



## District Sustainability Award Nominee Presentation Form

### CERTIFICATIONS

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#### District's Certifications

The signatures of the district superintendent on the next page certify that each of the statements below concerning the district's eligibility and compliance with the following requirements is true and correct to the best of the superintendent's knowledge.

1. The district has been evaluated and selected from among districts 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.
2. The district is providing 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.
3. OCR has not issued a violation letter of findings to the school district concluding that the nominated school district 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.
4. The U.S. Department of Justice does not have a pending suit alleging that the school district has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
5. 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 school district in question; or if there are such findings, the state or school district has corrected, or agreed to correct, the findings.
6. The district 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 District Sustainability Award 2019-2021

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


District Name: Rialto Unified School District  
(As it should appear on an award)

Address: 182 E. Walnut Avenue, Rialto, CA 92376

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

  
\_\_\_\_\_  
(Superintendent's Signature) Date: 2/12/19



## Nominating Authority's Certifications

The signature by the Nominating Authority on this page certifies that each of the statements below concerning the district's eligibility and compliance with the following requirements is true and correct to the best of the Authority's knowledge.

1. The district 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 education.
2. The district 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 that reads "Tony Thurmond".

Date: 2/14/19

(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: March 31, 2021

### 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](mailto: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.



# *Rialto Unified School District*

California Disadvantaged District Sustainability Award 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 2019

## PART II – SUMMARY OF ACHIEVEMENTS

### Rialto Unified School District, California

*Environmental issues inspire students to think globally and act locally*

Rialto Unified School District (RUSD) is a diverse district in Southern California's Inland Empire serving more than 25,000 students in 29 schools. Environmental education and use of green technologies are the foundations upon which RUSD educates students, makes decisions regarding student and staff health, and develops innovative partnerships and practices that support environmental and sustainability literacy.

RUSD STEM CARES (Science, Technology, Engineering and Mathematics Cultivating Active Responsible Environmental Stewards) uses locally relevant environmental issues to inspire students to think globally and act locally to improve their community and their world. RUSD believes that all citizens have a responsibility to be environmental stewards, and strives to integrate sound environmental principles and practices both in and out of the classroom. RUSD purposefully promotes green school ideals to conserve natural resources, reduce the impact of RUSD operations on the environment, and protect the health of students, staff, and community within the framework of the District's strategic plan.

In order to teach students to be responsible citizens of a global society, RUSD provides educational experiences that develop environmental literacy for all students K–12 that include outdoor learning, the California Environmental Principles and Concepts, innovative environmentally-focused course offerings, and community-based environmental stewardship projects. RUSD was one of the first districts in California to develop and earn University of California (d) science laboratory course approval for robust integrated science sequences of courses based on environmental sciences that promote students making "green" college and career choices.

Students complement their classroom success with real-world experience. RUSD students were the first in San Bernardino County to compete in the International Science and Engineering Fair (ISEF). High school students practice public speaking and engage in community advocacy by participating as speakers in community conferences such as the STEP (Science Technology Education Partnership) Con 18 Teacher Conference and the Speak Out speech competition with the Inland Empire Resource Conservation District.

RUSD has a fundamental belief in maximizing the efficient use of resources—including human ones. The District has been especially successful leveraging the expertise of classified staff to work directly with students and teachers to increase engagement in the classroom and in outdoor learning environments on school grounds. RUSD's Grounds Supervisor works directly with the District Science Lead to develop lessons for the recently installed outdoor gardens that were funded by a California Proposition 84 Grant. Nutrition Services has partnered with the Science Lead and local farmers to bring locally-grown fruits and vegetables to an elementary and a middle school in a pilot program. The farmers have talked to classes about the environment that supports these crops as well as the nutritional value of these foods. The District Energy Manager has worked with science and Career Technical Education (CTE) classes on energy audits. Alignment of the California Next Generation Science Standards (CA NGSS) standards, CTE Model Curriculum Standards, and collaborations between Education Services and Business Services coupled with implementation of the strategic plan has helped

RUSD design innovative learning opportunities to help students become responsible global citizens.

The District has documented substantial reductions in environmental impact, including energy use, water use, and waste generation. RUSD purchases and uses environmentally friendly products and focuses on green cleaning products and high-efficiency cleaning equipment to reduce the use of chemicals.

RUSD is a model district in Positive Behavior Intervention and Support (PBIS). Each of three comprehensive high schools is home to a Wellness Center; two include Meditation Gardens.

RUSD enjoys the full support of the City of Rialto and a variety of community-based public and private partners. The City-District partnership has driven a variety of initiatives that promote making healthy choices. Each year the City organizes an “Earth to Table” event and a community conservation fair where many of the District’s schools participate in a walking tour; help put together food boxes for those in need; and learn about pedestrian safety, water conservation, pollution prevention, and how to make healthy choices about food and exercise. Additionally, RUSD partners with CEMEX to organize an annual community 5k run at the local surface quarry. Profits from this event are donated to the District’s STEM program. The City supports RUSD in efforts to reduce vehicle traffic by establishing safe routes to schools for human-powered modes of transportation and promoting “walking school bus” days.

Science has been the foundation of environmental and civic responsibility education efforts in RUSD. While a few elementary schools have chosen to brand themselves as “STEM with a focus on Environmental Education” campuses, all schools are involved in using their gardens as outdoor learning laboratories. Teachers participating in Elementary Einstein Fellows workshops are developing environmental science-themed integrated curricula using Project Based Learning.

As RUSD students build their environmental literacy, improved academic outcomes are evident, especially in the STEM fields. RUSD provides students with a variety of STEM opportunities such as STEM Nights, STEM Bowl for elementary and middle schools, and STEM field trips. The district’s culinary program is highly successful with state of the art facilities; the culinary teacher has developed a “kitchen” garden as a learning space. Veolia, one of the district’s water companies, is a partner that provides many water-focused classroom-based student learning opportunities. Veolia was so energized by RUSD’s partnership that they created “GenSTEM,” an industry partnership to support education that they hope to expand to their entire North American region. Burrtec Waste Industries also works with RUSD to teach students about waste reduction. Additional partners include the Inland Empire Resource Conservation District, Earth Beneath our Feet, Inside the Outdoors, and West Coast Arborists.

RUSD’s science education is the catalyst for environmental education, using local and community projects to tap into students’ curiosity, thirst for knowledge, and project-based learning about local environmental issues. To fill the gap between the adoption of the California NGSS (2012) and the aligned instructional materials (November 2018), RUSD middle and high school teachers worked hard and developed their own open-source free textbooks from vetted online resources. Provisions were made at each school for students who did not have access through a device at home. This relevant content helps students to make great strides toward environmental literacy.

## PART III – DOCUMENTATION OF STATE EVALUATION OF DISTRICT NOMINEE

### Pillar I: Reduce Environmental Impact and Costs

#### Element IA: Energy

- The RUSD Governing Board adopted policies to ensure Green Schools Operations in 2011. In 2013, RUSD contracted with Cenergistic to manage energy conservation efforts. This work led to a subsequent Board policy, related to energy and water Conservation and building Management. RUSD has also implemented a 2011 master plan to manage and reduce energy consumption, and funds a full-time Energy Manager to monitor the use of electricity and water.
- From February 2014 to October 2018, RUSD realized a 23% reduction in electrical energy usage and a 12.5% reduction for water and sewer usage. There has also been an 18% reduction in greenhouse gas emissions since 2014.
- RUSD uses Energy Cap software to track energy usage. In the latest EPA ENERGY STAR report (March 2016), 96% of RUSD schools documented an ENERGY STAR score of 70 and above, with a mean score of 91 and a median score of 94. Energy Cap demonstrates a cumulative savings of approximately 113,865,121 kBtu since January 2013.
- On May 6, 2015, the Board approved installation of solar panels at all school sites by SunEdison (now Onyx Solar). The completed project has a total capacity of 7,800 kW, which meets 80% of district needs. For the 20% of energy purchased, renewable energy comprises 25-28% of the companies' portfolios.
- RUSD currently participates in state utility programs such as the School Energy Efficiency Program (SEEP). This program helps reduce energy use by installing motion detectors and replacing lighting with more efficient options that increase light intensity levels (lumens) with lower wattage use. RUSD also participates in savings programs offered by Southern California Edison (SCE), including appliance rebates. SCE also provides a "Living Wise" unit to all 6<sup>th</sup> grade students, which includes an apparatus to monitor and collect data about energy usage. Teachers use this data as the foundation for units about energy conservation at home and at school.
- Recent construction projects in RUSD include energy and water efficiency upgrades:
  - Eisenhower High School's newly opened football stadium, including the stadium call box, bleachers, and restrooms, meets green building standards and exceeds *California Code of Regulations*, Title 24 regulations. The field now has artificial turf to reduce water use and save money.
  - Eisenhower High School's Theater Project, due to open during 2018–19, will also meet green building standards. This space will have a cool roof, low-flow fixtures, and energy efficient lighting. There are also plans to add solar panels on the new theater and in a parking lot.
  - In 2014, Kelly Elementary and Kucera and Jehue Middle Schools added buildings that all exceeded Title 24 regulations.
  - The science laboratories at Kolb Middle and Eisenhower and Rialto High School were remodeled in 2012 to have new skylights installed, LED lighting, daylight harvesting, and motion sensors. These labs also exceeded Title 24 regulations.
  - 56 large transformers have been replaced with more efficient ones.
- In order to reduce the heat island effect, cool roofs have been installed at the district kitchen, Casey Elementary, and all new buildings since 2014. RUSD has also strategically planted

trees and installed shade structures in areas such as parent pick-up stations and places where students eat lunch. A current 6<sup>th</sup> grade Common Lab has students collect and analyze temperature data around their school to identify average temperatures in certain areas of campus and at certain times of day to better understand what conditions might contribute to the heat island effect.

- District buildings have been audited for HVAC optimization. To reduce energy use, air conditioning units equipped with EMS (smart thermostats) have been installed in 75% of RUSD's schools. A base lighting audit was conducted in 2014, and all sites now have LED exterior lighting. An interior lighting conversion is ongoing. Two elementary schools were upgraded from fluorescent lights to LEDs (32 Watts to 12 Watts). Ten school sites and the district administration buildings had new, more efficient HVAC units installed. All schools have solar panels installed in their parking lots, which light the lots at night using LEDs (replacing mercury vapor lights). The district's plan prioritizes replacing equipment at the highest-energy-use sites first to reduce energy consumption. All renovation projects in RUSD include energy and water efficiency upgrades. One recent upgrade was to purchase more energy efficient hot and cold transfer units (food carts) for each middle and high school. All school kitchens, including the district food services kitchen, are scheduled to be upgraded with more energy efficient gadgets and units.

#### Element IB: Water and Grounds

- Water consumption is tracked through Energy Cap and bills the four providers serving the district. A comparison of bills from 2016 to 2018 shows that RUSD reduced their cost of water by 24% compared to 2012.
- RUSD follows California water-reduction guidelines in their efforts towards reducing water use. Within the district, 16 elementary school sites have orange groves, 26 schools have water-wise gardens, and high schools have artificial turf football fields. Schools sites have installed water restrictive caps faucets and replaced toilets with low-flow models.
- All irrigation runs between 9 p.m. and 6 a.m. During the winter, gardens are watered at most once a week, depending on weather. Turf replacement consisting of the installation of 2.5 acres of school gardens and citrus groves at 16 schools has reduced water consumption by 2.5 million gallons per year. Last year, RUSD realized a reduction of 80 million gallons of water used over an 8-month period resulting from the installation of drip irrigation with a water-wise controller system and impervious decomposed granite.
- The landscaping at most elementary, middle, and high schools, as well as the District Office and the District Professional Development Center, has been replaced with drought tolerant plants and xeriscaping to reduce water consumption. When trees are tagged for removal, they are replaced by two new trees. The District often plants evergreens because they require less water, do not shed their leaves, and do not interfere with roof drainage systems.
- Approximately 60% of each school site's ground are devoted to ecologically beneficial uses. These uses include rain gardens, native plant and animal habitats, a pollinator sanctuary, outdoor classrooms, school gardens, and citrus groves. Kordyak Elementary and Milor High Schools have bioswale water retention basins with native plants. Milor has its own farm and plans to sell the produce that it grows. There are gardens at 19 elementary, 5 middle, and 2 high schools, and 16 elementary schools have citrus groves. Both the gardens and groves are used as outdoor learning spaces.
  - Rialto High School has a native plant garden and is adding the Tellus Garden. Victor Torres, a former student of Rialto High School who is currently majoring in Environmental Science, obtained a grant to fund the Tellus Garden; he is working with

his former MESA teacher and the District Grounds person on this project. The Tellus Garden will be a unique learning environment where students will explore STEM and civics topics, such as environmental landscape design, sustainable gardening for food security, farm to table, GIS, renewable energy technology and its maintenance, air and weather monitoring, and water and air quality management. The Tellus Garden will bridge gaps between human and natural systems and allow students to discover the world of possibilities afforded by careers in energy, environment, and utilities in a fun and organic way.

#### Element IC: Waste

- Many RUSD schools compost fruit and vegetable waste for use in school gardens. In the winter, RUSD composts leaves from deciduous trees and other plant wastes from maintaining the grounds. This compost provides soil nutrients, reducing fertilizer costs. This composting project was incorporated into the science curriculum by a 4<sup>th</sup> grade teacher at Kelley Elementary, who developed a composting PBL unit for use district-wide.
- Also, RUSD reduces their carbon footprint by using trash compactors so that the waste disposal companies come to schools less often.
- Waste disposal and recycling is tracked with the assistance of staff, billing companies, and students. Each classroom at each school has at least one recycling bin; schools participating in composting programs have special food bins. Elementary, middle, and high schools compete against each other on a quarterly basis to determine which campus can recycle the most. Once each quarter, maintenance personnel at each of the schools collects the recyclables from the schools and weighs them. The elementary, middle, and high school that has the highest recycling rate is rewarded by Nutrition Services with a barbeque picnic. Waste disposal and recycling is also tracked through the monthly billing from Burrtec. The bills break down costs into the amounts of waste disposal and recycling by site. Additionally, high school science students from Environmental Science and AP Biology classes are involved in collecting data during waste audits to determine how RUSD is reducing its “carbon footprint” by using data from the schools that are composting. Students include calculations for the reduction of waste disposal truck trips (diesel fuel) and landfill emissions (methane gas). A new 9<sup>th</sup> grade Common Investigation has students track litter on campus using the Litterati app to map the location, type, and amounts. Student groups then design a solution to solve the problem of campus litter. RUSD uses electronic communication and file sharing to help reduce the amount of paper wasted, purchased, and recycled.
- There are several steps taken by RUSD in order to properly use, store, and dispose of hazardous materials. Middle and high school science teachers annually attend a mandated chemical and lab safety workshop. Chemicals used in laboratory experiments are collected and stored in waste containers (labeled with their contents) provided by Barnes Hazmat, RUSD’s hazardous materials hauler. RUSD science labs have been revised to include experiments that use chemicals that are less harmful to the environment when possible. All laboratory safety equipment such as showers and eyewashes are checked each year to ensure that they are in good working condition.
- RUSD uses greener and less hazardous products where possible, including pesticides, insecticides, cleaners, floor treatment products, and landscaping chemicals. Additionally, the district warehouse collects fluorescent lighting tubes and freon from air-conditioning units for recycling. RUSD has installed VCT flooring which does not require waxing (and stripping of wax) as well as LED lights to replace the more hazardous fluorescent tubes.



- Green Seal certified products are used whenever possible. For weeds, RUSD uses “All Down Suppression,” an organic, citrus-based weed killer.

#### Element ID: Alternative Transportation

- According to a Safe Routes mode share survey administered to all RUSD students, 35% of respondents reported carpooling with two or more students in the car, 29% reported walking, 15% reported riding the school bus, 10% reported rolling to school (i.e., bicycle, scooter, skateboard), and 1% reported taking other public transportation. The district is working on school boundary changes so that more elementary schools become “neighborhood schools” or “walking schools” to decrease the pollution by cars at the schools.
- RUSD and the City of Rialto have implemented a city-wide Safe Routes to School Program. The program includes pedestrian and bicycle education such as offered in “Safe Moves,” student bike/pedestrian workshop/assemblies, and “Bike Rodeos,” an interactive program that is conducted at school playgrounds, allowing students to experience traffic simulations in a course called “Safe Moves City.” Safe Route analysis has been conducted at every school site and adjustments have been made to improve ingress and egress (e.g., signage, parking lot rerouting barriers, and parking redesign). At the larger elementary schools, district-funded parking lot attendants assist district safety officers to ensure orderly drop-off and pick-up of students. The City and District work jointly on the “walking school bus” program so that parents have another healthy and environmentally friendly way to get their students to school. RUSD’s RiSMART (California Mathematics and Science Partnership) grant focused on having teachers (25% of teachers during two of three summers) build PBL lessons that focused on “Safe Routes” and the benefits of active transportation which were then used in their classrooms as science lessons. Supporting the Safe Routes to School initiative, the Go Human event during the Earth to Table event involved 3<sup>rd</sup> grade students from ten of the elementary schools.
- RUSD Transportation currently owns 80 school buses: 51 compressed natural gas (CNG), 4 gasoline, and 25 diesel. RUSD received a South Coast Air Quality Management (SCAQMD) grant in May 2018 for CNG replacement buses, taking 13 pre-1994 diesel buses off the road. In an effort to reduce its carbon footprint, RUSD built a CNG fueling station to reduce the number of miles school buses travel to refuel, reducing vehicle miles traveled by 12 miles per day, per bus. The CNG station is also open to the public to supply CNG vehicles in the area.
- RUSD adopted Board Policy 3514 – Environmental Safety to ensure compliance with *California Code of Regulations*, Title 13, which limits bus idle time within 100 feet of school sites or departments. All district school buses turn off their engines when waiting at schools.

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

#### Element IIA: Environmental Health

- RUSD’s integrated pest management practices include contracts with Sharp Exterminators, a pest management company that inspects all district buildings monthly. Monitors such as mechanical devices and glue boards are replaced on a regular basis; pesticide use is the last resort. Of the pest products used, about 75% are safer products. RUSD takes steps to eliminate access, harborage, and food sources prior to any pesticide application.
- RUSD’s Risk Management department provides safe chemical storage equipment in science labs and provides all schools with Safety Data Sheets for all chemicals used. All

science lab orders are screened by Education Services, Purchasing, and Risk Management departments to confirm that the items ordered are not hazardous. RUSD does not have any fuel burning appliances except for the gas burners in the high school chemistry labs. RUSD complies with the ARERA act for asbestos management and abatement. Any wooden structures that contained chromate, copper, or arsenate were removed years ago.

- RUSD ensures that indoor environmental standards are employed at its schools. All classrooms have good acoustics and windows that provide daylighting. Newer buildings and remodeled labs have natural lighting included in their design (e.g., Solatubes). All classrooms are air-conditioned, and humidity control is monitored by the HVAC system. Except for a few classrooms in the district, all indoor learning environments have views of trees and nature.
- In order to ensure that RUSD's buildings and site soils are lead-safe, well-maintained painted surfaces are kept intact. If lead-based paint is peeling, state/federal standards are followed for its safe removal. Lead abatement has occurred in the past, and there are a few sites currently undergoing abatement. High lead content soil is covered with grass, plantings, concrete, or asphalt. An outside environmental company is used for immediate abatement of hazardous material.
- RUSD's water is obtained from four providers that conduct necessary water quality testing to protect district schools from potential contaminants. Each publishes Consumer Confidence Reports annually. RUSD also hires an environmental company routinely to check for contaminants in the drinking water. RUSD does not allow anything to be dumped in storm drains.
- In order to control and manage chemical use and to minimize student and staff exposure, all chemicals outside of science labs are dispensed through a metering system which ensures correct mixing of chemicals. All custodial staff undergo quarterly training overseen by the Risk Management Department. Safety Data Sheets (SDS) are kept on all chemical supplies in the custodial room. The secondary school science staff receive chemical safety training annually. Students must score 80% or greater on a lab safety quiz before they can perform experiments. The new middle school Common Labs use household products such as baking soda and vinegar.
- RUSD also maintains a healthier and greener cleaning custodial program, using Green Seal-certified degreaser, neutralizer, and hand soap. All schools use HEPA filters on vacuums. All products utilized are low in fragrance so as not to trigger asthmatic occurrences.
- In order to protect indoor air quality, custodians and maintenance personnel regularly clean air filters and ducts, vacuum with HEPA filters, and use school purchased cleaning chemicals and pesticides. The six key drivers from Action Kit items in the IAQ Tools for Schools are used in the process.

#### Element IIB: Nutrition and Fitness

- RUSD's Nutrition Services prepares fresh food for all schools, promoting healthy food and nutrition practices. The food is procured from either the USDA or from local farms in San Bernardino or Orange Counties. School gardens provide some fruits and vegetables. RUSD schools use "share tables" to collect items students selected but did not consume; these items are donated to a local church.
- Nutrition Services collaborates with the Science Department to bring a local farmer to classrooms to discuss how farming irrigation works and how it impacts the harvest. The

farmer discusses different varieties of locally grown produce and brings a selection for the students to sample.

- Students from all grade levels are involved in menu development through participation in taste testing fresh fruit and vegetable sessions with Nutrition Services; this program has grown from two to twelve elementary schools. New recipes or products are presented to the students using a blind taste test, and students are asked to comment on appearance, taste, smell, and overall desire to have the item on the menu. Students also have the opportunity to name the new dishes.
- The District has a state-of-the-art facility where high school students attend Culinary Academy classes in a CTE pathway. These students also provide catering at some District functions held in the adjacent Bistro and have designed their own garden and planted it with vegetables and herbs that can be utilized to develop dishes.
- In partnership with the City, RUSD provided a "seamless summer program" to feed children (toddlers to 18 years of age) for free at RUSD's five middle schools, three high schools, and three city parks. This hugely successful program included daily activities (including nutrition, farming, STEAM, literacy, and physical education) during the summer of 2018. The seamless summer program allowed multiple RUSD departments to communicate with students, parents, and the community about the district programs available. As part of the RiSMART project, teachers were able to learn about and then design healthy eating and exercise PBLs, which were then used as classroom lessons. Teachers in that module mapped the healthy eating restaurants in Rialto; this map was shared with the City's Healthy Rialto project. Nutrition education is part of the science curriculum in 5<sup>th</sup>, 7<sup>th</sup>, and 10<sup>th</sup> grades.
- RUSD has a wellness committee that meets three times a year. The committee meetings are open to all stakeholders, and meeting dates are posted on the district website. The Wellness Policy was recently revised by the Board in 2018; food and beverages now sold during school hours adhere to nutritional standards set forth by the federal and state government and the District.
- All elementary and middle schools have gardens. Kucera Middle and Rialto High Schools have native plant gardens as well. Milor High School recently created Milor Farm, and Rialto High has created the Tellus Center. These are outdoor learning spaces for science and will eventually supply food for the kitchen. Students take pride in developing and maintaining their gardens. Many NGSS-aligned PBLs have been developed by teachers providing students with hands-on science experiences; most of the lessons and Common Labs are designed around the gardens. The Common Labs include investigations of roly polys (isopods) in 3<sup>rd</sup> grade, seed dispersal in 2<sup>nd</sup> grade, and hydroponic gardening in 5<sup>th</sup> grade. Parent Garden Champions maintain the gardens, which have truly become a community projects.
- RUSD elementary students participate in the SPARK P.E. curriculum for a minimum of 200 minutes every ten school days. Secondary students receive 400 minutes every ten days. With favorable weather in California year-round, students mainly have P.E. outdoors. RUSD operates a year-round competitive middle school sports program with flag football, volleyball, basketball, wrestling, soccer, and cheerleading. Students are assessed on physical fitness skills at all grades.
- RUSD's Wellness Policy (2015) provides for serving nutritious foods at schools, delivering nutrition education that promotes a healthy lifestyle, and promoting physical activity. Nutrition education is integrated into math, science, language arts, and social studies lessons. The nutrition education curriculum is standards-based and involves sharing information with families and the broader community. The Rialto Fire Department teaches all

first grade students the Stewie the Duck (water and sun safety) lesson. RUSD adopted the Positive Prevention Plus Program to help teach health at the secondary level.

- RUSD also supports the mental health and positive behavior of students through the PBIS program, which has a full-time district-level coordinator. There is also a Counselor on Special Assignment who provides Restorative Practices Coaching, PBIS training, and training on the effective use of restorative circles. PBIS has been implemented district-wide. Last year, nine elementary, five middle, and all three comprehensive high schools received state PBIS recognition. This year, 19 of the 29 (66%) schools received PBIS bronze or silver awards. All three comprehensive high schools and the continuation high school have a Wellness Center and PBIS counselor.
- Meditation gardens at the Wellness Centers at Rialto and Carter High Schools consist of an outdoor garden with a dry stream bed and meditation benches to support emotional well-being. Although a Teacher on Special Assignment does outreach for the Wellness Centers, students can also self-refer for needed time for mindfulness, brain break, and timed release for behavior modification. The high schools have peer counselors, link clubs, and restorative practice groups to help support their peers.
- RUSD operates a school-based health center that provides immunizations, home hospital, and other services to support the health needs of students. RUSD employs a full-time district-wide nurse and nine School Nurses who work to ensure students are healthy. These nurses provide preventive measures such as vision, hearing, and scoliosis screenings. RUSD also has a district-wide suicide prevention/intervention/ postvention protocol in place.
- RUSD also engages in outdoor education, exercise, and recreation outside of formal physical education. The Common Labs at each grade in elementary and middle school involve outdoor science instruction; e.g., measuring temperatures or surveying trees or organisms in an area of campus. Students also spend approximately three hours per week on average in the school gardens learning about topics including life cycles, growing food, and ecosystems.
- Additionally, RUSD students representing 13 schools participated in the 2018 CEMEX 5k Run Around the Rocks. This event inspired one elementary school to register to start a 100 Mile Club and another to start a running club. Interest in this event resulted in an articulation between the elementary clubs, middle school students Run LA clubs, and the high schools' cross country teams.
- The after school program Think Together at each elementary and middle school provides participating students with daily physical activities after school (approximately 30 minutes each day). Many students at the middle and high schools take part in RUSD intramural sports and marching band programs.
- Risk Management has implemented many activities to increase staff wellness including participation in an annual Health Fair in partnership with local businesses, weight loss competitions, and mental health consultations. RUSD has a gym at the District Office that is open for staff use from 6 a.m. until 7 p.m.
- All three comprehensive high schools and the continuation high school have established wellness centers on their campuses; four of the five middle schools are in the process of establishing wellness centers. These are stress-free areas for students who request and receive permission from their counselor to spend time in these spaces. The wellness centers are supported by RUSD counselors and Marriage and Family Therapist intern counselors from Cal State San Bernardino.
- RUSD partners with the Rialto Police Department to annually present the "Every 15 Minutes" program at each high school to emphasize the potential consequences of drunk driving. The

Rialto Fire Department is a partner for Community Emergency Response Team (CERT) training and HAM radio certification. The CERT partnership has provided hands-on CPR training to more than 1,500 juniors and seniors at the high schools.

- In 2018, RUSD expanded its services to include behavioral specialists, crisis counselors, and therapists. RUSD also partners with a variety of health organizations to support students who are experiencing mental health issues: County Crisis Response team, Rialto Crisis Walk-In Clinic, South Coast Services, Cal State San Bernardino Marriage and Family Therapist Counseling interns, and Loma Linda University. These partners provide services free or at minimal cost. A low-cost insurance policy is available for students who participate in after school athletics. The Rialto Police Department sponsors The Great Program (for elementary) and Pride Platoon and Sheriff's Academy (for secondary). These programs help students increase self-image and change their behavior to succeed in school.
- All RUSD schools have a full-time health clerk located at the site's health office and a shared school nurse on-call. Middle and high school students also have access to counselors who assist with academic needs and personal issues. Counselors and teachers collaborate to organize Student Study Team meetings for students who fall behind academically.
- In RUSD, the PBIS team, counseling staff, psychological services, and security team all work together to support students' mental and emotional health. All RUSD PBIS counselors have attended the anti-bullying training program provided by San Bernardino County Superintendent of Schools; they also are responsible for addressing issues with McKinney Vento and foster youth in danger of not graduating.

### Pillar III: Provide Effective Environmental and Sustainability Education

#### Element IIIA: Interdisciplinary Learning

- RUSD STEM CARES has purposefully chosen practices that support the main goal of the District strategic plan—to teach students to be responsible citizens of a global society. Practices include:
  - articulating experiences that develop environmental literacy for all students K–12 that include outdoor learning and integration of California's Environmental Principles and Concepts, using locally-relevant environmental issues to inspire students to think globally and act locally to improve their community and their world;
  - integrating sound environmental principles and practices both in and out of the classroom; and
  - promoting green school ideals to conserve natural resources, reduce the impact of RUSD operations on the environment, and protect the health of students, staff, and community.
- RUSD's science education is the catalyst for environmental education, using local and community projects to tap into students' curiosity, thirst for knowledge, and work on PBLs about local/environmental issues. To fill the gap between the adoption of the California NGSS (2012) and the aligned instructional materials (November 2018), RUSD middle and high school teachers worked hard and developed their own open source free textbooks from vetted online resources. Provisions were made at each school for students who did not have access through a device at home.
- At the middle schools, an integrated science (Earth and Space Science, Biology, Chemistry, Physics, and Engineering) model was adopted. At the high schools, wanting all students to be scientifically literate and informed citizens about their environment, teachers voted to

adopt an integrated science curriculum (along with the more traditional discipline-based one) that could be organized around themes such as the environment, water, and medical issues. The topics were chosen to address student interest. Teachers, and then the District, approved changing the District requirement for graduation from two years of science to three years in order to meet the “All Standards for All Students” principle of NGSS. First-year and second-year courses were submitted to the University of California as college preparatory courses and approved. This year, the high schools are teaching Solving Water Problems, Water Technology, Environmental Science, Global Health, and Exploring Marine Environments.

- RUSD has worked with teachers to create unique NGSS-aligned Science curricula for K–12. Common labs are teaching units that integrate the scientific ideas, crosscutting concepts, and science and engineering practices with mathematics, ELA, and ELD standards. Many involve the school gardens and local ecological and environmental problems. District-wide paper and pencil examinations assessments have been replaced by the Common Labs performance tasks that are aligned to both NGSS and California’s Environmental Principles and Concepts (EP&Cs).
- RUSD’s science curricula align with California’s NGSS focus on relevant local phenomena, the EP&Cs, and the state’s Education and the Environment Initiative (EEI). EEI lessons are available at no cost; these lessons are incorporated strategically into science curricula from kindergarten through high school. Incorporation of the EP&Cs in teacher-created integrated PBL lessons ensures that environmental and sustainability concepts are integrated with the teaching of mathematics and ELA/ELD standards, not just science. This has focused teachers’ and students’ attention on a variety of environmental issues, but in particular local ones.
- All elementary school and secondary science teachers receive between three and five environmentally-focused professional learning sessions each year to more effectively implement CA NGSS and the EP&Cs. Middle school teachers meet monthly to collaborate on science and environmental initiatives; high school teachers are involved in the regional Community of Practice, where they share their work on NGSS and get ongoing professional development from CA science experts.
- Integrated science courses at both middle and high schools focus on local environmental issues when possible. Common Labs at the elementary and middle school level and Common Investigations at the high school level ensure that every student investigates environmental issues. The integrated sets of high school science courses focus on environmental issues: environmental science, water, global health; they help support existing high school CTE pathways. A new CTE Green Construction Pathway is under development; this course examines how solar panels work, California legal requirements, and the environmental advantages of these new technologies.
- All K–12 science assessments are hands-on laboratory investigations that immerse students in environmental and sustainability issues; this ensures all students are involved academically with these issues. All elementary and middle schools have gardens/groves that have become outdoor learning spaces for science, and most are supplying fruits and vegetables for the school kitchens. Students take great pride in developing and maintaining their gardens. Many NGSS-aligned PBLs have been developed by teachers designed around the gardens as described in Pillar II.
- RUSD’s annual LEGO Robotics Tournament has an environmental focus; this year’s topic for the fifth tournament was “Into Orbit.” Participating students had the challenge of programming a robot to successfully maneuver around a course, and learning how to deal

with problems in space, like growing crops. This year's tournament included teams from all five RUSD middle schools and two elementary schools.

- RUSD employs the following co-curricular programs to help ensure effective environmental and sustainability education:
  - Elementary Einstein Fellows Program: One teacher from each elementary school works in grade-level teams to develop science lessons aligned with NGSS, EP&Cs and CCSS ELA, and Math Standards.
  - STEM School Science Specialists: One teacher from each grade from five different schools works in grade-level teams to develop hand-on science lessons aligned with NGSS, EP&Cs and CCSS ELA and Math Standards.
  - Elementary RISE Conference: Annually, every 5<sup>th</sup> grade student in RUSD participates in a variety of STEM experiences and learns about the secondary courses and extracurricular programs. Students attend a student panel about middle school STEM electives, make a healthy snack at the Culinary Academy, learn more about the medical careers, have hands-on experiences with aquaponics and geology, play with robots, and are introduced to green technology.
  - Middle School Career Cruisin': As the RISE conference was so popular with 5<sup>th</sup> graders, this year RUSD implemented a Career Cruising event for all 8<sup>th</sup> graders. Students attend a student panel about high school courses, STEM electives, credits, and 4-year plans. They learn about the CTE pathway offerings and experience a lab from the new high school science courses.
  - Garden Champion/Environmental Clubs: At the elementary level, students learn how to support the environment and how the environment supports them. Most of their projects involve gardens, but they also focus on human impacts on the environment. At the middle school level, students explore alternative energy, conduct food waste audits, and lead recycling efforts. At the high school level, students examine environmental issues related to production and consumption of goods and ways to reduce the effects of human impacts on the environment. Students have also designed California native gardens, solar boats, and desalination units. Parent Garden Champions is a new program in which parents receive training from the District Science Lead and Grounds and Maintenance Supervisor to support the maintenance of their local school gardens. Every school was provided the basic materials and tools to maintain their garden.
  - Guest Speakers: Profits from the CEMEX Run Around the Rocks donated to RUSD STEM were used to purchase the samples given to elementary school students by a local geologist who provided lessons about the rocks and minerals. Additionally, Veolia provides technicians to talk about global issues like the Pacific Garbage Patch and local storm drain pollution prevention, and most recently West Valley Water has agreed to talk to students about local vulnerable species like the Santa Ana Sucker.
  - Field Trips: Partners sponsor field trips to Earth Science educational sites in Southern California (e.g., water treatment facilities). The City of Rialto also sponsors "walking field trips" for RUSD elementary school students to learn about safe routes, and the value of exercise and diet. Six elementary schools participate in the "Into the Wilderness" program through Orange County in addition to two schools in the "Travelling Scientist" program. All 2<sup>nd</sup> grade students in the District visit their feeder middle school in April for an "Earth Day Play" starring middle school students; followed by a short talk by a Veolia engineer about the importance of water conservation.

## Element IIIB: STEM Content, Knowledge, and Skills

- RUSD’s dedicated teachers want students to learn “hands-on science,” and classified staff are eager to bring their real-life experiences into the classroom. The head of the Grounds Department applied for and received funds for the garden project that replaced turf at all elementary schools with citrus groves and gardens; this project has now expanded to middle schools, one high school, and the continuation high school. The Science Lead and the Grounds Supervisor worked with school principals to ensure that teachers use the gardens for environmental and science instruction. The RiSMART teachers developed environmentally-focused PBLs using the gardens as laboratories. Some of their ideas were used to develop Common Labs. The 5<sup>th</sup> grade hydroponics Common Lab allows students to work in groups and design a hydroponic garden to provide fresh food for astronauts on a long space mission. To accomplish this task, students learn about hydroponics, bottom watering, and the importance of light for plant growth; in the process, they use their emerging engineering skills to design their garden, including the containers and the substrate used. Students plant radishes and nurture them to maturity. Each day, students acquire data then mathematically analyze the data to decide which garden design grows the most and largest radishes. Finally, students write to their US Senator supporting how best to grow radishes hydroponically while citing what plants need to grow. This project uses all of the NGSS Science and Engineering Practices with the science of hydroponics, expands student knowledge, and has students use their writing skills to make a claim supported by evidence from their experiment.
- One middle school Common Lab focuses on a City of Rialto construction project to extend a road through an area containing two endangered species and one protected species. In this investigation, students learn through song, reading, and videos what endangered and threatened species are and why it is important to help them survive. They investigate how alluvial fans are formed (where the species live) and why they thrive there. They learn about the needs of the species (San Bernardino kangaroo rat, Santa Ana river star, and nesting golden eagles) and produce educational brochures to help protect these species during the construction project.
- Another middle school Common Lab has students taking temperature readings at different locations on their campus, connecting location and time to variations in the temperature. This learning is extended to the difference between local averages at different times of the day, global temperatures, and how weather and climate are different. Students use mathematics to make sense of the world around them. Middle schools participate annually in the STEP (Science Technology Education Partnership) conference, initially started by Congressman Calvert, to learn more about STEM careers. Sixth grade students participate in Southern California Edison’s Living Wise curriculum to examine energy and water use and ways to reduce the amounts used.
- In high school, a new Common Investigation has 9<sup>th</sup> grade science students—regardless of which science course they are taking—learn about how human activities change the world around them and affect populations throughout the biosphere. They model population data for Rialto over time, connect the observed changes to technological advances (e.g., construction of freeways), and determine how the biosphere, geosphere, atmosphere, and hydrosphere are connected and affected by human activities. They then examine a proposed reconstruction of a flood detention basin in Rialto. Students, acting as civil and environmental engineers, present their findings about the interactions between the anthrosphere and the other spheres at the regional Bioneers conference. This project requires students to use multiple STEM skills as well as communication and writing skills. This project also exposes students to careers that address environmental issues.



- The District has developed three sets of three year-long integrated science courses and has developed each course to ensure that all NGSS standards are addressed in three years. All three integrated science course sets are linked to career pathways. All high school integrated science courses in RUSD have received University of California (d) designation as college preparatory laboratory science courses. The career pathways for engineering and the Health Pathway courses have received UC (g) designation as college preparatory electives.
  - The Integrated Water Science courses are linked to a career pathway in water distribution or treatment and serve as a context for learning about green technologies, environmental issues, and sustainability; they are approved as both a CTE Pathway and as stand-alone science courses. These courses prepare students for the T1 (California Treatment Level 1) and D1 (California Distribution Level 1) Water Board certification examinations. In the first course, students are exposed to several employment roles in water-related careers. Students assume these different roles in trying to solve water problems. All course assignments will prepare students to complete the capstone project: a portfolio of all assignments and a plan to improve water use efficiency. RUSD is working with the San Bernardino Workforce Development Department and the California Environmental Education Foundation to provide students with internship opportunities while still in high school. Students also can take concurrent courses in water technology through San Bernardino Valley College.
  - The Citizen Science course sequence consists of Environmental Science and Exploring Marine Environments, is linked to the Engineering Pathway, and will be linked to the Green Technology Pathway. In the Environmental Science course, students work as qualified environmental scientists and engineers in a world where a burgeoning population results in increased human impacts on the environment. Students need to assess changing conditions and develop solutions for the complex challenges of climate change, biodiversity loss, energy consumption, resource utilization, and waste management. The goals of the course are to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships in the natural world; to identify and analyze environmental problems and challenges (both natural and man-made); to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them. In Exploring Marine Environments, students take what they learned from explorations in Environmental Science and apply this to a new environment—water. They act as research divers to analyze aquatic environments, as environmental engineers to design and conduct experiments to examine changes to aquatic environments, as marine zoologists to learn about how marine organisms grow, live, compete, and evolve, and as NOAA researchers to analyze and mitigate the impact of ocean acidification. The third course currently under development is Astronomical Investigations.
  - The Global Health Science course sequence is linked to RUSD’s Health Pathway, offered at each high school. Global Health 1 is designed to provide students with the knowledge and analytical skills necessary to explore scientific phenomena related to global health issues. Acting as World Health Organization workers and various members of the medical profession, students develop and use models and simulations to build a conceptual framework to explain that nothing prevents matter and energy from flowing between interconnected systems. They analyze the public health impacts of earthquakes and plan and carry out investigations to construct explanations about why earthquakes are a threat in California. They obtain, evaluate, and communicate information about instruments to diagnose head injuries, examine the adaptations of some animals that receive large forces to their heads yet do not get concussions (e.g. woodpeckers), and

design solutions to prevent head injuries (e.g. design a better helmet). Students interpret data, use computational thinking, communicate information about how people depend on and influence natural systems through nutritional choices, and explore the challenges facing communities that eat locally when the environment is highly polluted.

### Element IIIC: Civic Knowledge and Skills

- The City's Annual Earth To Table – Go Human Event is sponsored by a partnership between the City of Rialto's civic leaders, RUSD, Healthy Rialto, Rialto PD, Rialto Fire, CEMEX, Niagara Water, Alta Planning, Burrtec, West Valley Water, Veolia Water, and the Community Action Partnership. At this event, students get to explore how their city operates. They learn how local industries use natural resources in the community to provide goods and services and how local government supports responsible use and environmental protections. Students take a "walking field trip" to the local farmer's market, city hall, and the local train depot. They learn about growing produce locally, and how fertilizer use and growing location are important environmental factors to consider. They learn how far fruits and vegetables were transported, how much energy is utilized to keep produce fresh, and how supporting community-based agriculture reduces those energy costs. Information about pedestrian safety and utilizing more active forms of transportation like: walking, biking, skating, and scooting is provided. These activities are an effective way to increase personal fitness, and decrease one's carbon footprint. Finally, students participate in a community service project; they helped to fill boxes with non-perishable food for families in need.
- Two years ago, 5<sup>th</sup>, 8<sup>th</sup>, and 10<sup>th</sup> grade students were filmed on Joel Green's TV show "Curiosity Quest" while working on the PBL, "How to optimize the space in a community garden to provide the highest yield." Students designed their garden with an elaborate irrigation system that provided a stable supply of water while minimizing the use of water.
- The meaningful outdoor learning experiences for RUSD students occur in a variety of ways. In elementary school, it is through the Common Labs and using the garden as a laboratory where students investigate how plants grow, what plants need to grow, and how their presence establishes an ecosystem. PBL extended learning experiences provide students with time outdoors to learn about the environment, water sustainability, soil nutrients, and "living off the Earth." The following labs were developed:
  - Sun Energy (Hot, Hot, Hot): Kindergarteners observe how the heat and energy from the sun melts an ice cube. Students then design, test, and redesign a structure to reduce the heat and energy of the sun on an ice cube.
  - Shadows (I'm Your Puppet): First grade students observe shadows around campus to learn how to produce a shadow. They look for big, small, moving, and unusual shadows walking around the campus and then watch a video of a shadow puppet portrayal of "Where the Wild Things Are", trying to determine how shadow puppets are made. Experiments with light and different materials allow them to discover how to make an opaque shadow with a transparent "window," just like one of the characters in the video.
  - Seed Dispersal (I've Got You Babe): Second grade students learn about the different modes of seed dispersal and the characteristics of seeds dispersed by water, wind, animals, and insects. Before designing their own seed that is dispersed by animal fur, students go on a "seed safari" to discover seeds around campus and hopefully the "parent plant" from which they came. After designing their seeds, students determine how successful their design is by counting the number of seeds that stick to their socks walking through the seeds. Students collect and analyze their data, and draw

conclusions as to the characteristics seeds need to successfully be dispersed by animal fur.

- Roly Poly Habitats (Holy Moly Roly Poly): Third grade students design an experiment to determine the preferred habitat conditions of roly polys (isopods). After watching a video about isopods, students seek roly polys around the campus while observing the conditions of the environment in which they were found. Students then construct their experimental apparatus, devise fair tests to see just how dark and damp the isopods prefer the conditions and what foods are preferred. Mathematical skills are used to analyze the data collected; the students then use their communication skills to write a claim supported by experimental evidence and reasoning about which conditions the roly polys prefer.
- Communicate with Light (Secret Agent Man): Fourth grade students learn that light is needed to see, and use that knowledge to create a code to communicate a message across the playground. Students test multiple codes, using mathematical skills to determine the most efficient way to communicate with light.
- Hydroponics (Interplanet Janet): Fifth grade students work in teams, as NASA plant researchers, to conduct an experiment that supports NASA's long-term manned space missions. The teams are responsible for determining whether radishes can be grown hydroponically as food for astronauts, and if so, how best to grow them. They begin by researching and designing experiments to determine how best to grow radishes without using soil, collect data about growing radishes under different conditions, and compare the results from different groups. Students make daily observations of their radishes, analyze this data, and then communicate their findings.
- Nine elementary schools participated in the Orange County Outdoor Education Program. This is an overnight field trip (funded by parents/clubs) for students to examine marine environments, fossils, stars and planets through telescopes, and various edible plants. Students learn to value nature and the environment through this experience. They take field notes and keep a journal of what they have learned. The Travelling Scientists Program also provided their program to two of our elementary schools.
- Microclimates: Sixth grade students take temperature measurements on their campus at specified locations at specific times. These measurements are analyzed to determine the conditions where the temperature is hottest or coolest. This leads into an analysis of temperatures in larger regions and globally.
- Ecosystem Census: Seventh grade students examine a small portion of their campus taking a detailed census of the flora and fauna within the boundaries of their plot. Comparing data across the class, students discover that the organisms found in damper regions of the campus are different from those found in drier regions. In a different assignment, students examine the flora around the campus in an attempt to discover and understand which plants are "natives" to the ecosystem using online research.
- All high schools provide the opportunity for science classes to participate in field trips related to Earth and Space Science standards in the curriculum. These trips include visits to Diamond Lake and the Western Science Museum, Santa Ana River, and Veolia's Water Treatment Plants.
- Elementary, Middle, and High Schools participated in the Art for Water Event in May where schoolyards and natural environments inspired 2-dimensional works of art created during VAPA time or in art classes. Our partner Veolia North America provided awards to the winners of this event.

- Tobin Brinker, a history-social studies teacher, partnered with local non-profit the Incredible Edible Community Garden to create a 50-tree grove on the Frisbie Middle School campus to mitigate one of the school's heat islands in celebration of the school's 50<sup>th</sup> anniversary. For Kolb Middle School's 50<sup>th</sup> anniversary, a crepe myrtle tree and two non-fruiting pear trees were planted. The Kolb Builder's Club annually plants landscaping plants around the campus trees. During Living Schoolyard Month (May), all 5<sup>th</sup> graders utilize their schoolyards to complete the President's Youth Fitness Challenge.
- RUSD teachers have created interdisciplinary PBL lessons designed to use local natural phenomena to teach science, literature, math, and civic engagement. About 30 of these units align to the EP&Cs. One example of a lesson from this collection is "Three Sisters' Garden." Students read the Native American fable of the three sisters: beans, corn, and squash. They then plan and build a three sisters garden. After planting, they use mathematics to look for patterns in weather and climate, analyze the water needs of the plants, and decide upon necessary irrigation. After harvesting, students use the produce to create corn husk dolls, harvest seeds, and cook a healthy stew. Comparing and contrasting Native American versus modern agricultural techniques incorporates social studies, fables, and mathematics to increase student engagement and achievement. All of these PBL lessons are archived online and shared throughout the district.
- Seventh grade students investigate issues that interweave environmental and civic issues. The Endangered Species Common Lab has students examine the environmental impacts of a local road construction project. They begin the investigation by making scientific observations about their outdoor environment and develop a hypothesis about which plants and animals are native. The culmination of the lesson has students create an informational brochure about how to reduce human impact on endangered and threatened species found locally. Their conclusions must be supported with collected evidence. Students learn to see themselves and their community as a part of the larger natural system. The Common Investigations in 9<sup>th</sup> grade also encourage students to engage in environmental civics. Students examine a city plan to redesign a flood detention basin. Students use mathematics to analyze how population and technology changes have affected the city's population, water needs, and flood risk. The investigations are designed to interest and engage students in community issues so they might consider careers where they can make their community a better place to live. Science teachers continue to work with state environmental professionals, water industry experts, and San Bernardino Valley Community College faculty who provide ideas and professional development to teachers so their teaching is relevant and interesting to their students.
- California's Environmental Principles and Concepts have served as a foundation on which to build authentic learning experiences and have allowed RUSD to strategically develop partnerships with local industries and the community. Rialto's Mayor, City Clerk, Fire Chief, and Community Services and Public Works departments support myriad district initiatives that mutually benefit schools and community. There are regular meetings between City representatives and the District Science Lead that allow for collaboration between District representatives and community leaders. RUSD is fortunate to have many environmental partnerships with organizations such as: Ten Strands, UC Riverside, San Bernardino County Superintendent of Schools, Inland Empire Resource Conservation District, the Incredible Edible Community Gardens, Veolia North America, Burrtec Waste Industries, and Alta Planning. These STEM partnerships serve as a vehicle to reach all students.