School Nominee Presentation Form

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.
8. The school or its district has in place and is willing to provide a link to or a copy of a non-discrimination policy, upon request. The U.S. Department of Education reserves the right to disqualify a nomination and/or rescind an award if unlawful discrimination is later discovered.

U.S. Department of Education Green Ribbon Schools

Name of Principal: *Dr. Joy Abernathy-Dyer*
(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in the official records)

Official School Name: *Villa Del Rey Creative Sciences and Arts Magnet*
(As it should appear on an award)

**Private Schools: If the information requested is not applicable, write N/A in the space*

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

Joy M. Abernathy-Dyer Date:
(Principal's Signature)

Name of Superintendent:
(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in official records)

District Name: East Baton Rouge Parish

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

Date:

(Superintendent's Signature)

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: Louisiana Department of Education

Name of Nominating Authority: Mrs. Michelle Lewis

(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

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

Michelle Lewis Date: March 1, 2022

(Nominating Authority's Signature)

SUBMISSION

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.

Louisiana Application for Green Ribbon Schools

Nominee Contact Information

School Name: Villa Del Rey Creative Sciences and Arts Magnet School
Category of Nomination: School
Address: 9765 Cuyhanga Parkway Baton Rouge, Louisiana 70815
Facebook: https://www.facebook.com/VDRCSAMS/
School website: https://www.vdrmagnet.org/

Top official (School=Principal; District=Superintendent; IHE= President) Title (Mr./Ms./Mrs./ Dr.): Dr.
First Name: Joy Last Name: Abernathy-Dyer Position/Role (Principal/ Superintendent/ President):
Principal Email: jabernathy@ebrschools.org Phone: (225) 924-1606

Lead Applicant (if different) Title (Mr./Ms./Mrs./ Dr.): Ms. First Name: Jeanne M. Gasperecz
Position/Role (Teacher/ Sustainability Director/ Facilities Director): Teacher
Email: jgasperecz@ebrschools.org Phone: (225) 924-1606

School Information

Check all that apply:

Early Learning ☐	Charter ☐	Community College ☐
Elementary X	Magnet X	Career and Technical ☐
Middle ☐	Non-Public ☐	Urban X
High ☐	Two-Year ☐	Rural ☐
Public X	Four-Year ☐	Suburban ☐

Provide percentages, if any are relevant to your school, district, or institution:

Pell Recipients: 0%
Free and Reduced Price Lunch: 100%
Minority: 96%
Limited English Proficient: 17%
Special Education: 9%
Graduation Rate:
Attendance Rate: 97%

Provide the following:

Total Enrolled: 363 Number of Schools: 1 Buildings: 8 Campuses: 1

Part II: Summary Narrative

Established in 1959, Villa Del Rey Creative Sciences and Arts Magnet School is a Pre K-5 elementary school in Baton Rouge, Louisiana. Since being awarded a Magnet Schools Assistance Program (MSAP) grant in 2017, the school houses both a magnet program and a traditional program. In 2019, Villa Del Rey was recognized at the Magnet Schools of the Mid-South conference as a school of "Promising Future" for its exemplary display of Magnet Schools of America's five pillars: diversity, innovative curriculum and professional development, academic excellence, and high-quality instructional systems and family and community partnerships.

Villa Del Rey Magnet is geographically positioned in the center of North Baton Rouge. Census tract statistics show that 20-30% of student households classify as food insecure compared to 8-10% of households in nearby South Baton Rouge census areas. According to the Louisiana Center for Excellence in Planning, "food insecurity" is an essential measure of socio-economic vulnerability exacerbated by inadequate mobility options and lack of access to fresh produce and healthy foods. Community members facing this challenge are forced to make tradeoffs between basic needs like food, medical care, and paying rent and utilities. Recognizing the deep-seated cyclical impacts that school families face, Villa Del Rey Magnet and district staff embarked on a mission to implement educational initiatives that would invoke long-term community health and viability.

A key driver to removing barriers and cultivating resiliency is a Magnet Schools Assistance Program (MSAP) grant. It has allowed the school to provide innovative programs, such as Renewable Energy Coding and Robotics. Currently, 363 students are enrolled. Villa Del Rey Creative Science and Arts Magnet holds a Title I distinction.

Villa Del Rey Magnet offers a robust and interdisciplinary project-based approach to learning. This approach involves the strategic blending of science, English Language Arts, social studies, fine arts, engineering, and math at each grade level. Environmental concepts and engagement are integrated through diverse curricula offerings and age-appropriate civic engagement opportunities. Through challenging technology-infused investigations, students develop STEM content knowledge while expanding their capacity to problem-solve, iterate designs, collaborate with peers, and innovate sustainable solutions. With three on-campus labs, students have dedicated access to the most sophisticated technology available for understanding the applied use of engineering, coding, animation, and sustainable energy practices. In conjunction with highly qualified leadership, creative research-based frameworks, authentic student engagement, and an unwavering faculty commitment to academic excellence, these unique opportunities are progressing student achievement. Villa Del Rey earned a progress index score of 85.6, demonstrating substantial growth gains.

Villa Del Rey Magnet is the first school in Louisiana to install and implement a Creative Smart Lab, complete with five different robotic systems, Lego WeDo 2.0, Lego EV3, Ozobot, Sphero, and Botley. The lab is also equipped with various engineering design kits, a 3-D printer, graphic design software, and green screen studio capabilities. The robust kits and standards-aligned curriculum integrate all subject areas with 21st Century skills to give students an engaging and unforgettable learning experience.

Students are given autonomy to select challenges to complete, problems to solve, and phenomena to explore and explain. Providing challenging yet achievable tasks is observed at every grade level, increasing student confidence.

Villa Del Rey Magnet is the only elementary school in the East Baton Rouge Parish School System to have a dedicated Renewable Energy Lab. All staff members attend Louisiana Department of Natural Resources, National Energy Education Development workshops and conferences each year. Teachers engage in high-quality, Louisiana standards-aligned, energy education experiences to incorporate into classroom practices to lay a strong foundation for future career success. Project-based learning themes in the Renewable Energy Lab connect alternative energy methods (wind, solar, hydroelectric, geothermal, and biomass) to Louisiana place-based issues like hurricanes and coastal erosion. Students engage in engineering problem-solving, technological systems, mathematical knowledge and skills, and effective communication strategies. As part of the Renewable Energy Lab, students explore sustainable energy generation and transference through Green Micro-gym stationary bikes. As students move the pedals, they produce electricity through the bike's "generator," while simultaneously improving their health and wellness through fitness.

Villa Del Rey Magnet recognizes the interdependent relationship between school services and community health, viability, and economic stability. To strengthen family and community partnerships, Villa Del Rey provides enriching environmental educational experiences with various stakeholders, including business, health, and human services, non-formal organizations. This enhances student access to an array of diverse future career options and meaningful real-world connections. As a result, they were chosen as a Knock Knock National Making Spaces Initiative site. Through a $10,000 Project Lead the Way grant, third through fifth-grade students explored the impact of energy locally and globally. They then designed and modeled alternative energy sources and evaluated the options for reducing energy consumption with sustainable solutions. Another example is a partnership with Big Green to support outdoor learning initiatives to address community food desert challenges directly. Through a $2,000 Jumpstart grant, teachers received training on gardening and methods to create meaningful student outdoor learning experiences. Through a district partnership with Aramark, students conducted a school-wide energy audit and learned strategies to reduce energy and water consumption. Students designed and posted signs throughout the campus, encouraging staff and students to reduce environmental impacts and costs. These efforts have resulted in a 14.5% reduction in overall energy consumption and an 11.13% reduction in Greenhouse Gas emissions from 2015 to present.

Villa Del Rey has strategically partnered with the following organizations to enhance student achievement and learning outcomes: Southern University's Agriculture and Natural Resources Department, Acadian Native Plant Project (ANPP), Purple Martin Conservation Association, Louisiana Nursery, Aramark Energy and Asset Solutions, National Energy Education Development (NEED), Louisiana Department of Energy, Louisiana A+ Schools (LAA+), LSU Public Interest Law Society (PILS), LSU Society of Professional Hispanic Engineers, Louisiana Transportation and Research Center RIDES, Big Green, Project Lead the Way, and Knock Knock Children's Museum.

Villa Del Rey Magnet incorporates authentic, "gold-standard," project-based learning with an anchoring emphasis on literacy. All teachers receive in-depth professional training from the Buck Institute for Education on using challenging problems or questions to promote sustained inquiry, authentic engagement, student voice and choice, reflection, revision, and a culminating project. Utilizing this structural design methodology, staff and students build, maintain, and leverage several campus gardens to empower students to use sustainable practices to address local food scarcity challenges. Villa Del Rey Magnet has gardens of all shapes, indoor and outdoor, in containers, and even in windowsills that holistically integrate various nutritional benefits to growing food. Through direct hands-on experience, students gain familiarity and comfort with fruits, vegetables, and native plant species. Made possible by a partnership with Acadian Native Plant Project, students research different butterfly host plants critical native pollinators and compare plants and soil types to determine the most suitable option for erosion control. Students also participate in soil preparation, seed planting, cultivation, and harvesting. Students have the opportunity to observe how food transfers from the garden to the table, with two mobile kitchens. Students also understand alternative growing practices by keeping two vertical hydroponic gardens. To help address food scarcity, students work with LSU Public Interest Law Society (PILS) to expand food-producing gardens. Another solution to provide fresh food to the community is the installation of 10 indoor Tower Gardens, which the student club, You Greaux Girl, maintains. Students practice systems and conservation thinking and encourage ways to reduce waste and conserve resources. One example is through observing and recording reclaimed water in rain barrels. Students analyze results and then make recommendations for which campus area is the most ideal.

Villa Del Rey Magnet provides a robust science education that includes a deep understanding of life, physical, and earth sciences through implementing the Louisiana State Student Standards-aligned curriculum, EL Education. This curriculum promotes a three-dimensional view of student achievement: mastery level knowledge of skills, character, and high-quality work. Units revolve around science and social studies topics highlighting the interdependent relationship between humans and the natural world. At each grade level, students tackle compelling topics and explore pressing real-world issues while developing personal habits of character such as perseverance, empathy, and compassion. Examples of literary texts that foster environmental literacy are "Seeds of Change," "The Great Kapok Tree," "The Boy Who Harnessed the Wind," "Eight Days: A Story of Haiti," etc. Each lesson has a complementary learning lab component that offers students choice and empowered agency, promoting student social and emotional well-being.

In working with dynamic environmental, social, and economic systems from an early age, students at Villa Del Rey Magnet precisely nurture the thinking, collaboration, and problem-solving skills that future careers require and communities need to thrive and prosper. In providing students opportunities to learn ways to reduce environmental impacts and costs, improve health and wellness, and implement sustainability practices, Villa Del Rey truly equips and empowers students with the tools they need to impact their world.

Part III: Documentation of State Evaluation of Nominee

Pillar I: Reduced Environmental Impact and Costs

Element IA: Energy Conservation

Villa Del Rey Creative Sciences and Arts Magnet was built in 1959. A classroom building addition was added in 2010, and windows were upgraded in 2013. The school is currently 51,612 square feet, and the campus is 12.78 acres. Staff and students work cooperatively to understand and reduce their environmental impact. These efforts have resulted in a **14.5% reduction in overall energy consumption** and an **11.13% reduction in Greenhouse Gas emissions** from 2015 to the present. Aramark, Villa Del Rey's Energy Management provider, tracks energy and water consumption in the East Baton Rouge School district using a utility tracking software called Metrix along with EPA ENERGY STAR Portfolio Manager.

To improve the energy efficiency of the campus, exterior lights under outside canopies and parking lots were upgraded to LED lights o improve the energy efficiency of the campus. Recognizing the positive impact this change made, Fourth-grade students studying energy conservation and sustainability participated in a lighting **energy audit** with Aramark Energy Managers to examine additional exterior lighting using less efficient bulbs. Students, Energy Managers, and teachers walked the campus and documented light fixture quantities and existing lamp wattages. The students then entered this information into a Google spreadsheet to calculate a **4% energy saving opportunity** by upgrading to LED lights. Using this data, an application was submitted to the local utility company (Entergy Louisiana) for the Entergy Solutions Energy Savings Incentive Program. The application was approved, and the utility company paid 10% of the lighting upgrade costs. This project is expected to result in **$2,285 in annual electrical energy cost saving**s, 22,831 kWh of electrical energy reduction, and 16.2 metric tons of CO2 emissions prevented.

Element IB: Improved Water Quality, Efficiency, and Conservation

Through various conservation efforts, awareness campaigns, and the implementation of different water savings policies, Villa del Rey Elementary **reduced on-campus water consumption by 73.26%** from 2015 to the present.

A grant from community partner, Big Green, allowed the purchase of rain barrels to reclaim rainwater across the campus. Students are researching the best locations for them based on the amount of rain an area gets and the proximity to gardens that need watering. The goal is to use **100% reclaimed rainwater** for the school gardens.

At Villa Del Rey, water intrusion from heavy rainfall is deterred by the planting of shrubs along exterior walls and sidewalks and the digging of shallow trenches to direct water away from

buildings. Students take an active role in mitigation efforts through researching and selecting plants most suitable for planting in south Louisiana climate and conditions. Students considered the amount of sun and shade each type of plant could tolerate. Students selected and **planted native Louisiana irises** due to their water-loving nature to provide a **natural solution** with no adverse environmental impacts.

Element 1C: Reduced Waste Production

Infusing project-based learning with real-world literary connections, second-grade students read the book "Miss Fox's Class Goes Green" and developed ways to help the earth by encouraging students and staff to **reduce waste** at school. Through observing areas where waste more prominently occurred, researching mitigation strategies, and making connections to the ideas illustrated in their story, students developed and implemented a school-wide "Lost-and-Found" system. This idea resulted in 80% of the items being reclaimed. Second-grade students were empowered to write, record, and produce family and peer **advocacy commercials using technology and media**. Students shared ways to minimize water waste and provided examples. Student-generated videos premiered at the Villa Del Rey Creative Sciences and Arts Magnet's annual Brotherhood Sisterhood community event and on digital screens around campus.

Student Members of the school Energy Team conduct bi-weekly campus walk-throughs and identify ways to reduce energy consumption. Students observed that several teachers were leaving their Smartboards on overnight. Through authentic engagement in the science and engineering practices, students developed a plan to use afternoon announcements to encourage teachers to turn off their Smartboards. After more research and observation, students discovered that the Smartboards were pre-programmed to timers to turn off at designated times of the day. Students reflected on their original plan revised their method, and resurveyed classrooms to determine which particular Smartboards were not included in the **automatic timer system**. Students conducted their energy reduction project by reprogramming all remaining SmartBoards across campus on the same systemized schedule.

Element 1D: Alternative Transportation

Students at Villa Del Rey are uniquely afforded the opportunity to engage in alternative energy forms of transportation. As part of the on-campus Renewable Energy Lab, students explore sustainable energy generation and transference through **Green Micro-gym stationary bikes**. As students move the pedals, they produce electricity through the bike's "generator," while simultaneously improving student health and wellness through fitness.

Pillar II: Improve the health and wellness of students and staff

Element 2A: Integrated School Environmental Health Program

Villa Del Rey promotes environmental and student health through monitoring and maintaining indoor air quality **(IAQ) systems**. Heating, Ventilating, and Air Conditioning (HVAC) systems are monitored for optimal efficiency from a centrally operated location. Consideration is given to COVID-19 mitigations and students with special health needs, such as asthma. Air conditioning and heating systems are operated from 6 am–6 pm Mondays-Fridays, allowing for adequate ventilation purges before and after building occupancy. Ventilation systems are filtered using high-efficiency KOCH pleated MERV-8 filters and MERV-13 filters where applicable for COVID-19 mitigation, as per CDC recommendations.

East Baton Rouge Parish School System implements an **Integrated Pest Management Plan**. At Villa Del Rey, Orkin Pest Control maintains the interior of buildings, while Bayou Cajun maintains areas where food is served/housed. Grounds crews address outside environments. All companies contracted have pest certifications and are reported yearly to the Louisiana Department of Agriculture. Contractors address issues while students are not on campus.

Villa Del Rey utilizes the United States Environmental Protection Agency's (EPA) Green Cleaning Products and Practices following the Green Clean Schools campaign. Routine and deep cleaning is conducted while the building is unoccupied, and **disinfection and antiviral practices** on high-touch surfaces are carried out throughout the school day. Cleaning product inventory is maintained, copies of safety data sheets are kept, and product labels are read and followed. Products are inaccessible to students, fragrance-free, and meet Safer Choice Standards and Criteria.

Environmental health is also supported through various initiatives designed to minimize the spread of environmental contaminants and communicable diseases. Food service workers undergo district and national training on handling and preparing food procedures. Villa Del Rey Cafeteria Staff uses the National Food Service Management Institutes HAACP- Based Standard Operating Procedures for cleaning and sanitizing food contact surfaces to prevent foodborne illness. All classrooms are dusted regularly and free of clutter. Trash is removed daily, rooms are free of pests and vermin, and no scented air fresheners are used in classrooms. Water leaks are reported and promptly fixed to prevent mold and mildew growth, and wet ceiling tiles are promptly replaced. Outside entrances have walk-off mats to reduce dust and dirt infiltration, microfiber cloths are used in space cleaning, and energy-saving floor care machines are used on all tile floors. Smoking is prohibited on campus, and elemental mercury is not allowed on campus.

Element 2B: Nutrition and Fitness

As part of the Renewable Energy Lab at Villa Del Rey, **Green Micro-gym stationary bikes** are used creatively to incorporate exercise into learning activities. Students pedal on the bikes while learning activities are displayed on the Smartboard. This dual-modality provides physical exercise and

enhances creativity, supports brain function and memory, and increases students' ability to focus cognitively, which leads to long-term learning retention.

Element 2B (Cont.): Coordinated School Health, Mental Health, School Climate, and Safety

Villa Del Rey Creative Sciences and Arts Magnet strives to create a school climate that nourishes the whole child, including teaching critical thinking skills and core content while promoting physical and mental health and wellness. Elements of the CDC's Whole School, Whole Community, Whole Child (WSCC) health model, and EPA's Healthy School Environments are used to accomplish this. Villa Del Rey offers on-site nursing services to address any physical health concerns students or staff need. As part of school health services, Flu Vaccinations are offered to students, and weekly Covid testing is available at no cost to all staff, students, and their families. Villa Del Rey has a full-time **Parent Liaison** who works to nurture and build quality relationships between parents and the school to promote opportunities for parents to become involved in their children's education. The Parent Liaison identifies and implements programs that engage traditionally non-participating families.

Students at Villa Del Rey Magnet receive comprehensive lessons on well-being through the ReThinkED platform. Through its implementation, Villa Del Rey Magnet students are equipped with powerful tools to encourage positive behavior, enhance collaboration among peers and families, instill a growth mindset, and accelerate **student wellbeing**. Additionally, Villa Del Rey has access to a full-time available guidance counselor on staff to receive support and resources. If more extensive **counseling services** are needed, East Baton Rouge Parish utilizes the *I-CARE program*, which provides prevention education to students in alcohol, tobacco, other drugs, violence, crisis response, and management. *I-CARE* staff includes 16 Licensed Prevention Professionals who are career educators with a five-year minimum classroom teaching experience and a master's degree in education. Specific services include individual family and student consultation, small group student support, classroom education, staff and parent training, prevention campaign support, and other well-being support services.

Villa Del Rey Magnet employs **Restorative Practices** as part of their school-adopted positive behavioral intervention system. Restorative Practice is a process that builds community, encourages students to manage conflicts, and empowers students to resolve disputes. This promotes a positive school climate through student well-being practices and learning, peer-school-family connectedness, and mental health and resilience. As needed, students have access to an intentionally calming space that has resources to assist them in coping, refocusing, and problem-solving to better self-regulate and be self-directed learners. This room contains sensory aids such as yoga balls and huggable teddy bears.

Villa Del Rey Magnet has a variety of upgraded classroom seating arrangements throughout the school to improve students' well-being and meet individual learning needs. The gardens and green spaces around campus provide **outdoor classrooms** to engage in authentic, hands-on experiential learning. Additionally, they offer students a safe and structured space to reflect and responsibly respond to emotions and work toward self-management. Over the last two years, the outdoor seating capacity has increased by 80%. In addition to meeting current guidelines, students are getting more physical

exercise, fresh air, and sunlight. Being in outdoor classrooms, students see the real-time results of their environmental impact work. Outdoor classroom spaces range from Adirondack-style desks to portable bucket outdoor seating. All labs and several grade-level classrooms have flexible seating, such as wobble chairs and standing tables, available to students. All flexible seating options are adequately cleaned and sanitized daily, paying particular attention to ensuring the products meet the Environmental Protection Agency's Safer Choice Standards and Criteria.

Pillar III: Ensure Effective Environmental and Sustainability Education

Element 3A: Interdisciplinary Learning about the Key Relationships between Dynamic Environmental, Energy, and Human Systems

Villa Del Rey Magnet offers a robust and **interdisciplinary project-based** approach to learning. This approach involves the strategic blending of science, English Language Arts, social studies, fine arts, engineering, and math at each grade level. Environmental concepts and engagement are integrated through diverse curricula offerings and age-appropriate civic engagement opportunities. Through challenging technology-infused investigations, students develop STEM content knowledge while expanding their capacity to problem-solve, iterate designs, collaborate with peers, and innovate sustainable solutions. With **three on-campus labs**, students have dedicated access to the most sophisticated technology available for understanding the applied use of **engineering, coding, animation, and sustainable energy practices**. In conjunction with highly qualified leads, creative research-based frameworks, authentic student engagement, and an unwavering faculty commitment to academic excellence, these unique opportunities are progressing student achievement. Villa Del Rey earned a progress index score of 85.6, demonstrating substantial growth gains.

Villa Del Rey Magnet incorporates authentic, "gold-standard," **project-based learning** with an anchoring emphasis on literacy. All teachers receive in-depth professional training from the Buck Institute for Education on using challenging problems or questions to promote sustained inquiry, authentic engagement, student voice and choice, reflection, revision, and a culminating project. Utilizing this structural design methodology, staff and students build, maintain, and leverage several campus gardens to empower students to use sustainable practices to address local food scarcity challenges. Villa Del Rey Magnet has gardens of all shapes, indoor and outdoor, in containers, and even in windowsills that holistically integrate various nutritional benefits to **growing food**. Through direct hands-on experience, students gain familiarity and comfort with fruits, vegetables, and native plant species. Made possible by a partnership with Acadian Native Plant Project, students research different butterfly host plants critical native pollinators and compare plants and soil types to determine the most suitable option for erosion control. Students also participate in soil preparation, seed planting, cultivation, and harvesting. Students have the opportunity to observe how food transfers from the garden to the table, with two mobile kitchens. Students also understand alternative growing practices by keeping two vertical **hydroponic gardens**. To help address food scarcity, students work with LSU Public Interest Law Society (PILS) to expand food-producing gardens. Another solution to provide fresh food to the community is the installation of 10 indoor Tower Gardens, which the student club, You Greaux Girl, maintains. Students practice **systems and conservation thinking** and encourage ways to reduce waste

and conserve resources. One example is through observing and recording reclaimed water in rain barrels. Students analyze results and then recommend which campus area is the most ideal.

Villa Del Rey Magnet provides a robust science education that includes a deep understanding of life, physical, and earth sciences through implementing the Louisiana State Student Standards-aligned curriculum, EL Education. This **curriculum promotes** a three-dimensional view of student achievement: mastery level knowledge of skills, character, and high-quality work. Units revolve around science and social studies topics highlighting the **interdependent relationship between humans and the natural world. At each grade level,** students tackle compelling topics and explore pressing real-world issues while developing personal habits of character such as perseverance, empathy, and compassion. Examples of literary texts that foster environmental literacy are "Seeds of Change," "The Great Kapok Tree," "The Boy Who Harnessed the Wind," "Eight Days: A Story of Haiti," etc. Each lesson has a complementary learning lab component that offers students choice and empowered agency, promoting student social and emotional well-being.

Element 3B: Use of the Environment and Sustainability to Develop STEM Content Knowledge and Thinking Skills

Villa Del Rey Magnet is the first school in Louisiana to install and implement a Creative Smart Lab, complete with **five different robotic systems**, Lego WeDo 2.0, Lego EV3, Ozobot, Sphero, and Botley. The lab is also equipped with various engineering design kits, a 3-D printer, graphic design software, and green screen studio capabilities. The full kits and standards-aligned curriculum integrate all subject areas with 21st Century skills to give students an engaging and unforgettable learning experience. Students are given autonomy to select challenges to complete, problems to solve, and phenomena to explore and explain. Students learn to write **programming code for various robotic designs to model environmental systems**, introduce different real-world problem scenarios, analyze the impact of those problems on ecological systems, and ultimately predict the consequences of those scenarios. Students collaborate on simulating Louisiana-specific environmental phenomena, such as climate conditions, habitat loss, and natural disasters.

Villa Del Rey Magnet is the only elementary school in the East Baton Rouge Parish School System to have a **dedicated Renewable Energy Lab**. Each year, all staff members attend Louisiana Department of Natural Resources, National Energy Education Development workshops, and conferences. Teachers engage in high-quality, Louisiana standards-aligned, energy education experiences to incorporate into classroom practices to lay a strong foundation for future career success. Project-based learning themes in the Renewable Energy Lab connect **alternative energy methods** (wind, solar, hydroelectric, geothermal, and biomass) to Louisiana place-based issues like hurricanes and coastal erosion. Students engage in engineering problem-solving, technological systems, mathematical knowledge and skills, and effective communication strategies. As part of the Renewable Energy Lab, students explore sustainable energy generation and transference through Green Micro-gym stationary bikes. As students move the pedals, they produce electricity through the bike's "generator," while simultaneously improving their health and wellness through fitness.

Element 3C: Civic Skills and Green Career Pathways

Villa Del Rey Magnet recognizes the interdependent relationship between school services and community health, viability, and economic stability. To strengthen **family and community partnerships**, Villa Del Rey provides enriching environmental educational experiences with various stakeholders, including business, health, human services, non-formal organizations. This enhances student access to an array of diverse future career options and meaningful real-world connections. As a result, they were chosen as a Knock Knock National Making Spaces Initiative site. Through a $10,000 Project Lead the Way grant, third through fifth-grade students explored the impact of energy locally and globally. They then designed and modeled alternative energy sources and evaluated the options for reducing energy consumption with sustainable solutions. Another example is a partnership with Big Green to directly support outdoor learning initiatives to **address community food desert challenges**. Through a $2,000 Jumpstart grant, teachers received training on gardening and methods to create meaningful student outdoor learning experiences. Through a district partnership with Aramark, students conducted a school-wide energy audit and learned strategies to reduce energy and water consumption. Students designed and posted signs throughout the campus, encouraging staff and students to reduce environmental impacts and costs.

Villa Del Rey has strategically partnered with the following organizations to enhance student achievement and learning outcomes while promoting environmental literacy through service and stewardship: Southern University's Agriculture and Natural Resources Department, Acadian Native Plant Project (ANPP), Purple Martin Conservation Association, Louisiana Nursery, Aramark Energy and Asset Solutions, National Energy Education Development (NEED), Louisiana Department of Energy, Louisiana A+ Schools (LAA+), LSU Public Interest Law Society (PILS), LSU Society of Professional Hispanic Engineers, Louisiana Transportation and Research Center RIDES, Big Green, Project Lead the Way, and Knock Knock Children's Museum.

Use the QR Code below for Villa Del Rey Creative Sciences and Arts Magnet pictures.