invention geared toward active and passive tick mitigation strategies that do not require pesticides.

FIRST DISTRICTWIDE STEAM NIGHT

The Cold Spring Harbor family came together at the Districtwide STEAM Night in February 2023. Nearly 1,000 students, parents, administrators and staff participated in the event. The STEAM Night was a K-12 initiative that allowed teachers and high school students to teach younger students about science, technology, engineering, art and math. Event inquiry and design concepts including electric circuitry, robotics and operational use of the Cyberhawks robot, construction of geometric shapes, force and angles to project objects, mechanical gears and operations, and creativity in art were taught by high school students to younger students, expanding their STEAM interest, knowledge and skills.



FAMILY AND COMMUNITY PARTNERSHIPS

Community involvement has consistently been a strong suit at Cold Spring Harbor. Parents support and participate in student-centered activities to enhance academic achievement. Parents are often part of the learning in school, from circuit building at Goosehill Primary, Makerspace Fairs at the elementary schools, Jr. High STEAM food trucks and golf course exhibitions, the high school "Night of the Living Museum" community art event, the Districtwide STEAM Night event and more. Community involvement at Cold Spring Harbor has consistently been linked to enhanced academic achievement.

Strong school-parent organization relationships promote the exchange of ideas, resources and strategies to address students' emotional, social and physical needs. This relationship promotes a safe, inclusive environment that nurtures character development, ethical values and interpersonal skills. The degree of volunteerism is remarkable in this community. Parent groups are extremely dedicated through their service and commitment not only to the students, but to the staff members, who they greatly appreciate. This home-to-school partnership is critical to building and achieving a successful school district.

Partnerships CREATE Opportunities

The district's partnerships with the following institutions enable students to expand their academic experiences, build upon their critical thinking and problem-solving skills, and prepare them to be innovators and leaders in the future:

- Art Supervisors Association
 - Arts Booster Club
- CSH DNA Learning Center
- CSH Educational Foundation
 - CSH Laboratory
- CSH Laboratory Partners for the Future
 - CSH Public Library
 - Cultural Arts Committee
 - Farmingdale State College
 - Huntington Arts Council
 - Long Island University Post
- NYS Council of Administrators of Music Education
 - Parent Teacher Groups
 - Stony Brook University



**COLD SPRING HARBOR
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COLD SPRING HARBOR *Forges a Path*

Cold Spring Harbor fosters innovation, creativity, exploration and teamwork. Together, students, teachers, administrators, parents and the community make Cold Spring Harbor a family of learners.

TOGETHER, WE CAN!

POINTS OF PRIDE



OPPORTUNITIES AND COMPETITIONS

Cold Spring Harbor DNA Learning Center | Ecybermission (Army Educational Outreach Program) Empower Solar Competition | GENIUS Olympiad | Genes in Space Gloria Barron Prize for Young Heroes competition | ISEF Regeneron International Science & Engineering Fair | Junior Science and Humanities Symposium | Long Island Science Congress | Long Island Science and Engineering Fair MITThink competition | NSPC Health Sciences competition | Northwell Health Medical Marvels Northwell Health Spark Challenge | Partners for the Future, Cold Spring Harbor Laboratory Regeneron Science Talent Search | Spellman Clean Tech competition | Stockholm Junior Water Prize competition | Toshiba ExploraVision | WiSE collaboration with Cold Spring Harbor Laboratory.

SCIENCE/TECHNOLOGY

Students' science research published on DNA sequencing mosquitos: National Institutes of Health National Center for Biotechnology Information database, four students.

- New York Tech Mini-Research Grant awarded: three students.
- 2022 U.S. Super STEM Competition Winner (Mechanical Division): one student.
- 2023 Junior Science and Humanities Symposium: two regional semifinalists.
- Robotics: 2023 FIRST National Competition Regional 1 champions at Hofstra University, and 2023 invitation to the Houston International Robotics FIRST Competition.

THE ARTS

CSH achieved honors/awards in the following competitions: All-County; High Arts Showcase, Huntington Arts Council; Long Island Arts Alliance Scholar-Artist Award; Long Island Museum Colors of Long Island exhibition, K-12; Long Island's Best: Young Artists at the Heckscher Museum; Merit Scholarships; National Art Honor Society; Photographer's Forum competition; STEAM Fair; Scholastic Art and Writing Awards; Tulip Festival; Scholar Artist Merit Recipient: one student.

MUSIC

CSH achieved honors/awards in the following music competitions: All-County Honors Music Ensemble members; All-State Honors Music Ensemble members; Long Island Arts Alliance Scholar-Artist Award winner; Hunting-Tony Award winners; Long Island String Festival Honors Music Ensemble members and Tri-M Music Honor Society Program inductees.

- 2022-2023 NAMM Foundation Award: Best Communities for Music Education.
- American Choral Directors Association All-National Honor Choir: One student selected to perform.

PERFORMANCES

Students in grades 2-12 presented numerous musicals and plays enhanced by innovative set designs and costumes in the Performing Arts Center, which is being enhanced.

- LHH performed "Peter Pan Jr."
- WSS performed "Willy Wonka Jr."
- CSH Jr. High School performed "The Descendants"
- CSH Sr. High School performed "The Play That Went Wrong" and "Chicago"