ELIGIBILITY CERTIFICATIONS

School and District’s Certifications
The signatures of the school principal and district superintendent (or equivalents) on the next page certify that each of the statements below concerning the school’s eligibility and compliance with the following requirements is true and correct to the best of their knowledge. In no case is a private school required to make any certification with regard to the public school district in which it is located.

1. The school has some configuration that includes grades early learning to 12.
2. The school has been evaluated and selected from among schools within the Nominating Authority’s jurisdiction, based on high achievement in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
3. Neither the nominated public school nor its public school district is refusing the U.S. Department of Education Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a district wide compliance review. The Department of Defense Education Activity (DoDEA) is not subject to the jurisdiction of OCR. The nominated DoDEA schools, however, are subject to and in compliance with statutory and regulatory requirements to comply with Federal civil rights laws.
4. OCR has not issued a violation letter of findings to the public school district concluding that the nominated public school or the public school district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan to remedy the violation.
5. The U.S. Department of Justice does not have a pending suit alleging that the public school or the public school district as a whole has violated one or more of the civil rights statutes or the Constitution’s equal protection clause.
6. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the public school or public school district in question; or if there are such findings, the state or public school district has corrected, or agreed to correct, the findings.
7. The school meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

U.S. Department of Education Green Ribbon Schools

Name of Principal: Mrs. Stephanie Engelhardt

Official School Name: Christ the King Catholic School

[Signature]
Date: 2-8-2021

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.

Name of Superintendent: Deacon Scott J Conway

District Name: Diocese of St Augustine Catholic Schools of Northeast Florida

[Signature]
Date: 2-9-2021

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.
Nominating Authority’s Certifications
The signature by the Nominating Authority on this page certifies that each of the statements below concerning the school’s eligibility and compliance with the following requirements is true and correct to the best of the Authority’s knowledge.

1. The school has some configuration that includes grades Pre-K-12.
2. The school is one of those overseen by the Nominating Authority which is highest achieving in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
3. The school meets all applicable federal civil rights and federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

Name of Nominating Agency: Florida Department of Education

Name of Nominating Authority: J. Alex Kelly, Chief of Staff for Commissioner Richard Corcoran

I have reviewed the information in this application and certify to the best of my knowledge that the school meets the provisions above.

(Nominating Authority’s Signature) J. Alex Kelly, Chief of Staff

Date: 2/4/21

The nomination package, including the signed certifications, narrative summary, documentation of evaluation in the three Pillars, and photos should be submitted online according to the instructions in the Nominee Submission Procedure.

OMB Control Number: 1860-0509
Expiration Date: December 31, 2023

Public Burden Statement
According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is 1860-0509. Public reporting burden for this collection of information is estimated to average 37 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit P.L. 107-110, Sec. 501, Innovative Programs and Parental Choice Provisions. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20202-4536 or email ICDocketMgr@ed.gov and reference the OMB Control Number 1860-0509. Note: Please do not return the completed ED-Green Ribbon Schools application to this address.
NOMINEE INFORMATION

SCHOOL NAME:
Christ the King Catholic School

ADDRESS:
6822 Larkin Road, Jacksonville, FL, 32211

FACEBOOK: @ctkschooljax

PRINCIPAL:
Mrs. Stephanie Engelhardt
stephanie.engelhardt@ctkschooljax.com
904-724-2954

LEAD APPLICANT:
Ms. Suzette Gagnon
STEM Coordinator, Educator, Green Team Member
suzette.gagnon@ctkschooljax.com
904-724-2954, cell 904-654-5853

SCHOOL TYPE AND GRADE LEVELS SERVED:
PreK through 8th grade private school

SCHOOL DATA:
Free and Reduced Price Lunch: none, we are a Private School (however, over 40% qualify based on census)
Minority: 35%
Students attending on Scholarship: 57%
Students receiving Title I Services: 24%
Limited English Proficient: 4%
Special Education: 9%
Graduation Rate: 100%
Attendance Rate: 98%
Total Enrolled: 280

AWARDS/RECOGNITION:
2020 US Green Building Council of NE Florida, Green School of the Year
2020 US Green Building Council Educator of the Year, Suzette Gagnon
2020 Project Learning Tree Green School
2020 Air Force Association, Fallon Chapter Educator of the Year, Lauren Valot
2019 Project Learning Tree Educator of the Year
2019 Florida Agriculture in the Classroom, Excellence in Teaching about Agriculture award
2018 Green Apple Day of Service Project of the Year from US Green Building Council
2015 Air Force Association, Fallon Chapter Educator of the Year, Suzette Gagnon
2014 Green Apple Day of Service Project of the Year from US Green Building Council
2018 Future of Educational Technology Conference Excellence in STEM Education Award
2017 STREAM Accreditation, Florida Council of Catholic Bishops
2015 St. John’s Riverkeeper Environmental Educator of the Year

GRANTS RECEIVED:
2020 Project Learning Tree Classroom Grant
2020 Florida Association of Science Teachers Classroom Grant for Environmental Science Hall
2020 Diocese of St. Augustine Community Garden Grant ($10,000)
2019 Florida Association of Science Teachers Classroom grant for STEM Education
2019 Fratris Scolarium Christianarium Foundation Grant ($2500)
2018 LaRose Foundation Grant for STEM ($5000)
2017 Sustainable Forestry Initiative Classroom Grant
2017 Florida Department of Agriculture Hurricane Relief Garden Grant
2017 Florida Association of Science Teachers Mini Classroom Grant for STEM
2014 Earth Day Grant for Outdoor Classroom.
GREEN RIBBON NARRATIVES

SUMMARY: STREAM GREEN AT CHRIST THE KING

Christ the King Catholic School (CTK) is an urban parish school nestled in the heart of Jacksonville, Florida. Built in 1955, we have over 40 acres including a creek and marsh area. We serve 280 students from grades pre-kindergarten to eighth grade. Over 57% of our students attend the school on a tax credit scholarship from the State and we are classified as a Title I school.

Our school has been pursuing the pillars of a Green Ribbon School for over twelve years in conjunction with our efforts to become a STEM school. In 2008, parents met with the principal and middle school science teacher to discuss how to make science education memorable and meaningful. From those beginning ideas, our school began a pursuit of STEM education. Through hard work, collaboration, teacher training, professional development and yearly self-assessment and revamping of our program, CTK has developed and sustained a STEM/STREAM program which led to the school's STEM Accreditation. We were the first Catholic School in Florida to achieve this honor. Over these past years, CTK enlarged spaces for STEM collaboration, built outdoor areas for gardening and observation, and developed a comprehensive agricultural program. We partnered with Notre Dame University, local biomedical manufacturing production facilities, the University of Florida extension service, Project Learning Tree, University of North Florida, Tree Hill Nature Center, the St. Johns Riverkeeper, parents and families of CTK. We have applied to an endless list of grants to gather the expertise and money necessary to provide the infrastructure for our programs. Today, we provide mentoring and tours to other schools who visit us to learn how to incorporate hands-on learning such as STEM.

In Pillar I, CTK’s most successful initiative is our agricultural focus. Students participate in choices that reduce environmental impacts by collecting organic matter for composting, sustaining vermicomposting, and using recovered rainwater for agricultural purposes. The school board implemented energy savings by switching our HDI lights for LED lights in the gymnasium as well as replacing all AC thermostats with programmable ones. Next on our parents’ fundraising radar is removing our original, 1960 windows with energy efficient replacements along with removing all 1987 AC units with energy efficient models.

In Pillar II, CTK’s most successful initiative is addressing student mental health as well as physical health. A grant enabled the school to afford a full time Guidance Counselor whose background is ESE. Now students and teachers are provided resources to address psychological and emotional needs. We have made significant strides in our student physical education programs. We now have PE classes three days a week as opposed to the two classes we have had in the past. This is in addition to a daily recess after lunch for our elementary school students. We have also implemented improved nutritional choices in our lunch programs. Once COVID quarantine is over, we can also utilize our salad bar that is an integral part of our agricultural programs. As an extension to these programs, the school developed a curriculum focused on nutrition. Second grade students even take field trips to a local cooking studio, learn how to follow cooking directions and appreciate healthy food options. We are in the process of developing field trips to the extension service canning facility to make canned foods from our garden harvests, as well as becoming a part of the Pullet program.
through our newly formed 4H club. We have made significant improvements to our gardens through several grants that have enabled us to update our aging garden beds from wood to stone as well as purchase our salad bar and improve our agricultural education programs.

By far most of our progress has been in the third pillar of environmental education. Using the creek, wetlands and acreage to our advantage, CTK fosters opportunities for students to test water health and learn the connections between natural springs, creeks, and how our St. Johns River feeds into the Atlantic Ocean. Our creek is uniquely spring fed and tidal because of our proximity to the mouth of the St. Johns River and this provides numerous connections for students to their science curriculum. The nature trails also provide endless experiences for our students to learn and interact with nature. Students once inadvertently videotaped a fox poking his head out of his camouflaged den located on our Nature Trail. We have forestry experiences for the fourth grade and each grade level utilizes the outdoor classroom for a wide variety of lessons and experiences. These programs led to our recognition as the St. Johns Riverkeeper Environmental Educator of the Year in 2015.

In addition to learning to be good stewards of our planet, students learn to advocate for themselves and those less able to do so by interacting with our Neighboring L’Arche Community. This community of severely disabled adults is a part of our parish campus. The students provide fresh foods from our gardens for the residents. They also plan and carry out a nutritionally appropriate dinner party to meet the dietary restrictions for the residents and staff. The Seeds of Faith Program run by the 7th grade helps to raise funds and awareness for the L’Arche program.

We have made considerable efforts to improve the facilities at Christ the King. Our goal is to make this program sustainable for future students and to help them make conservation, stewardship and sustainability a way of life. Through our annual Green Apple Day of Service (GADOS) projects and financial support from our community and grants, we have developed a 5 acre outdoor classroom with a viewing deck and nature trails, we have integrated approximately 700 square foot of raised bed gardens, water recovery system, solar panels in our grid, butterfly gardens, a blueberry house, new ballfields and a running track for our students. Each GADOS project day can boast as many as 100 volunteers! In 2014 and 2019, we won the Green Building Council’s (GBC) Project of the Year for our efforts. We have also been recognized by the GBC as the 2019 Green School Program of the Year. This past year, we became the only Project Learning Tree Green School Program in Northeast Florida. We recently joined the Duval County Green Champions Program (as an honorary, non-public school member) and worked hard to become a Green Apple School for the State of Florida.
At Christ the King we oppose the status-quo. We strive to improve and keep growing. This is why we are pursuing a National Green Ribbon. These three pillars exemplify Catholic Social Teaching – a reflection point for every Universal Mission project at Christ the King. These teachings guide one’s decisions towards the betterment of our fellow man and our environment. Our actions and decisions must consider others. Our goals remain steady for the future. We are building a culture of STEM, and environmental stewardship at CTK that allows students to tackle local problems, be creative in designing a solution, and communicate their ideas through actions and words.

PILLAR I: Efforts to Reduce Environmental Impact and Cost

Christ the King has made significant strides towards reducing the environmental impact and costs for our school. Our school community (students, parents, staff and teachers) have all contributed to our 67 year old school entering the 21st Century.

Reduced Environmental Impact and Costs

- Reducing Green House Gas Emissions
  The School found a way to limit emissions from cars idling during pickup every day. Since our school does not provide busing for our students, parents must pick up and drop off students every day. In an effort to social distance students for COVID-19 and to stagger pick up for a shorter wait time for parents, we now have 3 pickup times for the students. This allows parents to come at a specific time and not idle their cars in the parking lot for long periods of time. We communicate with parents through our weekly Ravens Review newsletter to keep them up to date on our different initiatives.

- Cost Effective Energy Efficiency Improvements
  Our School Board has also made the commitment to sustainability through monitoring of the schools maintenance program and making improvements as needed. A contractor surveyed the school facilities and made recommendations concerning energy efficiency, water conservation and indoor clean air. The resulting list showed some deficits. Over the years, we have completed changes based on these recommendations.
  - The HDI lights in the gymnasium have been replaced with LED lighting to decrease energy consumption and improve gym lighting.
  - We have replaced all the thermostats in the facility. There are now timed and programmed thermostats for each classroom.
  - The school is on a yearly A/C replacement cycle to replace old units (installed in 1987) with energy efficient systems. Two have been replaced to date.
  - The school signed a yearly A/C maintenance agreement two years ago to ensure routine AC filter replacement and thereby improve energy efficiency of the AC units.
Our middle school students tackle different challenges each year to improve our school or surrounding community as part of our STREAM curriculum. In 2020, our topic was “STREAM Green at Christ the King”. One project designed improvements to the landscaping around the air conditioning systems to help improve AC efficiency. The students had to consider the proximity to the chicken coup as well as a solution for the water runoff from the AC units. The students removed the overgrowth that was hindering the efficiency of the A/C system and replaced the area around it with granite to reduce the possibility of overgrowth. After consulting with a landscape architect, they then added high water use plants to help with the condensation drainage from the A/C that was causing some erosion around the water recovery system. They also utilized saltwater to minimize the growth of plants around the AC units.

Conservation Measures

- Our sixth graders study the wetlands that border our school grounds. Under the leadership of the St. Johns Riverkeepers, students go weekly to test the water salinity, turbidity and contaminant matter in Strawberry Creek. This hands-on project led to Christ the King receiving the St. John Riverkeeper Educator of the Year Award for 2015. The walk to the creek’s edge has fostered an annual trash pickup day, service projects to remove non-indigenous species plants, the identification of native plants, the building of a quarter mile nature trail and bird observation deck. These facilities are used weekly by the various grade level classrooms.

- Our Kindergarten classes planted and maintained nectar gardens to feed monarch butterflies. CTK became an official Monarch Butterfly station in 2009. Now our kindergarten students tag the butterflies as part of this migration study.

On Site Renewable Energy

- Five years ago, the school introduced fourth graders to solar power by installing two solar panels whose output is connected to our electrical grid. Students monitor energy output on their iPads and do research on the effects of weather and panel placement on energy output.

Water Conservation

- Four years ago, our eighth graders built a water recovery system with the help of University of North Florida construction major students to save rainwater for irrigation use on the school’s gardens. We also have timed well watering systems for the gardens and landscaping to conserve water.
Reduce Solid Waste Production/Eliminating Plastic Water Bottles

- Our Family School Association (FSA) has supported a student-led initiative to replace our old water fountains with new water refill stations. The middle school students did research during an Oceans and Waterways project, prepared a budget, did an analysis of the impact of limiting disposable bottles on campus and made a proposal and recommendations to the FSA and the Principal. The fundraising efforts of the Student Council, Sports Booster Club and FSA have allowed the school to replace all the fountains (7 total on campus). This led to a significant decrease in the use of disposable plastic on the campus. We no longer sell bottled water on campus and can boast eliminating over 6000 plastic water bottles since the beginning of the school year with our new fountains!

Recycling & Composting

- Our school provides students interdisciplinary (STEM) projects. One such project studied the water cycle with an emphasis on keeping our waterways clean of debris. The topic of one project was about the 4 R’s, reduce, reuse, recycle, rethink. The students collected a month’s worth of 2 liter sized soda bottles that were used in their own homes (there were over 500 bottles). Students did research on recycle programs and even made a trip to the local recycle facility. They learned about the limits of recycling as well as about ways that recycling is an integral part of our economy. They then had to create something with the bottles. Some students made a hydroponics system, and others created a beautiful underwater art themed project. They then displayed their projects in the local Science Festival.
- Another STEM project for reduce, reuse, and recycle where fifth graders created a promotional video and set up paper collection sites for office paper.
- Second graders maintain a composting bin. The students bring plant-based organic waste from home and each week take data measurements and mix it into our composting bins. Second grade also creates posters to teach other students about composting. This soil, in turn, is utilized in our gardening beds.

Student Conservation Efforts

- Christ the King School’s faculty, school board and student body are committed to stewardship and sustainability. Eight years ago, our school community committed to pursuing a STREAM designation. One instructional technique adopted to achieve this goal was hands-on learning projects. We call these hands-on learning projects Universal Missions. Students are presented with a theme-based problem to research, taken into the field to gain firsthand knowledge of the problem, and then given tools to use to develop a solution. Problems for students to resolve have been focused on either school or the local community (such as Strawberry Creek). Our students are very excited about their commitment to this program and have made tremendous efforts to contribute to our school’s improvement, sustainability and “green” improvements.
One Universal mission project topic was Oceans and Waterways. As residents of Florida, students have access to both fresh and saltwater, as well as a stunning array of marshland, streams and other water habitats. Students went to the Marine Science Institute at Jacksonville University and learned about the ways that several organizations including the St. Johns Riverkeeper are protecting our oceans and waterways. The students had an amazing array of project ideas including developing a boat sensor system that would detect manatees within 20 feet of the boat and turn the engines off to prevent injury to the animals. One group developed a shower timer to limit water used during a shower. And still another group developed a skimming device that would pull plastics and floating trash out of the waters. Through this project, the students developed an appreciation for our unique Florida environments as well as ways that they can be good stewards of our water and natural resources.

Last year’s Universal Mission was called STREAM Green at Christ the King. In this project, the students specifically had to address a project related to one of the three Pillars for the Green School Program. Once the Pillar was chosen, the students did a school survey to address problems that they identified related to their chosen pillar. The students did research, then engineered and developed solutions to the problems. They then met with professionals from several organizations including a xeriscape Landscape Architect, systems engineer, St. John’s Riverkeeper educator, construction managers, St. Johns River Water Management District engineers, and environmental scientists. They interviewed these professionals to improve their projects ideas. The projects addressed several specific ideas that were later funded by the School Board to improve the facility.

PILLAR II: Efforts to Improve the Health and Wellness of Students and Staff

Whole School Health/Physical Education

- Three years ago, the School elongated the school day to allow for three, forty five minute Physical Education classes for each grade level. We are the only school in our Diocese following this schedule. Lower elementary grades still attend recess, typically after lunch, for twenty minutes. The PE class starts with a mini lesson about sugar amounts in energy drinks, color of urine as an indicator of hydration, etc. Students proceed to participate in games designed to get their heart rates up.
- Two years ago, our School Board completed a refurbishment of our two outdoor fields. This included a clay track around the fields for students to run (four laps is a mile).
- Students participated in Jump Rope for Heart in 2018 and 2019 to support the American Heart Association as well as increase heart health awareness. We were recognized as a Top 25 School for this program for raising $6,000 and $5,000 respectively.
- For two years our parents have organized a Fun Run to encourage the healthy habit of running. Students run a course to the sound of music while parents track how many laps each student completed. This has become a replacement to our chocolate candy bar sales drive.
Counseling Services

- In 2017, improving our guidance services became part of our School Improvement Plan. Towards this end, the school hired a full time guidance counselor. She conducts weekly lessons with classes covering topics about how to resist bullying, how to forgive others, how to control one's anger, healthy habits, etc.
- The Guidance Counselor additionally meets with each parent whose student needs some type of accommodation to set a plan how the school will address the student’s needs. Additionally, she meets with teachers to review those students who may have a possible indicator that could lead to failure such as poverty, death of a parent, illness, past behavior problem and academic performance. The Guidance Counselor helps teachers to recognize and assist these students.
- Throughout the school year the Guidance Counselor conducts a book study with the staff on topics such as *Growth Mindset*, by Annie Brock and Heather Hundley, and *Understanding Poverty*, by Ruby Payne. The staff discusses how this pertains to our school and how we can address/help those in need.

Family Community Involvement

- Many of the “green initiatives” at CTK have been possible only due to parental involvement. Our gardens (over 700 square feet of raised beds), chicken coop, nature trail, and compost bin were built and maintained with parental assistance. In fact, CTK has been awarded the Green Apple Day of Service Project of the Year in both 2014 and 2018. Approximately 50% of our families attend these events.
- Parents participate in the day to day life of the school as well. Parental involvement spearheads our “Dress A Girl Around the World” program where students come after school to learn to sew. Parents help chaperone sixth grade’s trek to Strawberry Creek each week, second grade’s weekly composting chores, fifth grade’s weekly garden clean up and planting as well as daily after school animal care in our Environmental Science Hall.

Nutrition

- We have implemented significant measures to improve lunch line nutritional choices, as well as nutrition education for students. As a part of this journey, we have carefully evaluated the lunch program and have added healthy choices for our students including fruits and salads, and have limited processed food snacks as a lunch choice. As part of our community Garden Grant, we have purchased a salad bar and once we have finished with quarantine and social distancing, we will be implementing a fresh salad program as a lunch option for our students and faculty. Our school garden club also created fresh food recipes made from our school garden harvest. Two of our recipes were chosen to be in the Florida Agriculture in the Classroom cookbook.
- The School has incorporated a focus on agricultural education. From our 700 feet of raised garden beds, blueberry house, hydroponics tower and chickens, the school provides nutrition learning opportunities for all students. Our second grade field trip even includes cooking lessons. We also have two extracurricular clubs to support our nutrition programs; 4H, and Garden Club. We have a poultry program with a chicken house and incubators for our first grade students to learn about the life cycle of chickens. We have developed a comprehensive integrated hands on experience that includes all grade levels from Kindergarten through 8th grade. Our agricultural program
was designed to help our students understand where their food comes from, appreciate better nutrition, and understand the purpose of organic farming.

- We have a composting system on campus that provides soil for our gardens. We also utilize natural pest management in the gardens. Primarily we use marigolds to prevent aphids from destroying crops, as well as a planned crop rotation schedule that has been implemented this year in our newly renovated gardens. This prevents nematodes and other pests from invading a garden as well as providing important nutrients for the soil. Our 3rd grade also raises ladybugs to assist with our pest control efforts in the gardens.
- Our garden has an extensive volunteer commitment that includes 5th grade weekly classes with two Master Gardener volunteers from the University of Florida Extension Service. This is a significant support for the sustainability of our programs over the past five years.

Staff Health and Safety

- Our policies to help improve the air quality at our school has also improved. We have established an open window policy for the teachers on days when the weather is appropriate. Our air conditioner maintenance has also improved air quality with annual cleaning of ductwork as needed and filters changed on a regular maintenance schedule.
- We are also in the process of replacing our current ac systems with higher efficiency units. Air quality also extends to regular inspections of the facilities.
- We use all natural sanitizers to clean the classrooms each day. The sanitizing allows our maintenance staff the opportunity to inspect the room for possible hazards (such as mold or cleaning issues).
- We have also replaced all our water fountains with refillable water fountains to allow cleaner access to water for our students and staff. The water conservation efforts from this program also allows us to have significantly less disposable plastic on campus. Approximately 90% of our students and staff now use refillable water bottles.

PILLAR III: Efforts to Ensure Effective Environmental and Sustainability Education

Interdisciplinary Learning

- CTK is the first STREAM (Science Technology Religion Engineering Art and Math) accredited Catholic School in the State of Florida. Our program is designed to utilize hands-on learning through relevant experiences. We strive to maintain a culture of STREAM through integrated environmental and agricultural education and a real world understanding of our need to be good stewards of the world in which we live. In addition to our Universal Mission Projects, we achieve these goals through long term grade level projects. These projects are data driven scaffolding projects that are carefully woven into every grade level curriculum including the Next Generation Science Standards, literature and reading, math, social studies, and STEM 21st century learning skills.
Our Kindergarten program involves a yearlong study of butterflies. The students propagate lantana and other butterfly “food”, and tag the butterflies as part of a national butterfly migration study (The school was designated a Monarch Butterfly Station, 2016). They learn about the life cycle of the Monarch butterfly by counting caterpillars and chrysalis’ in the garden and observing them until they hatch. They also learn the importance of these pollinators to the gardens that are part of the school’s agricultural programs. The students learn about the effects of environmental contaminants and pesticides on the life cycles of these endangered animals. They also have an engineering project where they create “hand pollinators” for the milkweed plants.

First grade has two raised beds that are used to raise lettuce and marigolds as part of their “salad” garden. They learn about the differences between various types of lettuce and how they can be food for both humans and animals. The students incubate chickens and raise them over the course of the year, utilizing the harvest from their gardens to help feed the chickens. The goal for this project is to partner with 7th grade and our newly formed 4H Club to become part of the local Pullet project and show our chickens at the Jacksonville Agricultural Fair in the fall. We have careful support for this project in our local feed store (provides the chicken eggs yearly and takes mature chickens at the end of the year) as well as 4H and the extension service.

Second Grade is in charge of the composting system that provides soil for our gardens. They advertise for plant based composting scraps that are collected weekly. The students then weigh the compost and take data measurements for moisture and temperature. This data is used to make adjustments to the compost such as adding water or turning the soil as needed. This is an important component to the student’s long term understanding of sustainability and management of food sources. They also create graphs of their data in their math classes. This program is supported by parent volunteers who meet weekly with the students to collect the data and help maintain the composting bins.

Third Grade runs our blueberry garden. They maintain the gardens through weeding, fertilizing, maintaining bedding covering and harvesting. The students then use their crops to make blueberry muffins to sell and raise funds for the L’Arche Harbor House. The students also design a robotic “blueberry picker” when they are learning about machines in their science classes! Again, sustainability is the focus for this project, including long term management of pests for their food source.

Fourth grade is our energy “consultant”. They use our two full size solar panels to do experiments on improving the efficiency related to the angle of the panels. The panels are part of the school’s energy grid. The students have online digital access to the output of both panels at any given time and are able to see the effects of weather, season and panel angle on output. This project focuses on alternative energy sources, and long term sustainability.

Fifth grade is our 4R (reduce, reuse, recycle, rethink) experts. They started the project that eventually led to our new water fountains at the school. They take a yearly field trip to the local recycling center. The 5th grade students are also part of the Junior Master Gardener program through the University of Florida Extension Service. They meet weekly with two master gardeners to plant, harvest, and maintain the gardens.
Garden harvests support L’Arche Harbor House, the convent, and the school’s salad bar. We have support for this program through many agricultural grants as well as a network of parent and community volunteers.

- Sixth Grade is part of the St. Johns Riverkeeper backpack program. Seven years ago we started going to the creek and wetlands on Christ the King Property (Strawberry Creek) to learn about long term data collection and observations. The students, teacher and a volunteer trekked to the creek weekly to gather data on tides, water depth, turbidity, pH, nitrates, nitrites, ammonia, salinity, and species identification and observation. The students spent considerable time with Riverkeeper educators learning how to utilize the tools to collect data and creating presentations of their observations at the end of the year. They also attend an annual trip to the Guana Tolomato Matanzas National Estuarine Research Reserve as part of their hands on research education program. This important conservation and environmental monitoring program led to our 2015 Educator of the Year award through the St. Johns Riverkeeper.

- Finally, our school has worked diligently to gain funding to provide the infrastructure for our school wide agricultural and environmental educational programs. We have received grants from Whole Foods Kids for our blueberry house garden, Florida Agriculture in the Classroom, Florida Association of Science Teachers, FSC (Fratris Scolarium Christianarium) Foundation Grant for genetic testing equipment for agriculture and at Strawberry Creek, a LaRose Foundation Grant, and most recently the Community Garden Grant from the Diocese of St. Augustine which allowed us to completely update our gardens with concrete beds and a water table. Through these efforts, grants, and continuing work to obtain funding, we have a highly successful agricultural and environmental program that has been sustained at our school for nearly 8 years.

- Our STEM efforts were awarded with recognition at the Future of Educational Technology Conference. In 2018 We were a national finalist for STEM School of the Year. We have worked hard to create a culture of STEM and stewardship that will be sustainable through our students and the life of our school.

Development of Civic Engagement Knowledge and Skills

- 7th Grade runs the Seeds of Faith program through their Civics class. Seeds of Faith is a program that oversees, integrates and markets the agricultural programs at our school. Their efforts also benefit the residents of L’Arche Harbor House, the convent that is on campus, and our new school lunch salad bar program. At the end of 6th grade, the students create a resume, apply for jobs and interview with the Principal, Vice Principal and 2 teachers for a position in this “not for profit” organization. They can choose between marketing, accounting, corporate, research and development, and farming. The students then create a mission statement, budget, fundraising, and marketing (through presentations at church and other venues) corporate meetings to organize their goals for the year. They even choose some plant based research to do in their science classes. Farmers are currently developing a system to monitor the gardens utilizing drone data collection tools as well as crop rotation planning for preventing certain pests in the gardens. One year Seeds of Faith was invited to our local Microsoft Store to present their project at an entrepreneurship seminar. More importantly, the students
learn that they can make a difference in our community through their sustainability and stewardship efforts.

- Our fourth grade students have an annual Forestry project they do through their Engineering classes. The students learn to do tree measurements in the outdoor classroom, meet with a forester and do tree core samples. We had our first Arbor Day Celebration last year in January and planted trees on campus including 5 native blueberry bushes in the Blueberry House. The middle school students worked with the art teacher to create a mural of Strawberry Creek in our new Environmental Science Hall. This hall houses 6 native and non-native species including 2 snakes, a bullfrog, leopard geckos and a bearded dragon. The animals are cared for by student “Zookeepers”. They are trained to monitor the health of the animals, feed and maintain the cages, handle the animals appropriately and practice careful hand washing and cleaning. This year we received a grant to include a TV in the hall to add a “environmental science” channel with educational videos that are being researched and created by the 5th grade students in their science and technology classes. The students will highlight programs in the school as well as information about indigenous, non-indigenous and invasive species of both flora and fauna.

Teacher Professional Development

- Over 75% of our educators have received Project Learning Tree training for environmental science hands on lessons that are utilized in the classrooms for all grades.
- We also received training from Dr. Kim Cheek from the University of North Florida about the NGSS and integration into our program. Dr. Cheek was an original contributor to developing the NGSS.
- The faculty attended the Florida Association of Science Teacher conference in 2019.
- Our environmental science and agricultural programs as well as educator training commitment, sustainability and efforts to reduce environmental impacts and costs have led to our Green Apple School designation for the State of Florida as well as our Project Learning Tree Green School designation.