ANNUAL REPORT 2018-2019
INTRODUCTION

The Hillsboro Charter Academy is a proud part of the Loudoun County Public School system. We are an academically rigorous school of choice for scholars of all abilities and backgrounds that maintains the historic presence of a community public school in Hillsboro, Virginia, while welcoming families from throughout Loudoun County.

Hillsboro Charter Academy, known as HCA, opened its doors to students under the charter granted June 23, 2015, beginning with 125 scholars enrolled for the 2016-2017 academic year. At the end of the 2018-2019 school year, the number of scholars grew to 143, with a waitlist of more than 200 children.

HCA is proud of this growth and the strong community support we have earned through our outstanding academics, expert recognition and awards and parental acclaim—all rooted in a uniquely collaborative and supportive culture. This year’s theme, “Moonshot Mindset,” embodied our approach—that there is no limit to what our scholars can achieve, so long as we realize that making errors along the way leads to amazing results. This report reviews key accomplishments and metrics achieved by HCA as of the end of its third school year.

HCA has successfully developed and implemented cutting-edge instruction, with an emphasis on STEAM and our own innovative E3 concept (Explore, Engage, Engineer) approach to project-based learning, with a strong tie to literacy and other subjects.
MOONSHOT MINDSET

Our 2018-19 school theme, “Moonshot Mindset,” strategically combined Moonshot Thinking with Growth Mindset. We chose this theme to coincide with the 50th anniversary of the Apollo Moon Missions which culminated in the 1969 Apollo 11 spaceflight project when the first human walked on the moon.

We encouraged our scholars to “shoot for the moon” and experience how the seemingly impossible becomes reality through the power of science and technology. Together we cultivated a growth mindset which isn’t afraid to fail and try again. Our teachers used innovative curriculum to unlock learning, emphasizing process not just product. Teachers worked to foster creativity and develop a passion for innovation in the midst of a school community where scholars inspired each other to pursue their ideas. Students developed resilience and persistence even in the face of setbacks. Our scholars learned to say: “I can’t do it...YET.”

As a highlight of our Moonshot Mindset year, HCA hosted the 2018-2019 National Launch of the Civil Air Patrol (CAP) Aerospace Connections in Education (ACE) Program. The October 2018 ceremony featured many surprises, including a helicopter landing at the school carrying two mascots, the presentation of colors from the Leesburg Composite Squadron Civil Air Patrol and speeches by visiting dignitaries.

The helicopter then lifted off from the school ball field, and a CAP plane flew overhead while students heard principal Mr. Mark Wertheimer commend them from onboard via loudspeaker. There were student musical performances, drone demonstrations, additional flyovers and the inflation of a hot air balloon!

This event recognized HCA’s selection as the 2018 National ACE School of the Year from among more than 200 schools nationwide that use the program. The award spotlighted the way HCA utilizes the CAP ACE technology-focused curriculum to motivate students through the aerospace lens.
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**Mornings at HCA** are spent teaching essential literacy, math, science, social science and other critical skills.

**Afternoons at HCA** (called E3) are hands-on, collaborative project blocks. They include:

- Opportunities for scholars to apply academic skills in a cross-curricular manner.
- Time for demonstrating and strengthening learning.
- Guest speakers and community connections.
- Experiences that develop higher order thinking and problem-solving skills using:
  - Project-based learning opportunities
  - Inquiry-based lessons
  - Engineering Design Challenges
HCA’s STEAM FOCUS

Science the S in STEAM

- Science is emphasized at HCA through a scope and sequence unique to our collaborative needs.

- Our science blocks encourage investigation and discovery by posing real-world questions that require hands-on experiments and engagements to find answers.

Technology the T in STEAM

- Technology is embedded in everyday work in the classroom and during afternoon activities.

- HCA continually expands our technology footprint with additional devices and students access HCA’s protected G-Suite Google resources.

- STEAM activities and coding may or may not be “plugged-in,” illustrating HCA’s focus on using technology as a tool rather than as individualized, independent instruction in and of itself.

- Technology is often accessed in a collaborative group to foster 21st century skills.

- We also use the Common Sense curriculum at every grade level to ensure safe technology practices and have begun integrating the new Computer Science Standards for the Virginia Department of Education.

Engineering the E in STEAM

- Engineering is incorporated via design and robotics at EVERY grade level.

- The Engineering Design Process is taught and followed throughout the campus and can be seen on display and in practice in classrooms and specialist studios.

- Design processes and requirements are typically introduced during weekly STEAM studio lessons.

- Related skills are then integrated during the afternoon project time, where cross-curricular components are brought to life within the context of creation, critical thinking, collaboration and demonstration of learning.

Arts the A in STEAM

- Arts are integrated regularly, with visual and performing arts incorporated as required components of E3 projects.

- During daily E3 project time, specialists collaborate with classroom teachers to co-teach and ensure the inclusion of the arts.

- Arts are a vital part of our Exhibitions of Learning, one of which showcased a whole-school design challenge for a fractured fairytale that required dramatic presentation, artistic representation, music and science standards.

- Art and music classes are also included in weekly studio schedules.

Math the M in STEAM

- Math is taught using the Virginia SOL Enhanced scope and sequence using the GoMath Curriculum.

- This is further augmented with hands-on instruction and weekly exposure to our ASPIRE program, which involves math enrichment lessons related to the curriculum that enable scholars to apply the math concepts learned during the week.

- Measurement and geometry are a natural component of weekly STEAM studio lessons in which students actively solve real-world problems. For example, students used a pilot's sectional chart to map a cross-country flight, which required the measurement of mileage and determination of angles formed during the flight triangle.
STEAM STRENGTHENS LITERACY & OTHER SUBJECTS

HCA’s focus on literacy ties in with STEAM across the curriculum. Daily literacy lessons include independent, small and whole-group instruction. Based on best practices, students are offered remediation or enrichment by specialists in small group settings. Classroom teachers integrate books about science into literacy blocks to provide background knowledge and research related to STEAM projects happening each afternoon.

Students quickly learn that literacy is the basic foundation to success in STEAM and all else. Each lesson in the STEAM lab has a foundation in a story which must be read to understand the problem the character faces and decipher the question that starts the investigative STEAM solution.

When engaged in engineering projects, students are expected to follow the Design Process, which requires written recording of each step taken. All E3 and Exhibition of Learning presentations require scholars to practice, strengthen and demonstrate effective oral and written communication and presentation skills.

STEAM strengthens and enriches HCA’s instruction in other subjects. For example, history is taught through the lens of STEAM, using real-world examples of invention and innovation and their political, economic, cultural, geographic and technological impacts. Our second graders, for instance, focus on the transformation of transportation across the ages, learning the history behind the development of different methods of transportation and the wide-ranging effects of those developments.

HCA uses STEAM principles to address other important scholar needs like health and physical fitness. In addition to regular physical education, students participate in a separate health class where there is an emphasis placed on creating lifelong healthy habits.
HCA’S APPROACH TO SOLs, SOQs and 21st CENTURY SKILLS

HCA’s project-based learning model requires scholars to apply subject content and skills via highly engaging project experiences. This enables our scholars to develop problem-solving skills, higher order thinking and the 21st century skills of collaboration, communication, creativity and critical thinking.

Daily E3 and special Exhibition of Learning projects require scholars to understand, process, create, evaluate and share knowledge. We use student ambassadors to train fellow scholars on the different technologies that enhance our STEAM curriculum. Scholars self-evaluate on the 21st century skills at the end of each grading period.

HCA’s interdisciplinary curriculum has a solid foundation in the Virginia SOLs and SOQs, and we evaluate student mastery of skills accordingly. Classroom instruction and projects closely follow a scope and sequence aligned with the SOLs and SOQs to ensure they are properly covered.

We use norm-referenced evaluations to ensure the Virginia standards are mastered. Our progress report rubrics evaluate student performance and behavior on tests, classroom assignments and E3 and Exhibition of Learning projects (accounting for process and product). The rubrics are directly tied to the pertinent SOLs, with a strong focus on the 21st century skills.
AWARD WINNING SOL PERFORMANCE

HCA’s unique approach, grounded on the Virginia SOLs, has enabled us to exceed state benchmarks with outstanding scores—even when compared with the already high scores of LCPS as a whole. As a result of our extraordinary performance this year, we received the 2019 Board of Education’s Highest Achievement Exemplar Award, one of only 52 schools in the state (and one of only three in Loudoun County) to receive the award.

While SOLs fall short of providing us with comprehensive information regarding our scholars’ progress in all areas across all grade levels, they do allow us a snapshot into how they are doing, particularly as aligned with Virginia academic achievement expectations. Due to statutory limitations on reporting data for very small subgroups (to prevent identification of individuals in those subgroups), HCA has no information available for gap group analysis.

HCA is fully accredited by the Commonwealth of Virginia.
MEETING THE NEEDS OF ALL STUDENTS

HCA has enrolled a diverse population of students from Hillsboro and Loudoun County. We endeavor to meet the academic needs of students of all abilities and backgrounds. One of the unique aspects of HCA’s small-school culture is the distinct opportunity for students of all ages to interact with one another, regardless of grade level. Scholars know each other well and frequently collaborate in cross-grade-level activities.

HCA is committed to meeting all learners at their current level and ensuring appropriate yearly growth. We set and achieve aggressive goals to ensure that those enrolled at HCA for at least one year, including those who need additional assistance, will achieve a year’s worth of gains.

Students are given ongoing norm-referenced mastery assessments. We differentiate their instruction accordingly, especially in the morning during our focused, skill-based lessons. Differentiation is fluid, responding to changing needs as students overcome previous challenges or face new ones. Faculty work collaboratively to monitor all students, regardless of abilities and motivations, for supportive interventions in all subject areas. Teachers develop interventions tailored to individual learning styles for students who need additional scaffolding and/or enrichment.

All these elements contribute to individual learning plans communicated to parents through conferences and highly-detailed rubrics. Working with Loudoun County Public Schools (LCPS), we ensure that English Language Learner (ELL) and Special Education services are provided to those students who need them.

To bring gifted educational opportunities to our students, HCA uses the ASPIRE program, which closely resembles the LCPS SEARCH program. The main difference is the integration of push-in reading and math enrichment for students who demonstrate the need for challenge. We provide ASPIRE without formal identification to all K-5 scholars.

In place of the LCPS FUTURA program, HCA uses our SOAR (Students with Outstanding Ability Resource) program for identified 4th-5th grade students. HCA initially follows LCPS assessments and criteria to identify students placed in SOAR. In addition to the LCPS criteria, HCA also administers the Profile of Creative Abilities to include creatively gifted students in SOAR as long as they meet one of the criteria from LCPS Gifted Identification.
EXPERT FACULTY

HCA is proud of our extraordinary faculty who are expert leaders in student instruction, curriculum development and the integration of technology into the learning process.

This year, our third-grade teacher, Addie Schafer, was selected as a 2019 National Geographic Grosvenor Teaching Fellow, one of 45 Fellows selected from over 300 qualified educator applicants. She credits HCA for providing her with many opportunities to teach outside of the box and bring integrated arts and authentic learning experiences into the classroom.

Megan Tucker, our STEAM/Gifted Specialist, won this year’s prestigious American Institute of Aeronautics and Astronautics (AIAA) Foundation Educator Achievement Award. Ms. Tucker is one of only three awardees nationwide, a huge and well-deserved honor. This award is earned by a teacher’s effort to promote and contribute to the integration of science, technology, engineering and mathematics within the classroom.

Our faculty’s expertise contributes to HCA’s recognition as a leader in STEAM education. In addition to the 2018 CAP ACE School of the Year award, HCA was selected by RoboNation/SeaPerch to pilot their elementary school program in the construction and testing of underwater robots.

EDUCATOR AWARDS AND RECOGNITION

MS. WENDY DALTON
Teacher of the Year, past designee in prior districts
Seasaw Ambassador, 2010

MS. TIFFANY MILLER
Regional Civil Air Patrol Teacher of the Year, 2017
Seasaw Ambassador, 2018

MS. MIRANDA MEADOWS
LCPS Innovator Network
America’s Teachers at J/TSEC, 2017
Seasaw Ambassador, 2018
MERGE Ambassador, 2019

MS. ADDIE SCHAFER
National Geographic Grosvenor Teacher Fellowship

MS. DARCI RAMPINO
Certified for Yoga & Mindfulness in the Classroom
Seasaw Ambassador, 2019

MS. STACIE KLING
Expert in Project Based Education, Presented to LCPS principals
America’s Teachers at J/TSEC, 2017

MS. BETH FULLER
Art featured in Society of Children's Book Writers & Illustrators Brochure
Showcased on Western Loudoun Studio Artist Tour

MS. MARA MORGAN
Shenandoah University Teacher of the Year, 2006
Finalist for LCPS Teacher of the Year

MS. JULIE EPSTEIN
National Board-Certified Counselor

MS. MEGAN TUCKER
American Teachers at J/TSEC 2008, 2016, 2017
Presidential Award for Excellence in Math and Science Teaching, 2010
National Civil Air Patrol Teacher of the Year, 2011
NASA SOFA Airborne Ambassador, 2014
Space Foundation Teacher Liaison, Flight 15-16
AIA Foundation Educator Achievement Award, 2019
Air Force Association Gaithersburg Chapter #443
Teacher of the Year, 2019
Several of our teachers were chosen again this year to join a select group of educators attending I/ITSEC, the nation’s premier technical and engineering industry training, simulation and education conference. HCA teachers have also presented on STEAM and E3 at multiple local, state, and national conferences, including Inspire Loudoun, the Virginia Children’s Engineering Conference and the National Science Teachers Association Convention.

Our educators continue to pursue extensive professional development throughout the year. This widens learning opportunities for our scholars and models the growth mindset. For example, when our faculty engaged in the first-hand experience of making Sea Perch “submarines,” they stretched their skill-set to solder and create these robots—an experience they have transferred to our students when asking them to use tools and techniques that are new and challenging.

HCA teachers work as a team to deliver outstanding learning experiences to our scholars. To achieve our STEAM-integrated curriculum, teachers communicate weekly on scope and sequence as well as cross-disciplinary connections within and across grade levels. Classroom teachers regularly co-teach with specialists both for differentiation and integration of various disciplines. Teacher workdays include collaborative training around HCA’s unique model. HCA holds weekly staff meetings and weekly “professional learning communities” to reinforce the implementation of the interdisciplinary model. Educators discuss scholars’ progress while setting and determining new progress goals using peer-reviewed rubrics.

HILLSBORO CHARTER ACADEMY

IN JUST THREE SHORT YEARS, HCA HAS RECEIVED:

2019 Board of Education's Highest Achievement Exemplar Award

2018 National Civil Air Patrol ACE School of the Year

2018 RoBoNation/SeaPerch pilot elementary school for construction and testing of underwater robots

Kindness Certified School

"TreeRing Green Yearbook School" Status

Tomatosphere Selected Participant

Follow all the amazing things happening at HCA
Hillsboro Charter Academy 2018-2019 Annual Report

WELCOMING LEARNING ENVIRONMENT

HCA cultivates an inclusive and respectful environment that celebrates differences and fosters ethical behavior and global citizenship. Students participate in lessons and activities that teach friendship, tolerance, diversity, hard work, teamwork, responsibility, respect and conflict resolution. To build on such lessons, HCA provides a weekly opportunity for one scholar in each grade level to tell the class about herself or himself personally.

HCA celebrates National Unity Day in order to bring our students together and commit to treating each other with kindness and respect. Students also participate in the Great Kindness Challenge where each student does at least one random act of kindness at school—which contributed to HCA’s recognition as a Kindness-Certified School.

As part of our Bullying Prevention Month, students participate in National Stomp Out Bullying Day, pledging to stand up against bullying. We have a positive behavior reinforcement plan that includes a daily “WISE Owl” Promise as well as “Brag Tags” handed out for demonstrations of hard work, responsibility and respect for others.

HCA aims to foster a safe learning environment in which children can fully develop their range of abilities, balancing academic achievement with social and emotional needs. Through our emphasis on a growth mindset, we create a culture in which mistakes are encouraged and failing is celebrated with the intent of being able to try again. This empowers our students to be risk-takers who put forth extensive effort in all academic endeavors.

We also teach students about social and emotional resilience, helping them identify their individual strengths and how to use those strengths to “bounce back up” when feeling down. We add coping and calming strategies combined with other lessons on connections and relationship-building. These efforts allow diverse individuals to collaborate successfully, which is critical to HCA’s overall instructional approach.

Not surprisingly, students are enthused and excited to learn in this extraordinary environment. HCA’s average monthly attendance for the 2018-2019 year exceeded 92% every month. Most months, average attendance exceeded 95%. Our student to teacher ratio at the end of our 2018-2019 academic year was approximately 12:1.
AFTER SCHOOL
ENRICHMENT

HCA provides additional learning opportunities extending beyond the regular school day. After school activities give our scholars the chance to apply their skills to real world projects. This year our school fielded its first ever teams for the international Odyssey of the Mind problem solving competition. HCA’s emphasis on the growth mindset and student-driven solutions in the classroom helped our rookie teams deliver an impressive top ten finish at the regional Odyssey tournament.

Many of our scholars also participated in Drama Club where they embraced the big A (Arts) in STEAM, learning about improvisation, characterization and technical theater. In the spring, our Drama Club performed the student-led production “Peter and the Lost Kids”—a Peter Pan spin-off written by a local theater company. The kids did it all: designing their costumes, creating their props from recyclables and running all the tech for their show.
GRANTS & FUNDRAISING

HCA received numerous STEAM grants during the 2018-2019 school year. These grants totaled $25,000 that we used to fund new technology tools and software, enhanced STEAM instruction and STEAM-related field trips.

Fundraising is an important part of the culture at HCA. Fundraising efforts help fund field trips, assemblies, staff appreciation events, technology updates and other needs. During the 2018-2019 school year, HCA exceeded fundraising goals. Our annual auction was attended by both HCA families and members of the community and brought in over $50,000. The fundraising focus of the auction was purchasing new interactive whiteboards for the school, as well as assisting with other school and classroom improvements.

In addition to the auction, a family-centered Basket Raffle in the fall of 2018 raised over $3,000. HCA participated in Giving Tuesday, a movement to create an international day of charitable giving at the beginning of the holiday season. HCA's success with this program brought in another $2,400 for the school. Other sources of fundraising (including Box Tops for Education, Amazon Smile and Harris Teeter's Together in Education) brought in an additional $1,000.

Even students participated in fundraising. As a culminating activity for their Economics unit, first and second graders organized a market day in which they sold hand-made crafts to the school community. The students earned $800 during market day and have plans to purchase a water hydration station for the school.

For the 2019-2020 school year, our fundraising focus will be improvement of the school's physical environment. This focus will include items like furniture updates, library resources and possible facility expansion.
COMMUNITY SUPPORT AND COLLABORATION

HCA is proud to be named the 2018 Best of Loudoun “best public school” by the Loudoun Times Mirror. We believe such an award reflects HCA’s enthusiasm for learning and ongoing effort to deliver cutting-edge instruction in partnership with our larger community.

Our scholars and educators frequently engage with the community to exchange knowledge and ideas. We shared the power of STEAM at the first annual LCPS Computer Science Night in December as well as the second annual Maker Showcase in the spring. We also had a Maker Booth at the “State of the Gap” address in January at Hillsboro’s Old Stone School. Our school Exhibitions of Learning also provide a twice-yearly opportunity for our students to share their learning with the community.

HCA staff members have leveraged their professional credentials and recognition to develop relationships with educational and business leaders, thereby creating a Technical Advisory Group. This “TAG” Team functions as an informal group of professionals who are available to provide students and staff with technical advice, project support and collaboration.

We are also thankful for our partnership with firefighters from the nearby Loudoun Heights Fire-Rescue Station 26 who regularly help serve lunch and conduct safety training for our students. Firefighters also participate in various schoolwide, PE-sponsored activities like Bike to School Day, HCA Walk-Around and our end-of-year kickball game.

The HCA community displays an entrepreneurial spirit and work ethic in uniting to accomplish school projects. This includes the “HillsB’ro Show” events where the entire Hillsboro community is invited to join in work parties. When an old tree had to come down, it was not merely removed—a parent made part of it into a coffee table that was then donated for an HCA auction fundraiser, and the winner in turn donated it back to HCA for use in the reception area. Other examples this year include the pop-up of an impromptu tree-limb clearing crew and the construction of a butterfly garden.
PARENTAL ACCLAIM

HCA is honored to have earned parental acclaim for its program. Parental support is not only generally high but especially high regarding our educational approach and execution, our faculty and staff, our student focus and our close-knit community.

WHAT DO OUR FAMILIES LOVE ABOUT HCA?

“It is the best environment for our children and encourages them to stretch their minds and push themselves.”

“It is a great school with a unique wonderful curriculum and awesome teachers and staff.”

“It’s a small school and most people have become like family.”

“The safe, positive, welcoming, and encouraging atmosphere. The goal to set higher standards for kids and to find new ways of learning.”

“A Love of learning is cultivated in students, and children are encouraged to think for themselves.”

“It is a one of a kind place with tremendously dedicated teachers, a strong commitment to families and the community, and my kids are nurtured there.”

“All of the staff know all of the scholars - so my children feel comfortable anywhere in HCA.”

“It allows my child to explore solutions and collaborate.”

“It provides positive learning opportunities and stirs a passion for innovation!”
GROWTH AREAS

Building on our success, we are working to improve HCA in a number of growth areas. At the beginning of this school year HCA, along with the rest of LCPS, adopted the “Go Math” curriculum. We made special efforts to transition into this new program quickly, and the success of our efforts is apparent in our student test scores. For the 2019-20 school year, we plan to pursue continued academic improvement, now with a focus on reading and the primary grades as we implement new curriculum.

As a second major initiative going into next year, we plan to codify and document the many policies and procedures of our fledgling school. Now that we have had three years to get such protocols in place, we will organize and clarify them to improve our efficiency and reliability.
CONCLUSION

It has been a “moonshot” third year at Hillsboro Charter Academy—a year for our small school to shoot for big ideas and further implement our model of STEAM-focused, interdisciplinary project-based learning. Our innovative approach garnered local, state and national attention as we received prestigious awards and grants recognizing our academic achievements and our leadership in STEAM education.

Our school continues to earn parental praise and to thrive through community partnership and support. We look forward to ongoing growth and improvement as we work alongside our partners in the LCPS system. Our success shines brightest in the lives of our students, both in their test scores and in their enthusiasm for learning as they prepare to be 21st century citizens who use the power of technology to make the world a better place.