

# CEDAR RAPIDS COMMUNITY SCHOOL DISTRICT SUSTAINABILITY PLAN

*Success in Education Now and for  
Future Generations of Students*



**Cedar Rapids  
Community School District**

*Every Learner: Future Ready*

# ACKNOWLEDGMENTS

A special thank you to the CRCSD Sustainability Committee and contributors for their support in creating the CRCSD Sustainability Plan.

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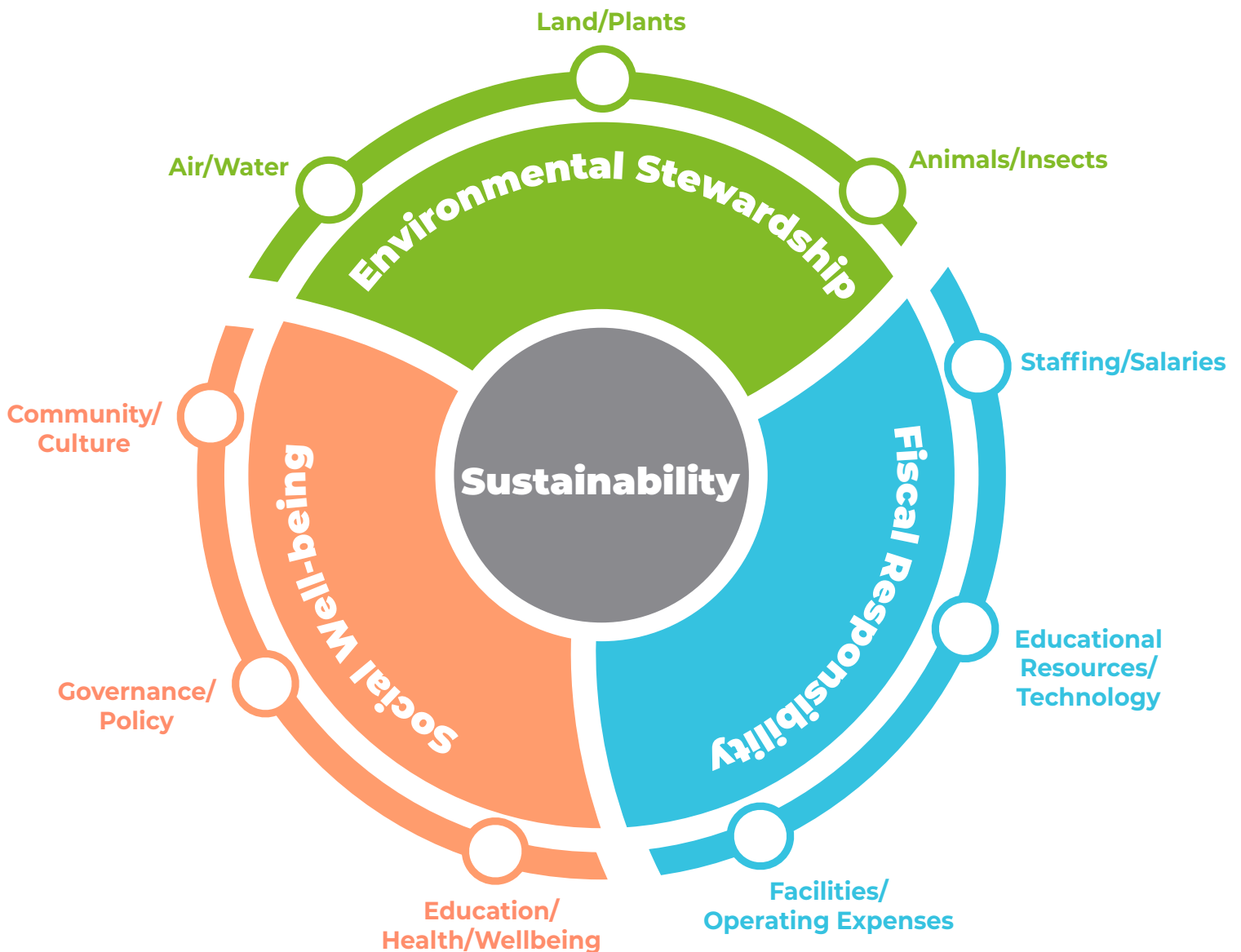


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## WHAT IS SUSTAINABILITY?

Sustainability is living and working in a way to meet the needs of today without compromising those of future generations. The three principles of sustainability are the foundation for Cedar Rapids Community School District's (CRCSD) commitment to environmental stewardship, fiscal responsibility, and social well-being.





## OUR COMMITMENT

*Cedar Rapids Community School District is committed to making student-driven, district-wide sustainability initiatives a priority. (Board Policy 801)*

Since 2013, CRCSD has been actively implementing sustainable practices through facility and grounds improvements, development planning, technology updates, and environmental education. Sustainable practices have transformed our culture to one that is focused on improving the environment, while also reducing waste, water, and energy in our operations.

Sustainable practices continue to evolve as new products are developed, and our educational model and business practices change. To fully communicate to staff, students, and our community stakeholders the conception of sustainable practices and how they come to fruition, we developed the CRCSD Sustainability Plan.

This Sustainability Plan guides our efforts to integrate conservation into our students' academic experiences, fosters a mindset that promotes responsibility, and imparts efficiency into every aspect of our organization.





## GUIDING CONCEPTS

**Every Learner: Future Ready.** *Students, their families, staff, and our extended community will be able to:*

- share a commitment of stewardship that sustains our planet's vital systems and resources.
- exercise their right to thrive in a safe, diverse, and respectful culture that promotes the well-being of self, others, and the environment.
- foster creativity and develop positive attitudes that promote personalized learning and connect student's passions for future success.
- hold themselves accountable in their relationship with nature, for both the local and global environment and our collective well-being.
- support academic aspirations, empower stakeholders, and work in a collaborative environment.

# MILESTONES

2013

Green Teams begin in CRCSD with recycling initiatives and building audits focused on energy and water conservation.

McKinley Middle School earns first Energy Star recognition as a building in the district.

2014

Mixed recycling program is started in all 32 schools.  
CRCSD collaborates with local energy businesses to update a new Energy Efficiency Plan

2015

Milk carton recycling begins.

CRCSD receives Governor's Environmental Award Recognition.

1.8M dollars in energy efficient lighting and HVAC projects implemented district-wide.

Jefferson and Washington High Schools include Energy Star equipment in cafeteria remodeling projects.

2016

CRCSD revises Idle Reduction Policy to decrease greenhouse gas emissions.  
CRCSD begins replacing diesel fueled buses with propane fueled buses.

2017

Green Team Coordinator implements environmental education projects for Green Teams and district-wide sustainability practices.

CRCSD receives Alliant Energy's Highest Energy Rating Award at the Iowa Energy Summit.

2018

CRCSD recognized as a key community partner for the City of Cedar Rapids receiving 4 stars in the STAR Community System for national sustainability practices

2019

CRCSD and three employees receive Eco Champ Awards from Cedar Rapids Mayor, Brad Hart, at EcoFest.

Taylor Elementary transitions to Cedar River Academy, a sustainability magnet school.

Grant Wood Green Team begins plans for enhanced rain garden project to prevent stormwater runoff.

2020

CRCSD is awarded Volkswagen Settlement Environmental Mitigation Trust funding for the purchase of two propane and two electric buses.

Students from Cedar River Academy, McKinley STEAM Academy, Roosevelt Creative Corridor Business Academy participate in the City of Cedar Rapids Community Climate Action Survey.

2021

CRCSD Sustainability Plan (1st Edition) is published







## WHAT ARE SUSTAINABLE SCHOOLS?

Sustainable schools operate with the future in mind by establishing a learning experience for students that will prepare them to lead the world toward a healthier, cleaner future.

### AWARENESS

- Students are knowledgeable on 21st century global concerns
- Fosters and inspires conservation awareness
- Students and staff understand the world is interconnected

### ATTITUDE

- A culture cultivated in encouraging individual and group accountability
- An environment that promotes learning through exploration and problem solving
- Promotes a healthy initiative in nutrition and well-being

### ACTION

- Focused on sustainable practices and education
- Resources are utilized and consumed efficiently
- Facility construction is built around environmental consideration
- Available green spaces for exposure to nature, wildlife, and hands-on learning



# **CRCSD SUSTAINABILITY FRAMEWORK**



# CRCSD SUSTAINABILITY FRAMEWORK

It is important for school districts to acknowledge the connection between educational development and sustainable learning environments. Schools engaged in creative thinking are a source of inspiration, and become a starting point as students develop a sense of awareness and responsibility for a sustainable world.

The purpose of this plan is to bring awareness and understanding to CRCSD community members, city leaders, and employees about the goal and process of becoming a more sustainable institution. The plan is designed to improve educational programs and physical space, while creating a culture that develops environmentally conscious citizens.

The CRCSD Sustainability Plan sets actionable goals that will be reviewed annually, with progress reported and additional strategies set. The plan does not include a specific implementation schedule because many strategies require multiple steps that may take an extensive amount of time, are ongoing, or short term. Each strategy is dependent upon resource availability, windows of opportunity, community support, and are based on cost effectiveness.





## **CRCSD SUSTAINABILITY FRAMEWORK**

The CRCSD Sustainability Plan focuses on four key sustainability priorities that set the framework for development of goals and strategies that guide our actions towards a sustainable future.

**1**

### **EDUCATION:**

Ensuring students and community alike learn, engage, and celebrate sustainable practices that allow prosperity now and for future generations.

**2**

### **CONSERVATION:**

Educate and implement sustainable practices that will protect the environment, reduce our carbon footprint, and build resilience to climate changes.

**3**

### **RESOURCE EFFICIENCY:**

Promote wise use of energy, water, and waste consumption to reduce greenhouse gas emissions and preserve resources.

**4**

### **LEADERSHIP:**

Sustainable actions and policies extend to the community by setting an example of conservation and sustainability efforts achievable for any school district, organization, and family.

# CRCSD SUSTAINABILITY FRAMEWORK - OVERVIEW

## 1 EDUCATION

*Ensuring students and community alike learn, engage, and celebrate sustainable practices that allow prosperity now and for future generations.*

### OPPORTUNITIES:

- Environmental literacy
- Green Teams
- Nutrition & health
- Extend learning outdoors

### GOALS:

- Students will develop knowledge of and respond to environmental issues
- Environmental and sustainability-focused curriculum across K-12
- Active Green Teams at all CRCSD schools
- School community involvement with Green Teams
- Increase awareness of the importance of Iowa's agricultural practices
- Reduce food waste throughout schools
- Develop guidance plan for construction and design of outdoor classrooms

### STRATEGIES:

- Design content and projects around environmental action
- Incorporate inquiry and project-based learning
- Green Teams enact school-wide projects
- Explore partnerships with local organizations and agricultural businesses
- Establish professional development for teachers to utilize outdoor classrooms

## 2 CONSERVATION

*Educate and implement sustainable practices that will protect the environment, reduce our carbon footprint, and build resilience to climate changes.*

### OPPORTUNITIES:

- Education of native species and preservation of natural resources
- Promote clean water to reduce stormwater runoff
- Promote sustainable products

### GOALS:

- Promote one-third native planting on CRCSD property
- Increase school green spaces
- Involve students in restoring and maintaining local watersheds
- Source products with lesser and reduced negative health and environmental impacts
- Support schools in developing compost programs

### STRATEGIES:

- Plan resilience strategies to climate changes and events
- Construct interactive green spaces
- Explore solutions to stormwater runoff
- Continue less toxic alternatives for integrated pest management
- Assess product purchases
- Develop a composting model for schools



## 3 RESOURCE EFFICIENCY

*Promote wise use of energy, water, and waste consumption to reduce greenhouse gas emissions and preserve resources.*

### **OPPORTUNITIES:**

- Efficient and sustainable building design
- Energy and water efficiency
- Promote cleaner air by reducing fuel carbon emissions
- Reduce, reuse, recycle, and refuse

### **GOALS:**

- Meet or exceed building energy efficiency
- Promote reporting and conservation technologies
- Reduce carbon emissions
- Develop clean fuel strategies
- Expand existing recycling programs
- Provide salvage and recycling services for building operations

### **STRATEGIES:**

- Continue enrollment in Energy Star programs
- Explore solar projects
- Building audits
- Explore sustainable outdoor water practices
- Expand vehicle idle reduction procedures
- Increase cafeteria recycling



## 4 LEADERSHIP

*Sustainable actions and policies extend to the community by setting an example of conservation and sustainability efforts achievable for any school district, organization, and family.*

### **OPPORTUNITIES:**

- Be conservation leaders
- Build future ready leaders
- Community extension and partnerships
- Sustainable culture transformation

### **GOALS:**

- Train faculty and students on sustainability initiatives
- Empower students to make positive change
- Provide leadership opportunities for youth
- Collaborate and promote stewardship with partners
- Model a sustainable mindset

### **STRATEGIES:**

- Communicate clear vision of sustainable initiatives
- School-wide initiatives
- Students engage with local businesses, leaders, and community events
- Continue alternative methods for waste



# 1 EDUCATION

*Ensuring students and community alike learn, engage, and celebrate sustainable practices that allow prosperity now and for future generations.*



## **Opportunity: A Developed Space to Enrich Traditional Classroom Skills and Extend the Learning Environment to the Outdoors.**

**Goal:** Develop a guidance plan for the construction and design of outdoor classrooms and interactive green spaces.

### **Strategies:**

- Evaluate the potential for outdoor classrooms at various school levels.
- Planning and development of outdoor classrooms, gardens, and landscaping will be done through collaboration and guidance with the buildings and grounds manager, Green Team coordinator, and school principal.
- Create spaces that enhance the purposes of lecture, curriculum content, discussion, individual and group work, and student-directed learning through nature discovery and educational signage.
- Develop criteria for outdoor classrooms, e.g., appropriate and flexible seating capacity, work surfaces, adequate shade, storage space, and a visual aid area for teachers in proper view for all students.
- Administer surveys for student, staff, and PTA involvement in the design of outdoor classrooms spaces.
- Establish a professional development plan for teachers to explore options for utilizing outdoor spaces.



## **Opportunity: Green Teams**

**Goal:** Active Green Teams at all CRCSD schools.

### **Strategies:**

- Explore opportunities for supporting staff involvement with recognition and resources.
- Current Green Team leaders are encouraged to mentor and support new teams and leaders for successful implementation.
- Schools can consider various clubs and classes focused on science and the environment for Green Team recruitment.

**Goal:** School-wide collaboration and support with Green Team initiatives.

### **Strategies:**

- Green Teams enact inclusive school-wide environmental and/or sustainability projects to educate staff and students on carbon footprint impacts.
- Green Team students perform Green Audits of their school (energy and water usage, recycling collection, and waste reduction) and share results with staff and students.
- Continue recognizing schools through the Green Team Award program for their efforts in increasing recycling and reducing energy and water consumption through team initiatives.

## **Opportunity: Nutrition and Health**

**Goal:** Increase awareness of the importance of Iowa's agricultural practices for students to learn how to grow and harvest native plant species of fruits, herbs, and vegetables and implement healthy food choices.

### **Strategies:**

- In collaboration with partner organizations, students establish and maintain campus gardens.
- Invite local agricultural businesses and farmers to work with students, teachers, and Green Teams for field trip opportunities, guidance with school gardens, and job shadow internships.
- Explore possible partnership opportunities with Farm to School through the food and nutrition department in school cafeterias.

**Goal:** Reduce food waste throughout schools.

### **Strategies:**

- Encourage students and staff to reduce waste from meals through adult coaching and signage around the amount of food students need to take in the lunch line.
- Promote menu selection by prompting students to taste test and take foods they will fully consume, especially with new or featured menu items.
- Consider scheduling recess before lunch and extend time for students to consume the entire meal.
- Consider implementing breakfast and lunch in classroom meal service that allows students to consume their meal with fewer distractions in smaller settings and the opportunity for nutrition education and adult coaching.



## Opportunity: Environmental Literacy

**Goal:** Students will develop knowledge of and respond to environmental issues.

### Strategies:

- Design content and projects around action and participation in identifying, analyzing, and predicting future impacts to environmental issues locally and globally.
- Use technology to research, document, and connect with content experts and others engaging in the same work.
- Guide students on how manufacturing, construction, transportation, and food production decisions impact the sustainability of natural resources.
- Incorporate STEAM principles into cross-curricular thinking for potential solutions to environmental challenges and climate change.

**Goal:** Environmental and sustainability-focused curriculum across K-12 including cross-curricular opportunities in math, history, economics, and political science.

### Strategies:

- Review state standards with administration and state leaders to identify elements of environmental and sustainability education.
- Inquiry and project-based learning to keep students engaged through discovery, discussion, and demonstration.
- Explore curriculum options to integrate environmental sciences into content instruction.





# 2 CONSERVATION

*Educate and implement sustainable practices that will protect the environment, reduce our carbon footprint, and build resilience to climate changes.*



## **Opportunity: Promote Organic and/or Certified Sustainable Products**

**Goal:** Support schools in developing a comprehensive composting program to divert waste from the landfill.

### **Strategies:**

- CRCSD will begin to explore cost-effective ways to support compost programs through partnerships.
- Schools with successful programs mentor new schools as they start their compost program.
- Provide instruction to staff and students around the importance of composting.
- Partner with local organizations and businesses to provide compost education and school wide compost needs.
- Develop a composting model for schools to be successful.



## **Opportunity: Promote Clean Water and Employ Management Strategies that Reduce Stormwater Runoff**

**Goal:** Involve students in restoring and maintaining local watersheds.

### **Strategies:**

- Explore potential solutions to stormwater runoff, including rain gardens, bioswales, permeable pavers, native landscapes, soil quality restoration, rain collection barrels, and native pollinator gardens on school grounds in areas of poor drainage.
- Collaborate with partner organizations to work with students on the importance of maintaining campus and local watersheds by monitoring winter salt levels.
- Participate in the City of Cedar Rapids Stormwater Credit Program by providing a list of each year's stormwater related practices and education on specific environmental issues annually.
- Identify opportunities to partner with the City of Cedar Rapids on new stormwater construction, such as rain gardens and bioswales, and apply for the City of Cedar Rapids Stormwater Best Management Practices - Cost Share Program.
- Continue to inspect all CRCSD vehicles and equipment frequently for leaks to prevent pollutants from entering stormwater drains.
- Continue to implement best management practices and professional learning for custodial, maintenance, transportation, and school staff to promote the responsible disposal of hazardous chemicals and other pollutants from entering stormwater drains.

## **Opportunity: Promote Organic and/or Certified Sustainable Products**

**Goal:** Source products that have a lesser or reduced negative effect on human health and the environment over their lifecycle when compared with like kind products or services.

### **Strategies:**

- Continue less toxic alternatives for integrated pesticide management efforts (e.g., sticky pads, traps, and bait stations) indoors and outdoors to ensure clean facilities and protect the environment.
- Use of specifically targeted chemical integrated pesticide management indoors is a last resort option for extreme situations.
- Continue integrated pesticide management with one annual treatment for broadleaf on school grounds on public view sides of buildings and athletic fields when staff and students are not present.
- Continue use of organic and/or certified sustainable cleaning products for disinfectants, neutral floor cleaners, general purpose cleaners for hard surfaces, and sanitizing carpet shampoo.
- Assess product purchases and explore environmentally friendly alternatives to reduce waste consumption e.g., Styrofoam, plastic straws, plastic ware, etc. in school cafeterias.

## **Opportunity: Education of Native Species and the Importance of Preservation of Natural Resources.**

**Goal:** Promote responsible planting of native trees and plants on district grounds for a future habitat of one-third Iowa native plant species on all CRCSD property.

### **Strategies:**

- Identify unused or problematic areas (saturated or dry) on school grounds that can be converted to native prairie.
- The buildings and grounds manager, Green Team coordinator, and grounds foreman will work with local experts to develop a native tree planting program.
- Leverage strategic partnerships to explore and prioritize planting native plants, trees, flowers, and shrubs to enhance the landscape and compliment wildlife habitat.
- Maintain a variety of native and some non-native species to prevent excessive infestation.
- Plan resilience strategies to climate changes and events (e.g., heavy downpours, river flooding, and extreme heat) with bioswales, rain gardens, and tree planting.

**Goal:** Increase school green spaces (e.g., land that is partly or completely covered with grass, trees, shrubs, or other vegetation) for the purpose of interaction with nature, decreasing noise and air pollution, and to encourage exercise.

### **Strategy:**

- Construct interactive spaces for students and staff to engage with nature, such as outdoor classroom areas and trails, to learn about native species of plants, animals, and insects.



# 3 RESOURCE EFFICIENCY

Promote wise use of energy, water, and waste consumption to reduce greenhouse gas emissions and preserve resources.



## Opportunity: Efficient and Sustainable Building Design

**Goal:** Meet or exceed the building energy efficiency standard (ASHRAE 90.1-2019) for efficient school design when planning new buildings and major renovations.

### Strategies:

- Continue to enroll in Energy Star Programs and submit for design recognition for new additions and facility construction projects.
- Model anticipated energy use in project planning and design phase to track and compare actual energy in KBTU upon completion annually.
- Explore new opportunities for both small- and large-scale solar facility projects.

## Opportunity: Energy and Water Efficiency

**Goal:** Promote energy and water efficiency awareness, reporting, and conservation technologies.

### Strategies:

- All new lighting updates and equipment replacements must meet Energy Star standards, when feasible.
- Continue to benchmark facility energy usage and compare annual performance with previous years' data.
- Continue to apply for energy and water efficiency rebates.
- Update shower fixtures to low flow and/or automated sensing devices.
- Continue replacing sinks and toilets equipped with automated sensors.
- The Green Team coordinator will continue informing building principals of utility and waste consumption costs per building through audits and assist with strategies for reduction.
- Explore cost and strategies for sustainable watering practices with school gardens to maintain appropriate moisture levels.
- Continue reporting preventative maintenance repairs and support staff on communication processes, i.e.: automated sensing devices, occupancy sensors, water line leaks, and dripping of faucets and shower heads.



## **Opportunity: Promote Cleaner Air by Reducing Fuel Carbon Emissions**

**Goal:** Reduce carbon emissions across CRCSD.

### **Strategies:**

- Expand the CRCSD vehicle idle reduction procedure for CRCSD buses and vehicles; to encourage privately owned vehicles at school drop-off/pick-up sites to reduce emissions by turning off their vehicle. Provide appropriate signage at each school's student drop-off/pickup location.
- Encourage carpooling at schools with designated spots and signage.
- Encourage walking, biking, free city transportation for students, school bus, and carpooling to school.
- Continue to focus on improving school bus and van route efficiency.
- Replace HVAC equipment with higher efficiency ratings, when feasible.
- Continue annual review of HVAC preventive maintenance programs for effectiveness in mitigating repairs and overall operational performance of systems.
- Continue to replace lighting with current LED technologies (certified by Energy Star, or DesignLights Consortium, DLC) when replacing light fixtures.
- Continue to participate with utility companies in energy audit programs.
- Develop and begin greenhouse gas inventories.

**Goal:** Develop clean fuel strategies for CRCSD bus fleet and vehicles.

### **Strategies:**

- Move away from diesel dependent vehicles and progress towards alternative fuel and electric vehicles.



## **Opportunity: (4-R's) Reduce, Re-Use, Recycle, Refuse**

**Goal:** Expand existing recycling programs to decrease waste consumption through increased initiatives and available markets.

### **Strategies:**

- Increase the number of recycling bins in schools and provide smaller trash cans with student friendly signage.
- The Green Team coordinator will continue supporting recycling initiatives that impact CRCSD.
- Encourage and reward efforts on behalf of schools that decrease waste dumpster sizes and pick-ups to increase recycling efforts and save money.
- Green Teams will perform waste audits of buildings to bring awareness of waste and the need for increased recycling.
- Increase in recycling across all school cafeterias (e.g., milk cartons, plastic fruit cups, and juice containers) for reduction in unnecessary waste.
- Continue selling no longer used obsolete technology equipment to recycling partners, while also finding opportunities to trade in older equipment for new.
- Promote the concept of sharing files digitally rather than printing to help reduce the amount of paper consumed and encourage further recycling efforts.
- Explore paperless initiatives through digital copies, web platforms, and signatures.
- Continue to encourage and expand recycling efforts school-wide, while exploring strategies to reduce the total time involved to dispose of trash and recyclables among the custodial and student lead recycling teams.

**Goal:** Provide salvage, reuse and recycling services for waste generated from building operations, maintenance, repair and minor renovations, and discarded furnishings, equipment, and property.

### **Strategies:**

- Buildings and grounds and custodial departments will continue to look for ways to donate, upcycle, salvage, and reuse equipment and parts, including electronic waste.
- Staff are encouraged to find alternative methods for disposing of supplies in garbage bins and consider donating or upcycling items instead.
- Continue current recycling of used motor oil, oil filters, non-alkaline batteries, tires, scrap metal, antifreeze, and other hazardous automotive fluids and explore additional options.
- Begin replacing standard alkaline batteries with those that are rechargeable and provide charging stations for staff.

# 4 LEADERSHIP

*Sustainable actions and policies extend to the community by setting an example of conservation and sustainability efforts achievable for any school district, organization, and family.*



## Opportunity: Be Conservation Leaders

**Goal:** Inform and train school faculty and students on CRCSD sustainability initiatives.

### Strategies:

- The energy project supervisor and Green Team coordinator will present to faculty the CRCSD sustainability initiatives, school-specific energy consumption data (including Energy Star rating and audit results), and ways faculty and students can help.
- Establish CRCSD Sustainability Plan manual and have it available in print and digital versions on the CRCSD website.
- Post signs and create awareness of programs that align with defined sustainability practices, so school communities and outside groups know their part in creating a more sustainable future for our schools.

## Opportunity: Build Future Ready Leaders

**Goal:** Students are empowered to make positive change.

### Strategies:

- Students are encouraged to take accountability for their actions in a setting that promotes conservation and sustainable practices.
- Environmental education is not limited to classroom activities or formal curricula but also includes school wide initiatives and extracurricular experiences.

**Goal:** Provide opportunities for youth to be leaders on environmental issues through in-school and out-of-school opportunities.

### Strategies:

- Students and Green Teams are encouraged to engage with local businesses, city leaders, partner organizations, and community events to share presentations and participate in sustainable activities.
- Work with area organizations to connect students to local environmentally conscious business and industry practices.
- Introduce students to environmental careers.

## Opportunity: Community Extension and Partnerships

**Goal:** Through stewardship and collaboration with partner organizations, CRCSD is committed to being a resource for other districts across the state and nationally in conservation methods, school specific sustainability practices, and community outreach.

### **Strategies:**

- Connect student projects with local businesses and partners to assist with academic and sustainability efforts (e.g., increase recycling, energy audits, native planting).
- Seek out potential partnerships for energy and water conservation efforts to meet joint organizational goals that are mutually beneficial.
- CRCSD via the Green Team coordinator, will continue to be a community resource and provide guidance in sustainable practices to other school districts as well as welcome collaborative input.
- Invite CRCSD leaders, local organizations, and businesses to engage with students through presentations, open houses, interviews, etc.
- Continued outreach with sponsors to engage with Green Teams through in-kind donations, celebrations, and challenges.
- Explore opportunities to work as an ambassador with the City of Cedar Rapids to reach students and families through sustainability projects with specified school neighborhoods to better serve vulnerable and underserved communities.





## Opportunity: Sustainable Culture Transformation

**Goal:** CRCSD administrators and staff model and support a sustainability focused mindset.

### Strategies:

- Communicate a clear vision based on values that are linked to sustainable initiatives.
- Communicate goals and strategies through various media and marketing platforms.
- CRCSD sustainability committee members will meet annually to inform stakeholders of progress and devise future goals and strategies.
- Encourage staff and students to develop and pursue leadership roles in sustainable decision making.
- Ensure staff and students have the information they need to make informed environmental decisions through consistent messaging and marketing efforts.
- Ensure equity to access information for students and families.





# GREEN TEAMS

Green Teams bring environmental awareness to staff and students, conservation visibility, and cohesiveness required for community engagement. These student-led teams have been instrumental in CRCSD sustainability initiatives since 2013.

## Promoting Environmental Responsibility

A Green Team is an interactive educational program that empowers students and staff to help the environment through waste reduction, energy and water conservation, and pollution prevention.

Through hands-on experiences, students learn to identify, analyze, and respond to environmental issues. These projects are made possible through the support of passionate and generous sponsors, partner organizations, and donations. By participating in Green Teams, students garner respect for how the world is interconnected and become leaders of positive change.

Active Green Teams involve students in actionable goals for a positive impact on society and the environment.

## Recognition of Environmental Efforts

An annual recognition program allows teams the opportunity to apply for various awards through a year-end celebration with CRCSD leaders and sponsors. These awards are specific to technology updates, facility upgrades, and landscaping projects at a team's school. Award topics include energy conservation, stewardship, waste reduction, community engagement, etc. and are judged by sponsors and community partners.



## Our Leaders

Green Team leaders are current staff members who work with students and implement sustainability initiatives within their school. They lead students in environmental service projects, experiments, sustainability practices, native species conservation, and much more. Teams have participated in EcoFest presentations, encouraged local businesses to increase recycling, established school wide compost initiatives, and enhanced campus green spaces through landscaping projects. Through these initiatives, projects, and exposure to real world experiences, students gain skills in higher order thinking, creativity, and teamwork.

If you are interested in starting a Green Team at your school, please contact the CRCSD Green Team coordinator.

## Teams May Participate in the Following Activities (and are Encouraged to Promote as School Wide Efforts):

- School wide recycling (collection from rooms and deposit in central location for custodial staff—schedule is determined by building)
- Vegetable and herb garden maintenance
- Grounds litter clean up
- Wildlife habitat areas (feeders, bird houses, etc)
- Disposal of indoor compost from food waste and paper towels
- School energy, water, and waste awareness programs
- Flower bed maintenance
- Outdoor compost bin maintenance



# GUIDANCE & POLICIES



# **CLASSROOM SUSTAINABILITY GUIDANCE**

Energy-smart classroom choices can significantly reduce energy use and at the same time, create better places to teach and learn.

## **Recycling**

### **Co-Mingled Recycling**

Recycling is required in all schools (Board policy procedure 801a). CRCSD follows a co-mingled recycling process, meaning all noted recyclable items below may be placed in one bin.

Acceptable items for co-mingled recycling include:

- Paper products such as rinsed milk cartons, newspaper, and cardboard.
- Plastic items that are labeled 1-5 such as rinsed juice and fruit cups, Tupperware, and pop bottles.
- Aluminum and metal items such as paper clips, tin cans, and pop cans.
- Button, lead, lithium, mercuric oxide, and nickel batteries will continue to be collected at the ELSC and sent to a recycling center.

### **Valuing Recycling**

The things we value the most we want to be the most convenient. By limiting garbage and increasing recycling we promote a community that respects and values environmental responsibility.

Ways to increase recycling and decrease garbage waste include:

- Eliminating excess garbage bins from common areas.
- Providing offices and classrooms with tiny trash cans and large recycling bins.
- Pairing trash and recycle bins together to encourage responsible waste collection and sorting.

### **Recycling Collections and Removal**

School administrators and custodial staff need to collaborate on a system for students and staff to participate in recycling efforts. Recycling container pick up and drop off locations, within the building, for removal of recyclable materials will need to be tailored to fit each school's needs. Students and office staff are encouraged to help custodial staff by emptying classroom recycling containers and personal tiny trash bins in a common location each day.



## Programs for Schools that Encourage Recycling of other Items Include:

- **Markers:** All markers types and brands can be collected, including permanent, dry erase, and standard through Crayola (<https://www.crayola.com/colorcycle.aspx>)—shipping included.
- **Crayons:** All crayon types and brands can be collected and melted down to create new crayons with user-friendly molds. They can also be sent to The Crayon Initiative. They recycle broken and used crayons, which are then melted down, reshaped, and distributed to art programs at children’s hospitals across the U.S. (<https://thecrayoninitiative.org/>)—shipping not included.
- **Stationary Items:** Through the Bic Stationary Recycling Program, all brands of empty writing instruments, glue sticks, watercolor dispensers, paint sets, and flexible packaging can be recycled. These items can be collected and shipped to TerraCycle (<https://www.terracecycle.com/en-US/brigades/bic>).
- **Pop Bottles/Can:** The PepsiCo Recycle Rally is one of the nation’s leading beverage container recycling initiatives for K-12 schools. Participants can also connect to a national recycling effort and gain access to educational materials, creative goal-trackers, and helpful tips and tools to make recycling fun and exciting (<https://www.pepsicorecycling.com/RecycleRally>).



## Leadership

- Promote student officers to lead conservation practices in the classroom by assigning student-specific “sustainability jobs” throughout the school day. These can include, checking and emptying recycling bins, turning off monitors/smartboards when not in use, unplugging electronics at the end of the day, turning off lights, watering plants, and monitoring classroom waste consumption.
- Encourage and educate students on recycling practices for the classroom and expectations for recycling in other areas of the school.
- Integrate and bring awareness to sustainable practices within general teachings and curriculum, when feasible.
- Assign student ambassadors to do periodic energy, water, and waste audits for the school.

## Energy and Water Conservation Practices

- Shut off overhead classroom lights when not in use (e.g., leaving for recess, lunch, special assemblies, and other unscheduled parts of the day).
- Consider choosing lower lighting levels in the classroom when natural daylight is available, and level of activity allows for less light. Lighting accounts for almost 30% of the energy used in schools (appropriate light levels and shutting off lights when feasible increases savings significantly).
- Shut off desk task lamp, projectors, instructional SMART Boards, and other appliances when leaving for an extended period during the day and at the end of each day.
- Ensure computers and other heat producing devices are not placed near classroom thermostats. A heat source near a thermostat will essentially over-cool a room, increasing energy use as well as making the space feel uncomfortable.
- Keep ventilation air grills free of airflow obstruction by not blocking vents with furniture or other classroom items. Ventilation flow of air is essential for overall comfort and health in the classroom. Airflow obstruction also leads to premature failure of equipment and higher energy use.
- Classrooms with window air conditioning units should be shut off when leaving the building at the end of each day.
- Classroom doors should be closed to hallways, except during arrival and dismissal of students, to minimize energy required to heat and cool classrooms. Keeping classroom doors closed will also condition the space efficiently, avoiding wide fluctuations in temperature.
- Classroom operable windows should remain closed when heating and cooling equipment is running to allow for proper conditioning of the classroom air and to minimize energy use.
- Space heaters are not allowed as supplementary heat in classrooms, unless provided by buildings and grounds for temporary use. Two issues affect the use of space heaters in buildings — fire safety and energy efficiency.
- Reduce energy loss by closing classroom drapes and blinds before leaving at the end of the day.
- Check classroom faucets and drinking fountains and report to your building engineer if dripping/running. A one-second dripping faucet wastes over five gallons of water per day!

# CLASSROOM EXTENDED BREAKS

*CRCSD plays an important role in reducing our energy and conserving resources (Board policy procedure 801a). Taking these five action steps prior to leaving for break can reduce energy and will support CRCSD's commitment to be more sustainable.*

## 1. PULL THE PLUG

- Power strips
- Computer/monitor, charging stations
- Desk task lamp
- Window air conditioning units
- What you cannot unplug, please turn off

## 2. FLIP THE SWITCH

- Lights (this includes classrooms equipped with light occupancy sensors)
- Projectors
- Ceiling fans
- Smartboards

## 3. CLOSE

- Close all windows tightly and shut blinds
- Close and lock doors

## 4. TAKE HOME

- Personal items and class pets

## 5. REPORT

- Inform the building engineer of needed repairs; they will submit a work order if needed.





# SCHOOL-WIDE: EXTENDED BREAK GUIDELINES

## Custodial

- Check that all windows and doors are closed and locked.
- Make a quick walk-through of your building and submit work orders for any equipment that is running that should not be running during break and identify any other problems that may need further repair.
- Unplug water fountain/filling stations in areas of the building that will not be occupied during break.
- Shut off display case lights and any other accent lighting.
- Shut off outdoor event messaging signs if not needed to communicate school events.
- One beverage machine may remain on during the summer for high school athletic activities and building staff, unplug others.
- Unplug snack vending machines during summer break. (Be sure to have the main office contact the vendor.)
- Check and adjust mechanical time clocks “time” setting and verify lighting and HVAC equipment schedules are set correctly. If not working properly, a work order needs to be submitted.

## Kitchen Staff

- Walk-in freezers and coolers and stand-alone coolers and freezers will remain off during summer months unless summer programming is in session and/or additional storage is needed (Board policy procedure 801a).
- Turn off, clean out, and open doors of milk coolers and ice machines not in use.
- Confirm that all kitchen equipment, both gas and electric are turned off. (Contact buildings and grounds to turn off pilot lights.)
- Review the need for ventilation and exhaust fans.
- Shut off all unnecessary ventilation equipment (e.g., kitchen hoods and exhaust fans)

## School Staff - Offices and Shared Spaces

- Check staff lounges and break areas:
  - Consolidate items from multiple refrigerators and freezers into one and clean out/unplug the other.
  - Shut off vending machines and water coolers.
  - Make sure all unnecessary electrical appliances are turned off and unplugged.
- Turn off lights and ceiling fans in offices, cafeteria, and other shared spaces.
- Shut off and unplug televisions and messaging monitors in hallways.
- Check to make sure all unnecessary electrical appliances are turned off and unplugged in offices (e.g., computers, printers, charging stations, power strips, and task lamps).
- Check computer labs.
  - Unplug computers, printers, charging stations, copiers (not in use), power strips, and other items.



## Athletic Departments

### (Seasonal -please perform the following tasks at the end of each season)

- Turn off, clean out, and open doors of concession coolers, freezers, and ice machines not in use
- Clean and unplug all concession appliances (e.g., stoves, microwaves, popcorn machines, etc.)
- Turn off ceiling fans, lights, and exhaust fans.
- Check thermostats - set to minimal heat during winter months.
- Check that faucets are shut off and report any dripping/leaking.
- Check that irrigation time clock systems are set correctly and working properly in the spring (Board policy procedure 801a).
  - Pressure test and verify no leaks prior to charging the system.
  - Follow recommended irrigation shutdown procedures for winter months.

## Report

- Inform the building engineer of needed repairs, they will submit a work order if needed.



# **ESTABLISHED TEMPERATURE GUIDELINES**

*To ensure CRCSD is meeting the needs of students and staff, the following guidelines have been established to take into account the recommended learning temperatures for students as well as CRCSD's responsibility to be energy efficient and fiscally responsible (Board Policy Procedure 801a).*

## **Occupied Hours**

### **Classrooms and Offices**

Sustainable temperature guidelines for classrooms, offices, and libraries will cool to no lower than 74 degrees in the summer and heat to no more than 72 degrees in the winter.

### **Auditoriums**

Sustainable temperature guidelines for auditoriums will cool to no lower than 76 degrees in the summer and heat to no more than 68 degrees in the winter.

### **Gymnasiums**

Sustainable temperature guidelines for gymnasiums will cool to no lower than 78 degrees in the summer and heat to no more than 68 degrees in the winter.

### **Cafeterias**

Sustainable temperature guidelines for cafeterias will cool to no lower than 76 degrees in the summer and heat to no more than 70 degrees in the winter.

### **Locker Rooms Shower Areas**

Sustainable temperature guidelines for locker rooms will heat to no more than 72 degrees in the winter.

### **Weight and Wrestling Rooms**

Sustainable temperature guidelines for weight and wrestling rooms will cool to no lower than 78 degrees in the summer and heat to no more than 68 degrees in the winter. Wrestling room space setpoints, during wrestling practice times only, will be scheduled to heat to no more than 78 degrees.





### **Pool Natatoriums**

Sustainable temperature guidelines for pool areas will cool and heat to 81 degrees with the relative humidity level at 55%. Pool water temperature will maintain at 79 degrees.

### **Hallways**

Sustainable temperature guidelines for hallways will heat to no more than 65 degrees in the winter.

### **Restrooms**

Sustainable temperature guidelines for restrooms will heat to no more than 65 degrees in the winter.

### **Maintenance/Shop Areas**

Sustainable temperature guidelines for maintenance/shop areas will cool to no lower than 80 degrees in the summer and heat to no more than 65 degrees in the winter.

### **Storage/Vacant Rooms**

Sustainable temperature guidelines for storage rooms will heat to no more than 55 degrees in the winter.

### **Humidity**

Equipment with humidity control capability will be set to control area space humidity between 35% - 45% relative humidity.

### **Dehumidification**

Equipment with dehumidification capability will be set to control area space humidity between 45% - 55% relative humidity.

### **School and Public Events**

Sustainable temperature guidelines for registered public events and school sponsored public events for auditoriums and gymnasiums, will cool to no lower than 74 degrees in the summer and heat to no more than 68 degrees in the winter.



## Unoccupied Hours

Thermostats will automatically go to unoccupied setback temperatures 30 minutes after the school day, unless necessary to provide temperatures for programs after regular school hours and weekends. Conditioned spaces will take a little time to adjust back to set points, but energy savings from conservation in this manner are substantial.

Business office temperature setbacks will take effect at 5 p.m. unless necessary to provide temperatures for CRCSD business meetings, classes, and conference center reservations.

## Heating and Cooling Equipment Scheduling

### School Day Hours

Conditioned spaces are scheduled and operated to meet temperature setpoints based on the CRCSD's current calendar year and school class start and end times. Occupancy schedules are set to meet temperature setpoints by no less than 30 minutes prior to use.

### Teacher Work Days/ Modified

On staff work days when school is not in session, the entire building will operate at setback temperatures. Variations for working staff comfort can be made via space one-hour override controls for classrooms. Buildings or spaces without local override control will be operated to duty cycle fans to maintain occupied temperature setpoints.

### After-Hour Facility Use Including Weekends and Breaks

CRCSD utilizes the scheduling software Facilities Scheduler (Board Policy 805), for school sponsored events and public facility-use reservations. Use of facilities during after school hours, including weekends, holidays, winter/summer breaks, must be reserved.

Public groups and organizations may register for facility use through the business service office or school main office. Requests for air conditioning or heating will be scheduled based on reservation details. To find further details on reservations, view this webpage: <http://www.cr.k12.ia.us/departments-services/school-use-facilities/>.

School sponsored events including teacher conferences, open house, athletic and fine arts activities, instructional meetings, etc., requiring "after-hour" heating or air conditioning must be scheduled through the school's activities or main office. Furthermore, scheduling requests should not be used as placeholders for "holding" an area so it cannot be scheduled.

In buildings with energy management control systems, appropriate staff members may override the system for school-based activities or approved community use. Overrides shall be used only for the building zone to be occupied, with time duration limited to two hours.

### Summer Educational Programs and Daycare

Daycare and educational summer programs must register for facility use through the business service office or school main office. Requests for air conditioning or heating will be scheduled based on reservation details.

## Reporting Temperature Issues

If your classroom, office, or area feels cool or too warm, but is within a few degrees of the setpoint, this may be a comfort issue and does not require a visit from maintenance. If your area is consistently much cooler or warmer than set point, and you would like your thermostat checked for accuracy, please send an email to [HVAC@crschools.us](mailto:HVAC@crschools.us). Please include your facility name in the subject line of the email, and in the body of the email include your name, area and room number if applicable, and the concern you would like addressed.



## VEHICLE IDLE REDUCTION

*A vehicle idle reduction policy (Board policy, support services 901.5a) is part of good citizenship and promotes positive environmental practices for buses and district vehicles. In an effort to improve fleet fuel efficiency, reduce greenhouse gas emissions and protect staff and students from toxic vehicle exhaust, CRCSD has established the following guidelines to reduce unnecessary idling.*

- Staff will minimize idling time on all CRCSD-owned vehicles and follow appropriate operating procedures.
- Privately owned vehicles are encouraged at school drop-off/pick-up sites to reduce emissions by turning off their vehicle.
- Buses arriving at schools to load or unload students are to turn engines off if idling for more than 5 minutes at temperatures between 45-80 degrees.
- CRCSD and private passenger vehicles are encouraged to minimize idle time to 15 minutes in temperatures below 32 degrees.
- Fleets should educate drivers on best practices via training sessions.
- Appropriate signage should be placed at each school's student drop-off/pick-up location.
- Walking, biking, free city transportation for students, school bus, and carpooling to school is strongly encouraged.

### **Idling exceptions include:**

- Temperatures below 32 degrees or above 80 degrees for buses.
- Operating special equipment for disabled persons.



# SUSTAINABLE LANDSCAPING

*Trees, shrubs, and well-maintained green spaces on school campuses provide many benefits to students, employees, and neighborhood residents. It is necessary that prior to any sort of planting the following specifications are considered and adhered to. CRCSD staff, community members or partners interested in donating or planting a tree on school or district property need to contact the Green Team coordinator for further planning requirements and approvals required by the buildings and grounds department.*

## Trees and Shrubs

### Prior to planting

Plans need to be developed and approved by buildings and grounds.

- The Green Team coordinator should be the first point of contact for tree planting projects for staff and community members.
- Plans must address species, location, and long-term maintenance.
- The Green Team coordinator will contact the grounds foreman to discuss location and specifications for planting.
- The grounds foreman will assess the area (consideration of fixed objects and species characteristics, such as mature height and width, water drainage patterns and soil characteristics will be taken into account).
- The grounds foreman will give final approval of all tree planting.
- The Green Team coordinator can help facilitate planting efforts if needed.





## Specifications











- Trees and shrubs must be selected from the CRCSD list of approved species.
- Plantings must include a variety of species with no more than 20% of the trees from any genus if possible. This provides a variety for native wildlife species and protects against large amounts of loss due to insect or disease infestations.
- Tree and shrub species native to Iowa are preferred.
- Trees must have an upright branching habit for ground maintenance access (mowing and snow removal).
- Trees and shrubs must not bear large fruit or any thorns. Thorns are dangerous to people and large fruit (non-ornamental varieties) can cause maintenance issues.
- Conifer tree species (evergreen trees) can be planted for specific wind or sound barrier projects as approved by the grounds foreman.
- Need to ensure that trees will not create visual barriers to security cameras, driveways, sidewalks or streets, nor restrict exterior light sources when planted and in maturity.
- Shrubs are only permitted in front entrances to buildings in mulched beds and should be pruned annually.

## Buildings and Grounds General Information











- Plantings should be located at least 10 feet from sidewalk, playground, or other hard surface area which will require snow removal.
- Only shrubs which do not exceed 3 feet in mature height should be planted. Larger species can create visibility issues.
- Plantings should be no closer to fixed objects than half the mature height of the species.
- Ensure that lawnmower, snow plows, and trimmer damage is not inflicted on any tree.





**CEDAR RAPIDS COMMUNITY SCHOOL DISTRICT**  
**APPROVED TREE AND SHRUB SPECIES**

	Name	Height/ Width	Bloom Time	Soil	Light	Zone	Pollinators	Notes
<b>Large Shade Trees</b>								
	Amur Maple <i>Acer ginnala</i>	20'x15'- 20'	May	W,M,D	FS-PS	3-8		
	Black Maple <i>Acer nigrum</i>	80'x30'-45'	May	M	FS-PS	4-8		
	Red Maple <i>Acer rubrum</i>	70'x25'-40'	April- May	M	FS-PS	3-9	Bees, butterflies	
	Sugar Maple <i>Acer saccharum</i>	90'x30'-45'	April- June	M	FS-PS	4-8	Bees, butterflies	
	River Birch <i>Betula nigra</i>	60'x40'-60'	April- May	W,M	FS-PS	4-7	Butterflies, moths	Location specific
	Hackberry <i>Celtis occidentalis</i>	90'x 25'-45'	April- May	W,M,D	FS-PS	2-9	Butterflies, moths	Concrete staining possible from berries
	Yellowwood <i>Cladrastis kentukea</i>	50'x25'-30'	April- May	M,D	FS	4-8		
	Ginkgo <i>Ginkgo biloba</i>	80'x25'-30'	May- June	W,M	FS-PS	3-8		Male trees only
	Thornless Honeylocust <i>Gleditsia triacanthos</i>	70'x30'-40'	April- May	M,D	FS	3-9	Bees	
	Kentucky Coffeetree <i>Gymnocladus dioicus</i>	70'x40'-50'	May- June	W,M	FS-PS	3-8	Bees, butterflies, hummingbirds	
	Tulip Tree <i>Liriodendron tulipifera</i>	100'x30'-40'	May- June	W,M	FS	4-9	Bees, butterflies, moths	
	American Hop Hornbeam <i>Ostrya virginiana</i>	50'x20'-25'	April	W,M	FS-PS	3-9	Moths	
	White Oak <i>Quercus alba</i>	90'x50'	May	M,D	FS-PS	5-8	Butterflies, moths	
	Swamp White Oak <i>Quercus bicolor</i>	60'x40'-60'	April	W,M	FS	3-8	Butterflies, moths	
	Shingle Oak <i>Quercus imbricaria</i>	50'x50'-60'	April- May	W,M,D	FS-PS	4-8		



	Name	Height/ Width	Bloom Time	Soil	Light	Zone	Pollinators	Notes
	Bur Oak <i>Quercus macrocarpa</i>	60'x40'	April	M,D	FS-PS	3-8	Butterflies, moths	
	Chinkapin Oak <i>Quercus muehlenbergii</i>	70'x20'-40'	April	M,D	FS-PS	3-8	Butterflies, moths	
	Northern Red Oak <i>Quercus rubra</i>	75'-100'x 50'-60'	May	M,D	FS-PS	5-8	Butterflies, moths	
	Littleleaf Linden <i>Tilia cordata</i>	80'x20'-30'	May	W,M	FS-PS	3-7	Bees, hummingbirds	
	American Linden <i>Tilia americana</i>	70'x30'-50'	July- August	M	FS-PS	3-8	Bees, moths	
	Silver Linden <i>Tilia tomentosa</i>	50'x20'-35'	June- July	W,M	FS	4-7	Bees	
	American Elm <i>Ulmus Americana</i>	100'x60'-70'	March- April	W,M,D	FS-PS	4-8	Bees, butterflies, moths	Dutch Elm Disease resistant cultivars
<b>Small Trees</b>								
	Serviceberry <i>Amelanchier spp</i>	20-40'x 15'-20'	April- June	W,M,D	FS-PS	4-8	Bees, butterflies	
	American Hornbeam <i>Carpinus caroliniana</i>	30'x15'- 25'	April	W,M	FS-PS	3-9	Butterflies, moths	
	Eastern Redbud <i>Cercis canadensis</i>	30'x20'-25'	April- May	M	FS-S	4-8	Bees, butterflies	
	Pagoda Dogwood <i>Cornus alternifolia</i>	25'x15'	May- July	M	FS-PS	3-7	Bees	
	Thornless Hawthorn <i>Crataegus phaenopyrum</i>	25'x15'- 20'	May- June	W,M,D	FS	4-8	Bees	
	Saucer or Star Magnolia <i>Magnolia soulangeana or stelata</i>	25'x10'- 15'	April- May	W,M,D	FS	4-9		
	Flowering Crabapple <i>Malus spp.</i>	20'x20'	May- June	M,D	FS-PS	5-9	Bees, butterflies, moths	Must be berry free
	Japanese Tree Lilac <i>Syringa reticulata</i>	20'x15'- 20'	April- May	M	FS-PS	3-7	Butterflies	

	Name	Height/ Width	Bloom Time	Soil	Light	Zone	Pollinators	Notes
<b>Conifers (Evergreens)</b>								
	Canaan Fir (Balsam Fir) <i>Abies balsamea</i>	50'x20'-25'	Year- Round	W,M,D	FS	3-8		
	White Fir (Concolor Fir) <i>Abies concolor</i>	120'x30'	Year- Round	M,D	FS-PS	4-7		
	Fraser Fir <i>Abies fraseri</i>	40'x15'-25'	May	M	FS-PS	4-7		
	Eastern Red Cedar <i>Juniperus virginiana</i>	50'-75'x 15'- 30'	Year- Round	M,D	FS	2-9		
	European larch <i>Larix decidua</i>	70'x25'-30'	April- May	M	FS	3-6		
	Dawn redwood <i>Metasequoia glyptostroboides</i>	70'x20'-30'	April- May	W,M,D	FS	5-8		
	Norway Spruce <i>Picea abies</i>	80'x20'-30'	Year- Round	M,D	FS	3-7		
	White Spruce (Black Hills) <i>Picea glauca</i>	80'x20'-30'	Year- Round	M,D	FS	2-6		
	Serbian Spruce <i>Picea omorika</i>	30'x10'- 15'	Year- Round	M	FS	4-7		
	Red Pine (Norway Pine) <i>Pinus resinosa</i>	75'x20'-30	Year- Round	M,D	FS-PS	2-5		
	White Pine <i>Pinus strobus</i>	100'x30'-40'	Year- Round	W,M,D	FS-PS	3-8		
	Bald Cypress <i>Taxodium distichum</i>	60'x20'-25'	April- May	W,M,D	FS	4-10		
	Arborvitae <i>Thuja occidentalis</i>	20'x10'- 15'	Year- Round	W,M	FS	3-7		
	Eastern Hemlock <i>Tsuga canadensis</i>	60'x25'-30'	Year- Round	W,M	FS,PS ,PSu	3-7		



Indicates native Iowa species

Moisture:  
 • W = Wet  
 • M = Mesic  
 • D = Dry

Light:  
 • FS = Full sun (at least 6 hours of sun per day)  
 • PS = Part shade (3 to 6 hours of sun per day)  
 • S = Full shade (less than 3 hours of sun per day)  
 • PSu = Part sun

Iowa's hardiness is mostly zone 5



## Flower Beds and Prairie

*Various types of flower bed and prairies are dependent on certain plants, soil, light, and sometimes construction, for success. On-site school bedding offers students the opportunity for garden maintenance, species knowledge, and community involvement.*

### Planning and Maintenance Guidelines

Building and grounds staff cannot routinely care for flower beds and shrubs thus projects involving herbaceous plants (grasses, flowers, small shrubs) should be carefully thought through as to how the ongoing maintenance will be carried out to keep the projects in good shape. Annual flower bed plans should be submitted to buildings and grounds for approval by the Green Team coordinator. Failure to do so may result in permanent removal of the beds.

A standard tall grass prairie can be prepped and planted on unused or wet areas on school grounds through buildings and grounds. This generally takes two to three years for success and will be maintained by buildings and grounds.



## Produce and Herb Gardens

*On-site school gardens offer students the opportunity for nutrition education, farm to school initiatives, and community involvement.*

### Planning and Maintenance Guidelines

These guidelines intend to ensure that school gardens comply with applicable building codes and that they are safe, reliable and maintainable. CRCSD requires that schools follow and abide by the guidelines and requirements outlined in this document. Failure to do so may result in the closing of the school's garden permanently.

Location of all gardens should be planned and constructed through collaboration with the building principal, buildings and grounds, and the Green Team coordinator.

### Produce & Herb gardens

- Annual garden plans should be submitted to buildings and grounds for approval by the buildings and grounds manager.
- Gardens should be in raised beds for proper weed control, grounds maintenance, and student accessibility needs.
- Construction of raised beds and requirements shall be the responsibility of the school or the organization implementing the program and shall be maintained year-around.
- To promote CRCSD sustainability goals, garden soil moisture control methods should be explored and considered to reduce natural evaporation and to help minimize use of water.





# SOURCES

- ANSI/ASHRAE/IESStandard 90.1-2019, Energy Standard for Buildings Except Low-Rise Residential Buildings (I-P Edition). <https://www.ashrae.org/technical-resources/standards-and-guidelines/read-only-versions-of-ashrae-standards>
- Arbor Day Foundation, Tree Guide Database, 2021. <https://www.arborday.org/trees/treeGuide/browsetrees.cfm>
- Barr, Stephanie, Cross, Jennifer E., Dunbar, Brian H. The Whole-School Sustainability Framework: Guiding Principles for Integrating Sustainability Into All Aspects of a School Organization. Institute for the Built Environment. Colorado State University. [https://centerforgreenschools.org/sites/default/files/resource-files/Whole-School\\_Sustainability\\_Framework.pdf](https://centerforgreenschools.org/sites/default/files/resource-files/Whole-School_Sustainability_Framework.pdf)
- Birney, Anna and Reed, Jane. Sustainability and Renewal: Findings from the Leading Sustainable Schools Research Project. 2009. <https://www.semanticscholar.org/paper/Sustainability-and-renewal%3A-findings-from-the-Birney-Reed/ee92e72e4abe5bb506b132f54d8ca62e3e6bfec3/figure/1>
- Cedar Rapids Community School District Board of Education. CRCS Policy Manual. Vehicle Idle Reduction (900) Support Services, Procedure 901.5a. Approved: 10-14-13, Revised: 02-24-14. <https://www.cr.k12.ia.us/assets/1/6/Policyhandbook.pdf>
- Cedar Rapids Community School District Board of Education, CRCS Policy Manual. Energy/Utility Conservation, (800) Article 8, School Plant. Legal Reference: Iowa Code §§ 279.44; 473.19-.20 (2013) <https://www.cr.k12.ia.us/assets/1/6/Policyhandbook.pdf>
- City of Cedar Rapids, iGreen CR Action Plan. January 2020. [https://cms8.revize.com/revize/cedarrapids/Sustainability/iGreenCR%20Action%20Plan\\_Web.pdf](https://cms8.revize.com/revize/cedarrapids/Sustainability/iGreenCR%20Action%20Plan_Web.pdf)
- City of Cedar Rapids, Stormwater Best Management Practices Cost-Share Program. 2021. [http://www.cedar-rapids.org/local\\_government/departments\\_g\\_-\\_v/public\\_works/stormwater\\_best\\_management\\_practices\\_cost-share\\_program.php](http://www.cedar-rapids.org/local_government/departments_g_-_v/public_works/stormwater_best_management_practices_cost-share_program.php)
- Green Schools Alliance, Impact of Environmental Education on Students. 2020. <https://www.greenschoolsalliance.org/why>
- Heming, Anisa. What is a Green School? 30 July, 2017. The Center for Green Schools. 2020. <https://www.centerforgreenschools.org/what-green-school>
- Iowa Department of Natural Resources. Rethinking Maple: Selecting Trees For Your Yard A Case for Species Diversity. <https://www.cityofmarion.org/home/showpublisheddocument/23520/637219278389330000>
- Iowa Living Roadway Trust Fund, Iowa Department of Transportation. Guide to Common Trees and Shrubs of Iowa. <https://secure.iowadot.gov/lrtf/docs/GuidetoCommonTreesShrubs.pdf>
- Iowa State University: Extension and Outreach. Natural Resource Stewardship. Iowa State University of Science and Technology. 2021. [https://naturalresources.extension.iastate.edu/encyclopedia?field\\_category\\_tid=605](https://naturalresources.extension.iastate.edu/encyclopedia?field_category_tid=605)
- Milwaukee Board of School Directors Busing Contract; City of Madison, Code of Ordinances 12.129(2)
- Morton Arboretum, Trees and Plants, 2021. <https://www.mortonarb.org/trees-plants/tree-plant-descriptions/yellowwood>
- NAAEE, Environmental Literacy Framework. The North American Association for Environmental Education. 2020 <https://naaee.org/our-work/programs/environmental-literacy-framework>
- New Hampshire Department of Environmental Services, Administrative Rules Env-A 1101.05, 1101.06, and 1101.09
- Northwestern University. Northwestern University Strategic Plan 2017-2021. [NUStrategicSustainabilityPlan-2017-2021-web.pdf](http://www.northwestern.edu/strategic-plan/NUStrategicSustainabilityPlan-2017-2021-web.pdf)
- Schellya, Chelsea, Crossb, Jennifer E., Franzenc, William S., Hall, Pete, and Reeve, Stu. How to Go Green: Creating a Conservation Culture in a Public High School through Education, Modeling, and Communication. Journal of Environmental Education, Volume 43, Issue 3, 2012
- Sustainable Schools Project. Growing Minds: Farm to Schools. 2020 <http://sustainableschoolsproject.org/education/big-ideas>
- Tallamy, Douglas W., Bringing Nature Home: How You Can Sustain Wildlife with Native Plants, Updated and Expanded. Timber Press; Second Edition, revised 2009.
- Tallamy, Douglas W., Nature's Best Hope: A New Approach to Conservation That Starts in Your Yard. Timber Press 2020.
- The Child Educational Center, The Outdoor Classroom, 2019 <https://outdoorclassroomproject.org/about/the-outdoor-classroom/>, <https://www.ceconline.org/>
- The University of Iowa, Office of Sustainability and the Environment. Tiny Trash, 2021 <https://sustainability.uiowa.edu/campus-initiatives/recycling-and-waste-reduction/progress-and-data/tiny-trash>
- Trees Forever, Trees and Shrubs for Pollinators, 2017. <http://www.treesforever.org/servlet/servlet.FileDownload?file=00P0e0000wOttIEAC>
- United States Environmental Protection Agency. Energy Star, 2021. <https://www.energystar.gov/buildings?s=mega>





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