



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.

U.S. Department of Education Green Ribbon Schools

Name of Principal: Dr. Roxanna Hernandez

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

Official School Name: Katella High School

(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.

A handwritten signature in blue ink, appearing to read "Dr. Hernandez", written over a horizontal line.

(Principal's Signature)

Date: 1/20/22



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

District Name: Anaheim Union High School District

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

A handwritten signature in black ink, appearing to read "Mr. Michael Matsuda".

Date: 1/20/22

(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: California Department of Education

Name of Nominating Authority: State Superintendent of Public Instruction Tony Thurmond
(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.

A handwritten signature in blue ink, appearing to read "Tony Thurmond".

Date: February 15, 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.



Katella High School

California Disadvantaged School Nominee to
U.S. Department of Education Green Ribbon Schools



Prepared By:
California Department of Education
School Facilities and Transportation Services Division
[Green Ribbon Schools Award Program](#)
February 2022

PART II – SUMMARY OF ACHIEVEMENTS

Katella High School, Anaheim, Calif.

Conservation, collaboration, and care bring sustainability to the school and its community

Katella High School (KHS) is located in Anaheim, California. Home to Disneyland, the city of Anaheim is modern and diverse, with a community consisting of older single-family and multiple-family dwellings. As part of the Anaheim Union High School District (AUHSD), KHS is one of eight comprehensive high schools serving students from an area that is approximately 50 square miles.

In 2019, KHS received the Sustainability School Award from Anaheim Public Utilities. This award recognized the school for making strides in environmental stewardship on the campus and in the curriculum. Additionally, KHS has been recognized as a California Green Ribbon School for two consecutive years, earning the bronze award in 2020 and the silver award in 2021.

KHS combines campus upgrades and student education to achieve a 27.7% reduction in non-transportation energy use from 2016 to 2021 and a 57.1% reduction in greenhouse gas emissions from 2016 to 2022. In 2019, the school replaced all interior and exterior lighting on campus with LED lights, including motion-sensing and dimming capability using a combination of Proposition 39 (California Clean Energy Jobs Act) funding and \$5,000 received from the City of Anaheim rebate program. The grant also contributed to the installation of a new high-efficiency 150-ton air-cooled chiller and high-efficiency tankless water heaters. In addition, student energy education plays an active part in the energy conservation measures at KHS. For example, students from the Advanced Placement Environmental Science (APES) classes participate in the California Energy Conservation Competition. In this competition, students develop a campaign to promote energy conservation, create energy conservation signs for classrooms, audit each classroom for its energy use, and suggest ways for teachers and students to reduce energy use at school and home.

In 2016, KHS received California's Drought Response Outreach Program for Schools (DROPS) grant, which established the school as a water reclamation site. The campus was redesigned to collect, filter, and recycle water from storms, irrigation, and clean-up. KHS used the grant to renovate the campus landscape to include native plant species, drought-tolerant shrubs and trees, vegetative bioswales, porous pavers, and sanded pathways. In addition, the school installed rain gardens designed to slow water flow, collect and store water, and filter pollutants from run-off. Teachers at KHS use the upgrades and lessons from the grant work to increase student understanding of the importance of conserving water resources.

KHS replaced its blacktop throughout the campus with light-colored porous pavers to reduce the heat island effect. The light-colored paving materials have a high solar reflectance that minimizes the amount of heat absorbed into the pavement and lowers surface temperatures through evaporative cooling. The school also has three large sycamore trees, an oak tree, and two large canopies to provide shade around the campus. In addition, all campus buildings are light gray, and all roofs have a reflective coating to reduce heat retention further.

KHS's commitment to waste reduction is visible throughout the campus. The school has provided each classroom with recycling bins for paper, bottles, cans, pencils, and pens. Additionally, there are four-source recycling bins for bottles and cans, food waste, paper, and

trash throughout campus. KHS also has two large clothing donation bins in the main parking lot, and the main office and library have recycling containers for batteries and ink cartridges. The school collects food waste from students, the cafeteria, and culinary classes in three composting containers. Students and staff place new compost on crops growing in the planter boxes monthly. The school composts about 50 pounds of food to enrich the student garden's soil each year. In 2017, KHS received the Orange County Waste and Recycling Grant. The school used grant funds to expand the school-wide recycling program and reduce solid waste.

In 2016, the Environmental Science classes and Save the Earth/Recycling Club were also concerned about the amount of litter they saw around school and the surrounding community. Students decided to help solve this problem. Using the Litterati app, students were able to identify impacted locations. Then they designed posters with messages to discourage littering. Students monitored locations and noticed a significant decrease in the amount of trash on the ground in most locations. As a result of this success, students from the APES and Living Earth classes make new posters each year. Then the student body votes on the five best posters, and those posters are made into signs by the district's graphics department to replace the signs from the prior year.

In a 2019 district-wide parent survey, KHS respondents reported that 58% of their children use the school bus, 18% walk, 6% use human-powered modes of transportation (i.e., bike, scooter, skateboard), and 2% use public transit to get to school. With the high number of bus commuters, the district has focused conservation efforts on its fleet. The AUHSD fleet consists of ten CNG fuel school buses and twelve electric buses. In addition, the KHS has four electric vehicle charging stations and designates five parking spaces in the parking lot for employees who carpool or drive a motorcycle to school.

The school's IPM plan treats pests using the least toxic methods possible. For example, KHS has three hawk perches around the campus to deter rodents. In spring 2022, the school will install three owl boxes in easily accessible locations so teachers can collect owl pellets for class dissection. In addition, the school has several five-gallon bucket traps filled with a pheromone-based liquid placed around campus. These traps attract flying insect pests and roaches.

AUHSD and KHS prioritize mental health for all students, families, and staff. The school partners with Pathways Community Services to offer mental health services such as case management, crisis intervention, and medication services. The school also uses Western Youth Services, an integrated service model, to better identify and match the appropriate services to each child and every family. The school further supports students' mental health by providing a variety of teacher-led focus groups, including topics on social-emotional health, culture and community, and English language learner support. Most recently, the district has offered programs to help students and teachers adjust to the changes in education due to the COVID-19 pandemic, including virtual fitness programs, mental health workshops, and mindfulness sessions. For the 2021–22 school year, teachers also received training to help identify and deal with students in crisis.

AUHSD continues to further its wellness agenda for employees and families with *Well Done!*. The district-built program promotes a culture of health, safety, and wellness within the district and the Anaheim community. *Well Done!* applies best practices from successful wellness programs specific to academic institutions, including programs and services that support employees to choose healthy behaviors at home and in the workplace. Since 2019, students and the administration have worked together to prevent and track bullying. The school uses the *STOPit* app as an anonymous reporting tool that enables students to share information with

those who can help resolve issues. The *STOPit* app also allows users to anonymously alert the school to inappropriate conduct or safety concerns such as harassment, bullying, weapons possession, hazing, safety hazards, threats, assault, or illegal activity; or ask for help for themselves or another.

The school's Sustainability Garden and Learning Center has two greenhouses, an aquaponic garden, ten raised plant beds, and an outdoor learning lab with six student-assembled benches. The area serves as a place to extend teaching and learning into context with hands-on activities. Science courses use the site for lab experiments in soil quality testing, seed germination, and the water cycle. The culinary classes grow vegetables and herbs for their recipes in the traditional and hydroponic gardens. Living Earth classes demonstrate the role of cellular division (mitosis) and producing and maintaining complex organisms using the aquaponics area to grow sunflowers. The DROPS grant provided a lesson where students explore the garden's drought-tolerant native plant species, the specialized groundwater infiltration system, and landscape design for water collection.

KHS connects students with green careers by partnering with Anaheim's Innovative Mentoring Experience (AIME) Program and the City of Anaheim Public Utilities. Mentors work with students to inform and prepare them for what is needed to work with the city of Anaheim in various green careers such as urban planning, electrical engineering for energy conservation, water conservation strategies, and waste management. Students also get experience with green technologies in courses like Physics and the Universe. In a final class project, students work in teams to design and construct solar cars. Since 2017, these teams have participated in the Solar Car Sprint at STEAM-A-Palooza, a district-wide event that showcases student learning and creativity.

In 2021, KHS was one of three schools in California to receive the Award of Excellence as a California Democracy School by the California Democracy School Project. The school was recognized for its commitment to embracing student choice and voice, the principles of democracy within the classrooms, and the school decision-making processes. The school best reflected these characteristics in the "Katella Talks" program. The program provides all students the opportunity to conduct research, create a speech, and present on a subject of their choice. Fellow students judge the "talks" for selection to be recorded and put on YouTube. Since the program's beginning in 2015, there has been a significant increase in talks that focus on environmental issues and sustainability, including human population growth, climate change, and recycling.

Each year, the KHS student body participates in the MLK Day Serve-a-Thon. The Save the Earth/Recycle Club organizes a school and neighborhood parks clean-up. The Garden/Sustainability Club weeds the garden area, refreshes the aquaponics planter beds, and prepares the planter boxes for spring crops. In past years, students repainted the bricks for the student walkways and built a butterfly garden. In January 2022, a local Girl Scout troop and members of "LOVE Anaheim" joined the Garden/Sustainability Club to rebuild planter boxes and revitalize the Butterfly Garden. On average, about 350 students participate in the event each year.

PART III – DOCUMENTATION OF STATE EVALUATION OF DISTRICT NOMINEE

Pillar I: Reduce Environmental Impact and Costs

Element IA: Energy

- The school documents a 27.7% non-transportation energy use from 2016 to 2021 and a 57.1% reduction in greenhouse gas emissions from 2016-2022 using SchoolDude Energy Tracking software. The software uses information gathered from monthly bills and weather data.
- In 2019, the school combined Proposition 39 (California Clean Energy Jobs Act) funding with \$5,000 KHS received from the City of Anaheim Rebate Program to replace all interior and exterior lighting on-campus with LED, including motion-sensing and dimming capability. The funding also paid for the installation of a new high-efficiency 150-ton air-cooled chiller and high-efficiency tankless water heaters. In summer 2021, the school installed a new Trane 150-ton air-cooled chiller with TR200 Variable Frequency Drive (VFD). This model reduces energy consumption by 50 to 70% over constant volume systems. In addition, the school installed a hydronic tankless water heater (Hi Delta Type H). It reduces particulate emissions and humidity and has an efficiency rating of 84%.
- KHS purchases energy from Anaheim Public Utilities (APU). APU has fifteen separate renewable resources that generate more than 783,000 MWh of energy from four biofuel, two geothermal, two small hydroelectric, two solar, and five wind projects. In 2006, Assembly Bill 32 established a statewide greenhouse gas emissions reduction target of 20% below 1990 levels by 2020, which later increased to 40% by 2030. By 2018, 34% of APU's energy was produced from renewable resources.
- KHS replaced its blacktop throughout the campus with light-colored porous pavers to reduce the heat island effect. The light-colored paving materials have a high solar reflectance that minimizes the amount of heat absorbed into the pavement and lowers surface temperatures through evaporative cooling. In addition, all campus buildings are light gray, and all roofs have a reflective coating to reduce heat retention further.
- Three large sycamore trees and an oak tree line the front and side of the campus, providing shade to the English and Social Studies buildings in the afternoon. In addition, two large canopy structures cover the student eating areas. These structures keep surrounding planters and buildings cooler at mid-day.
- Students from the APES classes have participated in the California Energy Conservation Competition since 2019. In this competition, students develop a campaign to promote energy conservation, create energy conservation signs for classrooms, audit each classroom for its energy use, and suggest ways for teachers and students to reduce energy use at school and home.

Element IB: Water and Grounds

- KHS meters indoor and outdoor water use together. The school documents an overall 43% reduction of indoor/outdoor water consumption from 2016-2022.
- In 2016, KHS received California's DROPS grant (Drought Response Outreach Program for Schools). The school's work on the grant established it as a water reclamation site

designed to collect, filter, and recycle water from storms, irrigation, and clean-up. As a result, the school has made the following improvements:

- Replaced all campus landscaping, except for the sports field, to native plant species and drought-tolerant shrubs and trees. The school is now host to fruitless olive trees, succulents, purple sage, and fescue.
- Enriched landscaping around the campus with decomposed granite and planter mulch.
- Added two vegetative bioswales and three rain gardens in the Heritage Gardens to function as a small-scale bioremediation area. This system slows stormwater flow, collects and stores water, and filters pollutants from run-off.
- Placed grated drains throughout the pavement and trees for stormwater collection. The campus slants for gravity to allow water to flow towards the drains. Water channeled into underground filtration systems leads to the aquifer beneath the school. In addition, the rooftops and parking lot drains connect to one of five tanks.
- Installed new water-wise irrigation to reduce water consumption. All irrigation units are weather-based ET (evapotranspiration) irrigation controllers. The system regulates when and for how long the sprinklers run.
- Replaced most asphalt surfaces with porous pavers and walking paths in both gardens with sandy/coarse-grained soil covers, increasing stormwater infiltration.
- Teachers lead education and outreach lessons designed to increase student awareness of California's water resources.
- In 2016, the school installed water-efficient toilets, urinals, and fixtures in all areas of the campus, including the cafeteria and culinary classroom. The toilets use 1.28 gallons per flush, and push-button restrictive-flow faucets use 1.5 gallons per minute.
- The school's water renovations earned KHS the Ewing Water and Sustainability Innovation Award presented by Ewing Irrigation & Landscape Supply and Audubon International in 2019. The award honored the school for its innovative water-efficiency projects and water-conserving landscaping.
- KHS has two bottle filling stations on campus. In addition, the junior or senior classes sell specially-designed water bottles as part of a fundraiser.

Element IC: Waste

- KHS documents a diversion rate of 43% from recycling and composting. However, this percentage does not include the recycling of bottles, cans, batteries, glue sticks, writing utensils, and ink cartridges.
- The school places bins for recycling paper, bottles/cans, used pens/pencils/markers, and glue sticks in each classroom. Battery and ink cartridge recycling areas are in the library and main office. School personnel send used pens and pencils to the TerraCycle Writing Instrument Brigade or PenGuyArt.com, dried Crayola markers to Crayola as part of their ColorCycle program, glue sticks and plastic wrappers to TerraCycle Zero Waste Box system. In January 2020, the school sent twelve pounds of dried markers to Crayola and four pounds of plastic pen/pencils to PenGuyArt.com. Money from recycling bottles/cans is used to fund transportation to clean-up events and materials for science classes.

- For the 2021–22 school year, KHS is participating in the Commercial Generator-Based Edible Food Waste Study. This study will help CalRecycle implement California’s Short-Lived Climate Pollutant Reduction Strategy, SB 1383, including supporting capacity planning for edible food recovery by jurisdictions and counties. In addition, the school will use data from this study to help reduce food waste and increase composting efficiency.
- Binders, folders, and other office materials used by the administration are given to students to be reused. At the beginning of this school year, the school distributed 57 binders and 129 manila folders to students in need of school supplies.
- The school has twelve food waste receptacles around campus; each container holds about 20 gallons. Students from the Save the Earth/Recycling Club collect food waste once a week. Waste is placed into any of the three composting bins on campus. Food waste from the culinary class is also added to the garden bins. Composting bins are mixed bi-weekly, and new compost is placed on crops in the planter boxes monthly. Since June 2021, the school has composted fifty pounds of food to enrich the student garden’s soil for spring planting in 2022.
- Chemistry classes store chemicals with the Flinn Compatible Chemical Family Storage System. At the same time, the Building Industry Technology Academy (BITA) and automotive classes keep flammable, corrosive, and harmful chemicals locked in specialized storage cabinets. Other dangerous materials are stored in hazardous storage cabinets near the custodial office in a designated safety area. All storage methods meet OSHA and NIOSH standards.
- All cleaning products used at KHS follow the Green Seal Cleaning Service Standards, which establish environmental requirements for cleaning service providers of public schools. The standards include in-house and external cleaning services to create a green cleaning program that protects human health and the environment. In addition, the school uses cleaning sprays and hand sanitizers that are non-toxic to humans and animals.
- The district contracts a hazardous waste disposal company to pick up all hazardous materials such as biological and chemical waste, fluorescent light bulbs, paints, and varnishes.

Element ID: Alternative Transportation

- In a parent survey, respondents report 58% of their children use the school bus, 18% walk, 6% use human-powered modes of transportation (i.e., bike, scooter, skateboard), and 2% use public transit to get to school.
- KHS has four electric vehicle stations and designates five parking spaces in the east side parking lot for employees who carpool or drive a motorcycle to school.
- The school has a no-idling policy for all buses. Drivers must turn off the ignition during the waiting, loading, and unloading process. There is a fine of \$300 if a bus idles for too long.
- A clearly defined crosswalk with a traffic light, solar School Zone flashing beacons, and signals with crosswalks on the east and west sides of the school assist students with a safe entry to the school. In addition, assistant principals meet students at each of the school’s three entrances to monitor for safety and welcome each with conversation and handshakes.

- All AUHSD buses use CNG, which produces low greenhouse gas emissions (80% compared to LNG) and is more cost-effective. In addition, the district currently has twelve electric buses and corresponding charging stations.

Pillar II: Improve the Health and Wellness of Students and Staff

Element IIA: Environmental Health

- KHS fully complies with the notification, posting, and recordkeeping requirements of California's Healthy Schools Act. The school keeps records of pesticides applications for at least four years. They post warnings throughout campus 24 hours before and 72 hours after the application of pesticides. Annual notifications of all pesticides expected to be applied during the year are sent to parents, guardians, and staff.
- Each school year, all KHS staff members take an online course in Integrated Pest Management (IPM) from Keenan SafeSchools Training and attend an in-service meeting to discuss chemical safety procedures and safe products to use in the classroom.
- AUHSD has worked hard to increase the number of green-certified products used throughout the district. As a result, pesticide use has decreased by 90% since 2017. All pesticides are non-restrictive, and only one is from synthetic chemicals (Alpine WSG).
- The district's IPM department implements natural predators to remove rodents from campuses. KHS has three hawk perches placed around the campus. In spring 2022, the school will install three owl boxes. They will be placed in a location for access by teachers so that owl pellets can be collected and dissected by science students. In addition, several five-gallon bucket traps filled with a pheromone-based liquid are placed around campus. These traps attract flying insect pests and roaches.
- The school's IPM plan treats pests expeditiously using the least toxic methods possible. School staff immediately report infestation issues to the plant manager or SchoolDude reporting software on the district's website.
- The district's Pest Management department was nominated for the IPM Achievement Award from the California Department of Pesticide Regulation for the 2021–22 school year. This award identifies leaders in adopting techniques that increase the benefits and reduce the risks of pest control.
- The school uses self-contained indoor and outdoor bait traps throughout the school year. In addition, anti-microbial pesticides and minimum-risk pesticides are used to reduce or prevent the infestation of roaches. Only trained custodial staff members can administer these products. The school does not use chemical herbicides or pesticides in the student garden.
- In 2014, KHS buildings were renovated and repaired. At that time, district personnel removed any remaining asbestos and disturbed lead paint permanently. As a result, all exterior and interior paints used for painting or repair do not contain volatile organic compounds (VOCs).
- KHS is a tobacco-free campus. The school participates in the TUPE program (Tobacco-Use Prevention Education). Health classes incorporate anti-smoking events into the curriculum with Red Ribbon Week, Great American Smoke-out, Kick Butts Day, and Threw with Chew Week. During Halloween week, classes sign up to participate in the "Say No to Drugs" door decorating competition. Students also create anti-smoking/vaping public service announcements shown throughout the school daily. In addition, ASB supports this curriculum by running campaigns during the week, such as

a pledge poster for students to sign and lunch activities around intoxicated driving and drug use.

- All cleaning products at KHS are Green Seal-certified and free of harmful, flammable, or carcinogenic chemicals or asthmagens. The school prohibits over-the-counter cleaners. However, green products, including disinfectants, are available to teachers upon request.
- Twice a year (summer and winter break), janitorial staff wax classroom floors and wash carpets, windows, room fixtures, sideboards, and ceiling vents. In addition, Waxie-Green products (cleaners/degreasers, surface cleaners, bathroom cleaners) are used to clean and sanitize the kitchen, bathrooms, and classrooms, which are cleaned daily. All cleaning practices include nightly spraying of Waxie 730HP Disinfectant Cleaner in all rooms and bathrooms.
- KHS and AUHSD follow the California Department of Public Health's "Healthy Cleaning and Asthma-Safer Schools: A How-to Guide." With this guidance, 100% of cleaning products are third-party certified for aerosol compliance. The school inspects and immediately repairs ceiling tiles for mold and replacement twice a year. Yard work, such as blowing and raking, is usually completed early in the morning before students arrive.
- In 2021, the school installed new HVAC systems to reduce sound levels that accompany lower fan speed and reduce the pressure with Variable Frequency Drive (VFD) speed control. The new systems also monitor ventilation and humidity levels that meet all district requirements of school buildings.
- KHS is also participating in the CalSHAPE (California Schools Healthy Air, Plumbing, and Efficiency) Program Grant. This grant provides funding to replace and upgrade heating, air conditioning, and ventilation (HVAC) systems in public schools and replaces noncompliant plumbing fixtures and appliances that fail to meet water efficiency standards. To date, the grant has replaced the dishwasher in the kitchen and washing machine in the gym with energy-saving/water-reducing machines. In the 2022–23 school year, the grant will replace any HVAC units older than six years.
- Condensation from HVAC systems is drained into roof drains. District personnel randomly check classrooms for relative humidity. If one room has a humidity problem, the surrounding rooms are also inspected.
- AUHSD uses the EPA's IAQ Tools for Schools throughout the district. The district performs indoor air quality tests annually and uses the Facility Inspection Tool (FIT) biannually to determine if the campus is in "good repair."
- KHS is part of the Air Quality Flag Program. Each day Reserve Officers' Training Corps (ROTC) raises a flag that corresponds to how clean or polluted the air is. South Coast Air Quality Management provides this information through a daily email. The color of the flag matches EPA's Air Quality Index (AQI): green, yellow, orange, red, and purple. The flag alerts students and staff to the local air quality forecast and helps them to take action to protect people's health, including those with asthma.
- The district conducts an annual test for lead in the water at KHS. In addition, soil samples are collected at random locations and tested for lead. Lead-based paint in undisturbed areas remains. If these areas are damaged, then the paint is immediately removed. All window caulking is checked yearly for cracks or leaks and repaired as needed.
- The school's drinking water comes from the Orange County Water District and complies with the Federal Safe Drinking Water Act and California Title 22 regulations.

- AUHSD tests for lead in the school's water annually. The district uses a third-party lab with the assistance of the City of Anaheim to test five water samples from the public water system. A few locations tested were drinking fountains, cafeteria/food preparation areas, and reusable water bottle filling stations. Results from February 2021 showed that KHS met the water quality requirements.

Element IIB: Nutrition and Fitness

- The school purchases 100% of the food used by the cafeteria from Gold Star Food. This company uses only local growers, and they pledge to be "local, sustainable, fair, humane and healthy."
- The school's culinary teacher buys 100% of her produce from Ingardia Bros, a Santa Ana-based company that practices sustainability by using all solar energy, 30% recycled water, zero landfill waste, and sells and produces 100% organic foods and eco-friendly products.
- KHS has several courses with a health and nutrition focus. Examples of these courses include:
 - In the school's Living Earth course, students learn the importance of organic molecules, carbohydrates, lipids, and proteins. Then based on California's Next Generation Science Standards (CA-NGSS), students construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids or other large carbon-based molecules.
 - KHS's Health course curriculum focuses on nutrition education to help students develop life-long healthy habits. In addition, students analyze positive strategies to educate family and peers about choosing healthy eating and physical activity habits. Finally, students combine nutrition with physical activity education to create personalized nutrition and physical activity plans based on current guidelines.
 - The school's Basic Culinary course explores healthy eating habits, fad diets, and organic farming. In addition, students participate in the "Cooking Up Change" culinary competition offered through Kid Healthy. The contest focuses on making school lunches delicious while following school nutrition guidelines, such as low fat, low sodium, and multiple servings of fruits and vegetables.
 - The Advanced Culinary course analyzes the food system, looking at the social, environmental, and economic impacts of agriculture. The course teaches students about critical issues so they can advocate for change, integrating academic learning with school gardens and bringing cooking into the classroom. Some of the course curricula come from Stone Barns Center for Food and Agriculture in New York.
- KHS Sustainability Garden and Learning Center has fully-functioning traditional and aquaponic gardens. The 7,800 square foot garden has two operational hothouses with electricity; one to grow herbs and spices for cooking, the other for science classes and clubs to conduct experiments and use the hydroponics system. KHS's adjoining 180 square foot outdoor learning center has six student-assembled/painted tables for teachers to bring classes to apply science concepts and grow ingredients for culinary courses.

- The Living Earth and the Garden and Sustainability Clubs maintain the school garden. Students volunteer to pick weeds, harvest vegetables, design and construct landscaping, and perform maintenance on the aquaponics systems during class time and community service opportunities in the school's Saturday Academy.
- In 2018, KHS earned two grants for its Sustainability Garden and Learning Center. The school built an aquaponics system with three planting beds and one fish pond with the California Teacher Association's Institute for Teaching Grant. Additionally, KHS purchased picnic benches (student work tables), seeds, and planting materials with funding from the Whole Kids Foundation Garden Grant program.
- Ninth and tenth-grade students are required to take physical education classes. As a part of their class, ninth-grade students take part in the California State Physical Fitness Test (CA-PFT). The CA-PFT provides information students can use to assess and plan personal fitness programs and establish lifetime habits of regular physical activity.
- KHS hosts staff spirit and appreciation activities for the faculty throughout the year. At the beginning of every school year, the KHS Parent Teacher Association (PTA) sponsors a breakfast to show staff appreciation. At the event, ASB students applaud staff as they enter the campus theater. For Halloween, department groups dress up, and student judges select the best group costume. Right before Thanksgiving break, the Advanced Culinary students prepare a Thanksgiving feast for the staff. During teacher appreciation week, the PTA provides lunch and free massages all week. Since 2019, KHS staff share their spirit by surprising students with viral dance performances. Teachers continued this tradition throughout the pandemic with recorded videos.
- Since COVID school closures in 2020, the district offers staff access to virtual exercise classes and mental health resources. The district started the 2021–22 school year by providing all staff members with mindfulness training and stress-reduction workshops. Additionally, wellness newsletters are emailed to all employees each month. These newsletters discuss healthy recipes, district events, fitness tips, discounts to fitness programs, sun-safety tips, skin cancer prevention, and information on district courses in wellness.
- AUHSD continues to further its wellness agenda for employees and families with *Well Done!*. The district-built program promotes a culture of health, safety, and wellness within the district and the Anaheim community. *Well Done!* applies best practices from successful wellness programs specific to academic institutions, including programs and services that support employees to choose healthy behaviors at home and in the workplace.
- Since 2019, students and the administration have worked together to prevent and track bullying. The school uses the *STOPit* app as an anonymous reporting tool that enables students to share information with those who can help resolve issues. The *STOPit* app also allows users to anonymously alert the school to inappropriate conduct or safety concerns such as harassment, bullying, weapons possession, hazing, safety hazards, threats, assault, or illegal activity, or ask for help for themselves or another.
- During the 2020–21 school year, the school formed a Black Lives Matter (BLM) Task Force to help create and foster environments, curricula, and instructional methods that validate and reflect all students' diversity, identities, and experiences. The BLM Task Force addresses opportunities for growth through various initiatives such as implicit bias training for staff, centralized forms of communication (website/social media), community banners, and action items to create culturally-responsive teaching and learning environments. Additionally, Katella's Black Student Union produced a podcast, "The Greatest Podcast in America," a PSA about Black Wall Street; developed QR codes

about the often-overlooked or skimmed-over events in U.S. History; and helped plan "AUHSD 1st Annual Black History Month Celebration".

- The KHS administration has developed a variety of teacher-led focus groups to work in the best interest of the students. These groups include:
 - Social-Emotional Group focuses on the implementation of programs and activities to better the social-emotional health of KHS's students and staff.
 - English Language Learners Task Force works to develop and implement a mentoring program supporting new English language learners academically and socially-emotionally.
 - Culture and Community Focus Group introduced recognition activities such as posting students of the month for each department on the marquee and social media, and hosting a recognition breakfast for students recognized for demonstrating the school's valuable traits (Communication, Collaboration, Creativity, Critical Thinking, and Character).
- KHS is staffed with a full-time health technician to provide basic first aid for unexpected injuries, assistance with medications given at school, and maintaining health records on all students enrolled.
- Since 2019, KHS's Licensed Clinical Social Worker Program has expanded intervention support and improved services for students. The program provides 1:1 individual counseling support, crisis stabilization, and group counseling support. In addition, it has identified some of the most vulnerable students on campus and actively works with staff and students to address their needs.
- KHS students participate in constructive activities that promote their healthy development in programs like Project SAY (Support Anaheim's Youth). The program utilizes a combination of youth outreach, case management, school interventions, assistance to parents, community education, youth leadership development, employment support, health, and fitness to engage youth in constructive activities that promote the healthy development of young people.
- KHS partners with Families Together of Orange County and Children's Hospital of Orange County to help provide various medical services for students. Services include medical, dental, vision examinations, preventative care, prescriptions, and vaccinations. Families can also receive referrals for additional assistance.
- KHS's approach to behavior management includes Positive Behavioral Interventions and Supports (PBIS) and elements of Restorative Practices, site and district-level alternatives to suspension options, and wrap-around services for students needing high-level support. The administration intentionally details student expectations through the beginning of each school year grade-level behavioral expectations meetings, a PBIS matrix in student planners, and daily video announcements. In addition, the school prioritizes social-emotional learning (SEL). For example, the counseling department's monthly guidance lessons have embedded SEL topics such as stress and mindfulness, healthy relationships, and adulting and deadlines.
- The school hosts parenting classes and Reflective Parent Learning Walks through their family and community engagement specialist. Parenting classes include the Parent Leadership Academy, Positive Discipline Parenting, and the Parent Leadership Academy Book Club.
- Pathways Community Services (Pathways) offers mental health services such as case management, crisis intervention, and medication services. In addition, Pathways has specialty mental health programs such as parent-child interaction therapy, Trauma-

Focused Cognitive Behavior, Seeking Safety, Motivational Interviewing, Dialectical Behavior Therapy, Cognitive Behavior Therapy, and Managing and Adapting Practice.

- KHS partners with Western Youth Services (WYS) to provide expanded programs to help students and families deal with mental health issues. WYS provides an array of mental health services such as child psychiatric services, medication monitoring, psychological assessment, and testing, couples counseling, school and district assessments, student evaluations, crisis debriefing services, coaching and training of non-mental health professionals, community presentations, group counseling, and substance abuse prevention services.
- Orange County Asian & Pacific Islander Community Alliance (OCAPICA) focuses on enhancing the health, social, and economic well-being of the under-served populations of Orange County. OCAPICA offers health services such as health education, access to healthcare systems, and insurance for low to moderate-income families. OCAPICA also supports students with college preparation, leadership development, and mental health services.

Pillar III: Provide Effective Environmental and Sustainability Education

Element IIIA: Interdisciplinary Learning

- KHS aims to provide students with experiences that promote a solid foundational knowledge of environmental concepts and issues. Through targeted lessons, students learn positive habits and attitudes for sustainable practices at school and in their community. In addition, students are connected with professionals to help them explore and prepare for degrees and credentials in green careers. The school's adoption of the California Next Generation Science Standards focuses its science curriculum development on the connection between humans and their effect on the environment.
- The school infuses environmental literacy into the curriculum using the Education and the Environment Initiative (EEI) curriculum whenever possible. The Living Earth course teachers use EEI to introduce students to the "big ideas" of the natural world. The EEI program is about bringing out the "essential elements" in instruction like the anticipatory setting (big idea introduction), modeling, guided practice, the 5 E's (engage, explore, explain, evaluate, extend), the differentiated instruction (sentence frames, student voice/choice). These teachers collaborate with the district's Science Specialist to develop storylines for each unit. In addition, Chemistry teachers use EEI for specific articles and graphs to enhance their lessons on climate change, water resources, and ecosystems.
- KHS leads the way in environmental science and sustainability practices within AUHSD. The school was the first in the district to include Environmental Science and AP Environmental Science (APES) in its course offerings. These environmental science classes and others supporting environmental literacy at KHS include and focus on the following topics:
 - Students learn about environmental stewardship and green careers in the school's two annual sections of APES. In addition to exploring environmental concepts, students experiment on the effects of cigarettes and vaping on organisms (red worms). Students share video recordings and the results of their experiments with health teachers for their lessons.
 - The school's Environmental Science course is a PBL laboratory and field-based course designed to provide students with the content and skills needed to

understand the various interrelationships in the natural world, identify and analyze environmental problems, and propose and examine solutions to these problems. The new curriculum for the 2021–22 school year focuses on green careers exploration, maintaining a sustainable lifestyle, and fostering global citizenship.

- KHS was also the first to introduce AP Human Geography to the district in 2016. This course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface.
- Instructional units for Living Earth include a unit in ecology in the fall semester and an Ecosystem Stability and Response to Global Change unit in the spring semester. These units teach students basic ecological concepts, biogeochemical cycles, climate change, water resources/conservation (as per the DROPS grant), and potential solutions for environmental issues.
- Chemistry in the Earth System also contains units about climate change and water resources focusing on water pollution and water quality testing. This unit includes a field trip to the Orange County Sanitation and Water District.
- Physics of the Universe covers units in renewable and non-renewable resources, energy flow and the laws of thermodynamics, and how they pertain to the Earth's four major spheres. In addition, the course includes engineering design standards by building models to demonstrate solar, wind, geothermal, and hydropower.
- In 2019, AUHSD introduced their California Next Generation Science Standards (CA-NGSS) three-course model, including The Living Earth, Chemistry in the Earth System, and Physics of the Universe. Each course of the three-course model contains multiple units dedicated to environmental concepts like climate change, renewable resources, and sustainability. All students are required to complete The Living Earth and Chemistry in the Earth System. However, for the third year of science, students have the option of taking Physics of the Universe, Anatomy/Physiology, Environmental Science, AP Environmental Science, AP Biology, AP Physics, or AP Chemistry.
- The Sustainability Garden and Learning Center, located between the science building and culinary/arts building, serves as a place to extend teaching and learning with hands-on activities that put learning into context. Some activities include:
 - Living Earth classes use the aquaponics area to grow sunflowers as part of a unit on the Characteristics of Life for the Living Earth (grades 9-10) classes. Once the flowers are ready, students harvest the seeds to be eaten or planted to make more flowers. This activity demonstrates the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.
 - Another Living Earth teacher utilizes the greenhouse to start various vegetable plants from seed. Students measure and record the plant growth data from week to week and then transfer the seedlings to repurposed plastic bottles to continue the plant's growth. Students then have the opportunity to take their plants home to continue growing and realize the idea of growing food even if you live in an apartment.
 - The AP Environmental Science, AP Biology, Living Earth, and Chemistry classes use the Sustainability Garden and Learning Center for lab experiments in soil quality testing, seed germination, and the water cycle.

- The Culinary Arts teachers utilize the hothouses to grow ingredients for their programs.
 - The DROPS grant provided many lessons based on water conservation, reclamation, and pollution. One lesson all Living Earth students engage in is "Exploration of the Heritage Garden." This lesson includes observations of drought-tolerant native plant species, the specialized groundwater infiltration system, and landscape design for water collection.
- Four KHS science teachers attended training workshops led by Strategic Energy Innovations (SEI), an environmental nonprofit organization whose goal is to build leaders to drive sustainability solutions. The workshops focus on Climate Change, Renewable Energy, Introduction to Energy Auditing, and Green Building Certification and align with CA-NGSS, Common Core State Standards, and Career and Technical Education standards. These teachers are currently using the workshops' curriculum in their courses. For example, the teacher for The Living Earth course uses the lessons about climate change and watersheds. A Chemistry teacher uses lessons from the training about climate change and water chemistry. The AP Environmental Science teacher has her students participate in the SEI Energy Conservation competition and performs labs in renewable energy by making windmills and waterwheels. Two of the Physics teachers, one of whom went to the training, make solar cars and other renewable and non-renewable energy projects. In addition, all of the teachers use SEI-provided materials to build models of solar cars, wind turbines, and water wheels.
- KHS offers several field trips that give real-world examples of environmental issues. Examples of these field trips include the following:
 - Partnerships with the San Diego Institute for Conservation Research began in 2015 when four members from the science departments attended a week-long conference at the San Diego Safari Park to introduce teachers to their curriculum. Yearly field trips to San Diego Zoo Safari Park allow students to meet with conservation scientists, gain access to innovative research equipment, and participate in hands-on experiences of real-world scenarios in wildlife conservation. After the lab, students explore the park.
 - In August/September, APES and AP Biology (grades 10-12) classes go to the Newport Aquatic Center. This field trip teaches students about estuaries, ecosystems, biodiversity, and conservation efforts. Part of the lesson takes place as they paddle through the bay on double outriggers.
 - In the spring, the classes of Living Earth (grades 9-10) and APES (grades 11-12) go to the Bolsa Chica wetlands, where they perform water quality and soil sample tests and study water pollution biodiversity conservation.
 - APES hosts virtual meetings with educators from the Bolsa Chica Wetland, an atmospheric scientist from the South Coast Air Quality Management District, and a representative from EPA's Superfund program in Boston, Massachusetts.
 - Students in Living Earth classes watched a salmon dissection webinar sponsored by the California Department of Fish and Wildlife at the Nimbus Fish Hatchery.
- In the Spring of 2018 and 2019, KHS hosted 350 fifth-grade students from three local elementary schools for a day of showcasing the school's programs to future students. Three interactive activities were developed and presented with the help of 50-60 high school students on multiple days. Students rotated between three stations set up around campus. Station 1: Water Conservation in the Front Garden; Station 2: Water Cycle in

the Student Garden; Station 3: Water Testing of pH. This partnership will continue in spring 2022.

Element IIIB: STEM Content, Knowledge, and Skills

- Ecology-based STEM knowledge and skills are rooted and developed through multiple classes at KHS. Some examples include:
 - In The Living Earth course, students study the properties of water with regards to cell processes, such as photosynthesis and cellular respiration, and the importance of the water cycle in ecosystems and biomes. Students study the school's DROPS campus improvements throughout the year as they demonstrate key concepts in ecology, cells, and cell processes. In addition, students utilize computer simulations to predict conclusions on climate change, sustainable agriculture, and human populations.
 - KHS's laboratory-based Chemistry in Earth System class leads students in an examination of water run-off and how it impacts human activity and natural resources. Students learn how KHS recycles water, why the school changed the campus' landscaping, and how these modifications have positively improved the human impact on the local environment. Students also explore the new desert landscape and explain why this landscaping change helps the water footprint. Then students develop models of energy flow in Earth's climate. Next, students review combustion reactions to focus on emissions from fossil fuel energy sources and nuclear processes. They engineer models of molecules structures to explain how different molecules trap heat in the atmosphere, creating the Greenhouse Effect. Finally, students apply their learning by evaluating different chemical engineering solutions that can reduce the impacts of climate change.
 - Physics and the Universe class focuses on electricity production and teaching students how power plants work, including fossil fuel, nuclear, wind, hydroelectric, and solar photovoltaic. Students then discuss the environmental impacts associated with each energy source. STEM is an integral part of the course curriculum as students explore, design, and engineer ecological solutions. In a final project, students work in teams to design and construct solar cars. Since 2017, these teams have participated in the Solar Car Sprint at STEAM-A-Palooza, a district-wide event that showcases student learning and creativity.
- The school connects students with green careers through a partnership with Anaheim's Innovative Mentoring Experience (AIME) Program and the City of Anaheim Public Utilities. Mentors work with students to inform and prepare them for what is needed to enter the various green careers working for the city of Anaheim in careers such as urban planning, electrical engineering for energy conservation, water conservation strategies, and waste management.

Element IIIC: Civic Knowledge and Skills

- KHS has a few ecologically-focused clubs.
 - Teacher sponsors from the Save the Earth/Recycling Club, Key Club, Garden/Sustainability Club, and others have established a faculty Green Team. This group meets weekly at lunch to monitor energy and water uses in the school, improve recycling programs, explore future campaigns to increase campus sustainability, and help acquire funding for present and current projects.

- The Save-the-Earth/Recycling club meets every week to schedule days students collect recyclables from paper and bottle/cans bins or classrooms.
- The Garden and Sustainability Club discusses watering and maintenance schedules for the garden, future garden projects, fundraising ideas, and sustainability ideas for the campus. For example, at the Martin Luther King Jr. (MLK) Serve-a-Thon in January 2020, students built a butterfly garden and repaired several planter boxes. In addition, students in Saturday Academy days worked to spread compost in planter beds, clean the hothouses, and maintain the aquaponic system in the following weeks. In the upcoming weeks, the Garden/Sustainability Club, along with members of LOVE Anaheim and OC Girl Scout Troop 625, will rebuild the existing planter boxes and add four additional boxes.
- In October of 2018, students from Environmental Science and APES classes organized a screening of the documentary *Love and Bananas: An Elephant Story*. The documentary explores the plight of Asian Elephants and exposes the cruel secret they have to endure to become service animals. With a \$500 donation from an anonymous source, film director Ashley Bell came to the screening to discuss her work. Students designed and sold tickets, made fliers and posters, advertised the event, sold refreshments, and decorated the theater. After the screening, several students gave Ms. Bell a tour around the campus and presented her with a Katella High School shirt and cap. Students sold 200 tickets and raised over \$800 to donate to the Lek Chailert's Save Elephants Foundation.
- In 2016, the Environmental Science classes and Save the Earth/Recycling Club were also concerned about the amount of litter they saw around school and the surrounding community. Students decided to help solve this problem. Using the Litterati app, students were able to identify impacted locations. Then they designed posters with messages to discourage littering. Students monitored locations and noticed a significant decrease in the amount of trash on the ground in most locations. As a result of this success, students from the APES and Living Earth classes make new posters each year. Then the student body votes on the five best posters, and those posters are made into signs by the district's graphics department to replace the signs from the prior year.
- Katella Talks began in 2015 as a senior-level English class presentation assignment, and now every student has the opportunity to participate. Based on a college application, the driving question is, "What is a problem you would like to solve within your major, career interest, or community?" Students select a subject they are interested in and passionate about, conduct research, create a speech, and present it to their peers. A student-led committee determines which student should showcase talks to the school and the district. The talks are performed live throughout the district and recorded on YouTube for future viewing. This event is filmed, produced, and organized by students. Over the years, there has been a significant increase in talks that focus on environmental issues and sustainability, including human population growth, climate change, and recycling.
- In May 2022, KHS will have its first annual Fish Fry and Garden Party. Tilapia from the aquaponics pond along with vegetables from the garden will be cooked and prepared by the culinary department. This annual event will allow all the staff to celebrate the end of the year and enjoy the garden's bounty. It will also remove all adult fish from the aquaponics garden and remaining plants from the traditional garden to clean and revitalize the gardens.

- In Spring 2017 and 2018, students at the Garden and Sustainability Club took part in STEM Night at Paul Revere Elementary School in Anaheim. Students led an activity where participants placed succulents into ice cream cones to take with them to grow at home. Their purpose was to demonstrate the importance of planting drought-resistant plants and how to care for them.
- Each year, the KHS student body participates in the MLK Day Serve-a-Thon. The Save the Earth/Recycle Club organizes a school and neighborhood parks clean-up. The Garden/Sustainability Club weeds the garden area, refurnishes the aquaponics planter beds, and prepares the planter boxes for spring crops. In past years, students repainted the bricks for the student walkways and built a butterfly garden. In January 2022, a local Girl Scout troop and members of "LOVE Anaheim" joined the Garden/Sustainability Club to rebuild planter boxes and revitalize the Butterfly Garden. On average, about 350 students participate in the event.