U.S. DEPARTMENT OF EDUCATION

GreenRibbonSchools

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

☐ Public ☐ Charter ☐ Title I ☐ Magnet X Private ☐ Independent ☐ Rural

Name of Principal: Mrs. Sarah Cummins (Head of School)
(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in the official records)

Official School Name: Redwood Cooperative School
(As it should appear on an award)

Official School Name Mailing Address: 166 Crestwood Drive, Lexington KY 40503
(If address is P.O. Box, also include street address.)

County: Fayette State School Code Number *: n/a

Telephone: 859-273-4496 Fax: n/a

Web site/URL: redwoodcoop.org E-mail: scummins@redwoodcoop.org

**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.

Sarah Cummins

(Principal's Signature) Date: 1/24/20

Name of Superintendent:

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

District Name:

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

_____ Date:

(Superintendent's Signature)

Nominating Authority's Certifications

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

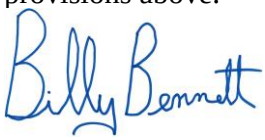
1. The school has some configuration that includes grades Pre-K-12.
2. The school is one of those overseen by the Nominating Authority which is highest achieving in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and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

Name of Nominating Agency: Kentucky Environmental Education Council

Name of Nominating Authority: Mr. Billy Bennett

(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.



_____Date:2/7/20

(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 and reference the OMB Control Number 1860-0509. Note: Please do not return the completed ED-Green Ribbon Schools application to this address.

Summary Narrative

From its inception in 2014, Redwood Cooperative School has valued environmental sustainability as a key program tenet. Environmental education, literacy and service learning are so much a part of our school that they are embedded in our vision statement - “Redwood strives to be a regional leader in child-centric, progressive education that creates global citizens and empowered problem solvers with a commitment to community and environment.” Each year, the school’s Leadership Team surveys the school classrooms, buildings and grounds to find identifiable environmental needs. They then plan and implement improvement projects, involving each student in the school in the process.

The space directly outside of each classroom has been turned into outdoor classrooms, so each class has easy access to outdoor learning and can utilize this connected outdoor space as an extension of their classrooms. Teachers use this space to offer an outdoor component to regular lessons (literacy, engineering, math, etc), have a space for hands-on activities, and an outdoor space for enjoying snacks and lunches and generally connecting with nature. Teachers also utilize other outdoor space on campus to enhance lessons. One example of this is when, during a multiplication unit, teachers offered a rotation outside where students played multiplication hopscotch to reinforce multiplication facts. All students, preschoolers through fifth graders, are also provided 90 minutes of unstructured outdoor time for social and emotional growth, free play and nature explorations. Middle School students have 75 minutes of unstructured outdoor time. We connect our students and families with community environmental education, including neighborhood trash cleanups, community tree plantings, stream studies and exploration of natural areas.

Redwood makes efforts to learn about and to conserve energy. For the last four years, Redwood has co-hosted the citywide used cooking oil recycling project, the Gobble Grease toss. We partner with Lexington Fayette Urban County Government (LFUCG), the University of Kentucky Center for Applied Energy Research (CAER) and Kelley Green Biofuel to collect and recycle used cooking oil the day after Thanksgiving each year. Over the last four years, students have collected more than 1,200 gallons of used cooking oil from the community and prevented it from being thrown in landfills. Instead, some is used for biofuel research and the remainder is converted into biofuels that are used in Kentucky farm equipment.

At Redwood, reducing solid waste is an ongoing effort. We require each student to bring a water bottle to school, cutting the number of plastic bottles that would have been used and discarded by 16,486. We maintain a school recycling program where each student in the school is educated about proper recycling and then recycles all possible waste. In addition to city collection items, our leadership team has expanded this to include collecting and recycling unique items, such as markers, squeezable food containers, and additional plastics that the city does not recycle. During the summer before the 2019/20 school year, Lexington announced that it would no longer be able to collect and recycle paper. Our fourth and fifth grade students took on the challenge of collecting and recycling or repurposing all of the paper that our school produces. After educating each student in the school about the importance of recycling paper,

they distributed special collection bins to each class. Each week, they collect paper and turn it into goods or use it for purposes around the school. They make paper bead necklaces, fire starters, plant pots, and they even built a chair for the preschoolers! The remaining paper is shredded and used as bedding in our school chicken coops, in our worm bin and in our regular compost bins. Additionally, our leadership team has begun a cell phone recycling project with a goal of collecting 300 used cell phones to take to the Cincinnati Zoo for their cell phone recycling program that helps protect gorilla habitats. Recently the Leadership Team was able to build a compost bin for the school. After educating each class and faculty and staff, we are now composting all compostable food waste produced by the school. The processed compost is then used to fertilize our school gardens.

After collecting and analyzing data on idling habits in morning and afternoon carpool lines (finding that two thirds of cars were idling for 15 minutes or more, even on days with mild weather), students purchased a bike rack and “idle-free zone” signs with raised funds. Students are encouraged to ride their bikes to school and people in carpool line are encouraged to be “idle-free” while waiting for their children. For their efforts in energy education and conservation, the Leadership Team was presented with an award of elementary school of the year in 2018. We make additional energy conservation efforts by installing LED lights, programmable thermostats and high efficiency toilets. Leadership Team members educate students and teachers about energy saving strategies and perform weekly energy surveys to determine the school’s success in conserving energy.

Sustainable agriculture is another area of focus for our school. We have built a raised bed garden, using free end cuts from a local lumber yard to reduce waste. Each class starts seeds in the classroom and tends to the seedlings until they are ready to be transplanted in the outdoor garden, and all classes tend to the outdoor garden and harvest produce. Some of the produce is enjoyed by our students as nutritious supplements to their snacks and lunches and some produce will be donated to local food pantries. We also have a recirculating aquaponics system with Koi and edible plants that the students tend and utilize for food production, data collection and STEM education. Our science teacher is also helping students colonize mushrooms, which allows them to learn about another type of growing and harvest. Our preschool students tap maple trees in their playground area and process the sap to make maple syrup. The students host a plant sale in the spring each year, selling some of the starter plants that they have grown in the classroom, to raise money for their garden other environmental projects and to help our families grow their own food. Last year, we partnered with a local farm to promote community supported agriculture through weekly farm shares for participating families. We have also added edible berry shrubs throughout the property so these fresh foods can be readily accessible to students. Redwood participates in the University of Kentucky Extension egg incubation project. Our classrooms incubate, hatch, and care for the chickens. Students provide food and water and collect eggs from coops on campus. Some classes have used their eggs to make baked goods, others have donated the eggs they collect. Keeping chickens at school allows all of our students and families to connect with farm animals, develop compassion, learn about locally produced foods, and reduce the carbon footprint of food transportation.

Water conservation is another area of great focus for Redwood. On Earth Day, students were able to break ground on a rain garden. The Leadership Team surveyed school grounds during times of rain, measuring and calculating percentages of pervious and impervious surfaces, calculating runoff volume and determining the ideal size rain garden to handle the volume of watershed runoff at Redwood. They spent the next several weeks building it with the help of community experts. Seeds for the native rain garden plants were started in classrooms and planted in the rain garden. For their efforts, students were awarded an environmental commission award from the Lexington Fayette Urban County Government.

In addition to student environmental efforts, teachers are offered professional development and outreach opportunities that help them integrate environmental education curriculum into their classrooms. 65% of all Redwood teachers are certified in a formal EE curriculum. In July 2019, Redwood hosted its first annual learning conference in environmental education. We welcomed 80 teachers to learn about EE and hosted many professionals in environmental education as presenters.

As another piece to the environmental education program, the Redwood Leadership Team hosts an annual Earth Day Extravaganza, a fair that families and students are invited to attend. They rotate through STEM and environmental learning centers. At Redwood, environmental education and sustainability are a primary focus and we make daily efforts to increase both. We regularly observe, evaluate and update our practices to best address current environmental needs.

Narrative for Pillar 1

We make efforts to reduce environmental impacts and costs in several ways. Our idle free zone and the research done by the students before implementation, allows us to educate families about the risks of idling and the benefits of reducing emissions produced by idling vehicles. Students regularly collect data during morning and afternoon carpool lines to continually determine our success in reducing idling. We have provided a bike rack and encourage students and teachers to ride bikes to school.

Our recycling and compost program not only reduces landfill waste, it reduces the production of methane gas produced by decomposing food waste when it is not properly composted. Our students designed classroom collection bins (with helpful visuals and instructions) and taught each class how to collect food waste and add it to the main school compost bin. They regularly work in the school compost bin, turning it and providing visuals on the bin so everyone knows which one is in use. Each spring, they will use the compost on their school gardens, saving the cost of purchasing compost. Additionally, the reduction in pounds of waste picked up and processed by trash companies not only saves in cost but reduces emissions. Using school produced compost also reduces the need to use commercial fertilizers which contain harmful chemicals and contribute to water pollution. Additionally, in some classrooms, students rotate through jobs of recycler and composter. This person, from preschool students through sixth graders, has the job of ensuring proper recycling and composting in the classrooms.

Our local and sustainable agriculture program reduces transportation emissions, conserves water and increases awareness of the benefits of eating locally grown food. We support local farms financially through our CSA partnership with Elmwood Stock Farm. Utilizing farm fresh produce also helps our students learn to eat seasonally, which has additional positive environmental impacts. We recently started a weekly school lunch program in which we partner with local restaurants to provide nutritious and locally sourced foods when possible. Our pollinator gardens support pollinators, which helps with food sustainability and production, while supporting populations of pollinators that are at risk.

In addition to recycling and repurposing as much waste as possible, we encourage families to pack zero-waste lunches, and each student is required to bring a reusable water bottle that they can refill at our water bottle refill stations. We reduce paper waste by sending communications electronically, and use as many repurposed materials as possible for school projects.

Members of the Leadership Team educate students and teachers about energy saving strategies and perform weekly energy surveys to determine the school's success in conserving energy. We have converted 50% of our fluorescent light bulbs to LED fixtures and bulbs, with generous donations from local businesses and have plans to convert the remaining lights soon. We have also been able to install programmable thermostats and even lock some thermostats to make sure we are conserving as much energy as possible during evenings, weekends and school breaks. Students will be reviewing monthly energy bills to determine the cost savings of these efforts.

Our rain garden improves water quality, filtering some of the runoff pollution from our grounds, and provides another space for education about water quality. As a member of the community, we are trying to improve water quality on a greater scale. Street water runoff travels through our campus and to a local stream and our rain garden allows us to improve our environmental efforts related to water quality.

All of the many plants we grow in our edible gardens, pollinator gardens, and rain gardens improve air quality as they add beneficial gasses and absorb detrimental gasses and toxins. They also provide habitat and food to local wildlife and enhance our learning green spaces. Additionally, each of our classrooms and office spaces have indoor plants that help to improve indoor air quality within our buildings.

Narrative for Pillar 2

Redwood promotes health and wellness of students and staff through a variety of school and class efforts.

Growing our own foods and partnering with a local farm increases nutrition education and nutrition information is shared with students, staff and families. Teachers regularly incorporate cooking healthy snacks into their lessons using fresh produce from the aquaponics system, the school gardens and eggs from our school chickens. During educational events, we teach families how to grow their own food and have planting stations where they can plant heirloom and open pollinated seeds that were donated by Baker Creek. We also have a food and nutrition policy that relates to the food children bring from home for their own snacks and lunches as well as the food that is served during class parties.

Redwood does not use any environmentally harmful chemicals, or those that are harmful to health, in or out of the buildings. Besides not using pesticides on our gardens and grounds, we do not use harmful cleaning products. All cleaning products are safe for the environment, do not contribute to a worsened air quality and do not negatively impact children's health. We also have plants throughout the building to absorb toxins and improve indoor air quality, contributing to the respiratory health of our students, families and staff. While we do suffer from the typical mosquito issues that plague many in Lexington, we refrain from using pesticides and instead the children make natural mosquito deterrents. They make garlic water and mint water and spray them on our grounds. This year we will be partnering with UK to participate in a beneficial nematode experiment.

We increase physical activity and wellness by providing 90 minutes of unstructured outdoor time to all of our students each day and attempt to incorporate structured outdoor time in the form of classwork as well. We plan a field day annually and participate in environmentally focused gross motor games. Taking risks and climbing trees is encouraged and we make improvements and additions to our outdoor spaces regularly, with the recent addition of sodded mounds and cut logs for loose parts play.

Fresh air is utilized when possible and the temperature is kept at a comfortable, yet energy saving, level during the school day. Filters are checked regularly and any identified moisture is mitigated. We are sending water samples from our drinking fountain to be tested by the water company to ensure optimal drinking water quality.

Our families and community are invited to be involved in health and nutrition activities, including our Earth Day Extravaganza, field day and bike day. Each May, we hold a "bike day" where students celebrate riding bikes as a way to keep healthy and reduce emissions. They are able to enjoy bike washing stations, decorate their bikes and have hours of fun riding their bikes around campus.

Families volunteer to tend gardens and care for the school chickens on weekends and school

breaks. They are able to collect and enjoy fresh eggs.

Each week our teachers are provided an opportunity to take yoga and mindfulness classes free of charge. Yoga and mindfulness are programs that help with the health and stress levels of our teachers and provides them with helpful tools to take back to the classroom and utilize with students.

Narrative for Pillar 3

All classes at Redwood incorporate environmental and sustainability education throughout the curriculum. Teachers utilize a model of Project Based Learning to gather students' input and interests to devise relevant curriculum through thematic units of study. Theme studies support environmental literacy and learning. Our first grade class participated in a long term study of bats and, after conducting research and building models of bats and bat boxes, students wrote persuasive writing pieces to the administration requesting that the school allow them to build and place two bat boxes on campus. Our Upper Elementary students held a bake sale to raise money for the first grade bat boxes and they will be built and placed in the spring. Our Middle School students used the knowledge they gathered during social studies to launch a social media campaign to help save the rainforests. All families were able to watch the videos they created and engage in the project. These are just a few examples of integrated environmental learning that incorporates collaboration across classes and deep learning within the class. Our science program utilizes both Next Generation Science Standards and North American Association for Environmental Education (NAAEE) Guidelines for Excellence: Best Practice in Environmental Education, as well as Project Learning Tree, Project WET, Project WILD, Project Underground and the corresponding early childhood modules.

Redwood encourages 21st-century learning, problem solving and critical thinking to address the world's problems. We seek partnerships in the community and provide opportunities for our students to make community-wide environmental impacts. The Gobble Grease Toss, Community Supported Agriculture and alternative transportation awareness are all good examples of this.

The Leadership Team has coordinated a school-wide recycling program, organizing recycle relay games and scavenger hunts as a way to help educate all of the students and teachers in a fun and hands-on way. They periodically do "dumpster dives", sorting through each class's recycling and trash bins, to make sure we are all utilizing them properly. When their findings indicate that the school could use another refresher, they revisit classes with educational lessons and games.

Our students take many field trips that relate to their current learning and incorporate environmental education. During the study of water quality and research of rain garden features, our students took a field trip to a restored stream to participate in macroinvertibrate identification as an indicator of water quality. Students often attend field trips to the Living Arts and Science Center and the UK Arboretum, as well as the Buckley Nature Preserve, Raven Run Park, Bernheim Forest, EKU Planetarium, Lower Howard's Creek Nature Preserve for a stream study, Toyota Manufacturing to view sustainability efforts, and Tree planting at McConnell Springs, to name a few. Students are given opportunities to see community examples of environmental literacy and sustainability efforts.

Our school chickens allow our entire school community to learn about the benefits of local foods and the ease of raising your own food. When we have participated in incubation projects, we

have had successful hatchings. After a few weeks, when the folks from UK usually come back to collect the hatched chicks and take them to a farm, the students petitioned the administration to allow them to keep and care for the chicks. We were able to secure a donated and gently used chicken coop and recruit community volunteers to help build a chicken run. The Leadership Team allows the chickens to free range after school and works to "train" them to remain in certain areas of the school grounds. They also research and help educate all of the students about chickens through signage that they post on the chicken coop for all to read. They facilitated a school vote to determine the names of the hens and then tagged them and placed signage that would allow students to observe and identify each chicken.

Leadership Team is available to all fourth, fifth and sixth grade students who are interested in studying sustainability and implementing school and community improvement projects. While the Leadership Team facilitates projects, all students participate in those projects, utilizing project based and place-based learning, using their local and state communities to learn about the environment. Literacy, math and social studies are built into a model of Project Based Learning for all students. The Leadership Team regularly engage in peer-to-peer education as well as educating teachers and staff about environmental issues and efforts.

Throughout environmental projects, efforts are made to involve all members of the school community. For example, during the rain garden project, Leadership Team members created models of their desired rain gardens, presented information to peers about rain gardens and then allowed students to vote on the design. They also made educational posters to hang in the school about other ways to conserve water at school and home. In correlation with the Gobble Grease Toss, students traveled to the Center for Applied Energy Research to learn about the biofuel conversion process.

Our grounds are used to provide ample green space to our students for unstructured and structured learning. Each classroom has its own outdoor classroom attached and we have sensory and edible gardens on campus. We are currently raising money to enhance our outdoor spaces with an additional designated garden for our preschool students, a mud kitchen and a new sensory garden.

And finally, we increase environmental education through the education of our teachers. They have many opportunities to participate in professional learning related to environmental education including educator workshops in EE and our learning conference.

Supporting and increasing environmental and sustainability education is how we will ensure continued sustainability efforts on the part of our students and our community.