SUSTAINABILITY FRAMEWORK















On June 24, 2025, the Loudoun County School Board approved the LCPS Sustainability Framework as the foundation for incorporating sustainability into instruction, operations and the culture of LCPS while also informing budget development.

Development of the LCPS Sustainability Framework was led by the Office of Sustainability and informed by the thoughtful voices, ideas and experiences of departments and stakeholder groups across the division. Sincere thanks is extended to these collaborators as well as the Green Schools National Network, USGBC Center for Green Schools and dedicated leaders of school systems across the United States for their thought partnership and lessons shared.

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(Forthcoming - To be added as a Living Document)

LCPS & Sustainability

LCPS at a Glance

Loudoun County Public Schools (LCPS) is the **third largest public K-12 school division in Virginia**, caring for more than 82,000 students and 13,000 staff. As of 2025, the division's 100 schools and 14 support facilities total 13.5 million square-feet and are spread across more than 4,000 acres of campus.



What is Sustainability?

LCPS defines sustainability as a **holistic approach to our mission and operations** that integrates economic, environmental and social goals.

Integration of sustainability division-wide:

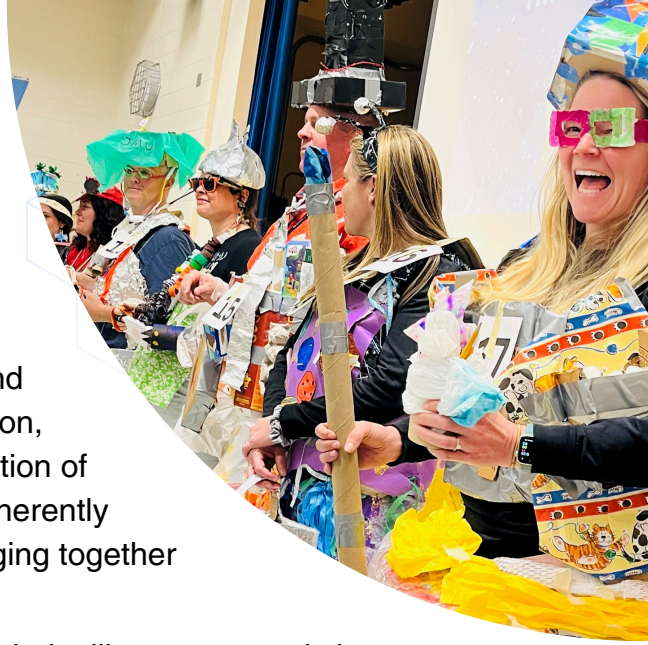
- **Prioritizes resource conservation and efficiency**;
- **Promotes healthy schools and planet**; and
- **Cultivates environmental literacy for all**.

In doing so, we **model a culture of sustainability** - leading by example, embracing sustainable practices and valuing our connectedness as we advance LCPS' mission of **empowering all students to make meaningful contributions to the world.**



A Foundation for Success: The LCPS Energy Program

Sustainability is not new for LCPS. We celebrate a long history of effort and leadership in energy management and efficiency. The division has tracked and benchmarked energy and water use **since 1993.** These data inform combinations of strategies and best practices that support daily operations as well as long-term capital planning. Thanks to the diligence and success of its Energy Program, LCPS celebrates more than **$130M in avoided utility costs,** to date. **Every dollar saved on energy is a dollar that can be invested in our students, teachers and classrooms.**



Integrating Sustainability Division-Wide

LCPS opened its Office of Sustainability in 2023, kicking off an expanded emphasis on sustainability division-wide. In addition to building on more than 30 years of conservation and efficiency work *and* expanding strategic efforts in transportation, nutrition and waste, the division is also prioritizing the integration of sustainability education for all LCPS students. The work is inherently collaborative, spanning multiple LCPS departments and bringing together a rich variety of partnerships and perspectives.

Sustainability isn't *just* solar power, electric vehicles and avoided utility costs - nor is it limited to outdoor education, recycling initiatives and student-led solutions to environmental challenges. Rather, sustainability is a holistic, systems-based approach to thinking, collaborating, planning and problem solving. As such, **sustainability isn't part of our work at LCPS; it's a driving force that influences all of our work - and everyone is invited to participate.**

Making the Connection: Student Learning & Sustainable Practices

LCPS students are at the center of sustainability - in what they learn, in how they practice and apply their learning and in our steadfast commitment to them to model what we teach. The value of **learning-by-doing** experiences that are made possible when student learning and sustainable practices are purposefully combined cannot be overstated or ignored.

Throughout this document, look for our **Making the Connection** callouts (accompanied by the **student icon** shown at right) - that showcase examples of how LCPS is already leveraging the power of such place-based and issues-driven experiential learning.

The LCPS Sustainability Framework

This Sustainability Framework is an overarching tool to organize and communicate the structure and principles that guide our sustainability efforts. **Four sustainability goals** are introduced in the pages that follow, each representing a top priority for LCPS sustainability.

Under each goal, multiple **targets** are identified - areas of impact or influence where we believe we can bring about lasting change. Ideas for **possible metrics** to consider and examples of student engagement (**Making the Connection**) provide additional context and clarity.

Time-bound **work plans** will be collaboratively developed on a regular basis and will identify the objectives, strategies and actions that are needed to advance incremental progress against each goal and target. Work plans will be appended to this Framework and will be living documents that further guide our work.

Sustainability Goals



Identifying Our Priorities

Amazing things are happening in LCPS classrooms, offices and campuses every day. **Identifying and celebrating sustainability-minded activities** and efforts that are already taking place throughout our division provides helpful insight on opportunities and challenges, taps into student and educator passion and enthusiasm and creates excitement and momentum around the growing emphasis on sustainability division-wide.

Through a variety of **stakeholder feedback** processes, department and school leaders, students and educators and many community partners have shared their thoughts, experiences and goals for LCPS sustainability. The **experiences and lessons learned** by other teams facilitating K-12 sustainability around the US have also informed our approach. This feedback and thought partnership have shaped the priorities and focus of the LCPS Sustainability Framework.

The overarching priorities that guide LCPS Sustainability are summarized in **four goals**:

GOAL 1: CONSERVE RESOURCES & IMPROVE EFFICIENCY — **ECONOMIC**

GOAL 2: PROMOTE HEALTHY SCHOOLS & PLANET — **ENVIRONMENTAL**

GOAL 3: CULTIVATE ENVIRONMENTAL LITERACY FOR ALL — **SOCIAL**

GOAL 4: MODEL A CULTURE OF SUSTAINABILITY — **LEADERSHIP**

Grounded in Local, State & Regional Contexts

LCPS Sustainability Goals are aligned with and contribute to the advancement of several other strategic efforts:

- The **One LCPS Strategic Plan** is anchored in the prioritization of empowered students, exemplary staff, an enriched division and engaged communities. The Strategic Plan specifically emphasizes **energy efficiency and occupant health and comfort** as a priority for **safe, productive learning environments**.
- A **2020 School Board Resolution on Action for Climate Change** underscores LCPS' commitment to **reducing its carbon footprint** and **expanding environmental education** and opportunities for **student advocacy and voice.**
- LCPS sustainability goals are relevant to goals outlined in **Loudoun County's Energy Strategy,** which promotes **energy conservation and efficiency** as well as **emissions reduction**.
- Emphasizing curriculum, professional development and the connections between student learning and sustainable practices clearly aligns LCPS efforts with the **Environmental Literacy Goal** of the **Chesapeake Bay Watershed Agreement** and the **Virginia Department of Education's** emphasis on environmental literacy.
- The highly engaging and interdisciplinary nature of sustainability-related learning offers ample opportunity to showcase the power of the new **LCPS Instructional Framework.**
- LCPS participation in the **Virginia Environmental Literacy Network** helps build capacity locally for environmental literacy planning and encourages knowledge sharing and collaboration with school divisions across the Mid-Atlantic region.
- LCPS energy and sustainability successes contribute to achievement of the **Virginia Clean Economy Act**, which specifies **clean energy** goals for the Commonwealth.





GOAL 1:

CONSERVE RESOURCES & IMPROVE EFFICIENCY

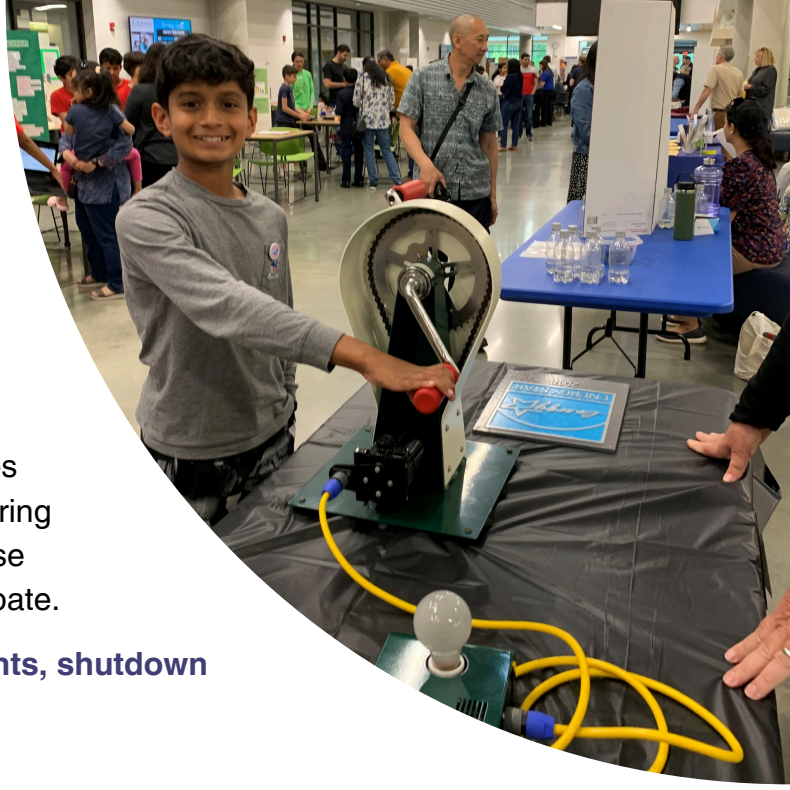
ECONOMIC

Why Conservation & Efficiency?

When we **conserve** resources, we change our behavior to use less. When we improve **efficiency**, we use less of a resource to perform the same task.

When conservation is prioritized, efficiency improvements that follow are most impactful.

There is ample opportunity for LCPS to continue strategic use of existing resource management practices while also exploring opportunities to promote conservation and improve efficiency in new and exciting ways.



Goal 1 Targets

The following impact areas are targeted under Goal 1:

Target 1. Energy Management

Understanding and strategically managing our energy consumption conserves resources and leads to significant cost savings by lowering utility bills and operational expenses. Because everyone uses energy, everyone can participate.

Examples: Optimized temperature setpoints, shutdown checklists, energy conservation projects

Target 2. Water Conservation

Fresh water is an essential, limited resource. Water-saving strategies promote stewardship, reduce energy demand, prevent water pollution and avoid costs. Water can be studied and conserved inside and outdoors, across campuses and communities.

Examples: Install low-flow fixtures, explore & map your watershed, change habits

Target 3. Building Design & Retrofits

Incorporating sustainability design standards into how we build improves efficiency and helps us model what we teach. Building retrofits and renovations offer opportunities to integrate green technology and solutions and improve efficiency in operations & use.

Examples: Design to ENERGY STAR & LEED, energy efficiency improvements combined with end-of-life critical systems replacement

Target 4. Operations & Training

Shared practices and regular trainings can help students, educators and staff understand the importance of sustainability & their role in helping LCPS meet its goals.

Examples: Division-wide energy trainings and campaigns, student-led energy audits





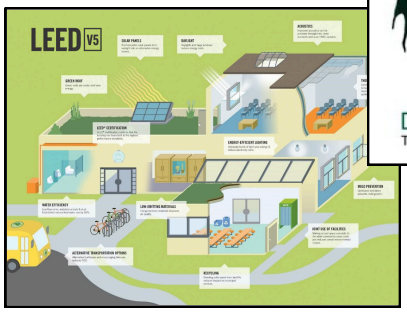
Facilitating & Evaluating Change

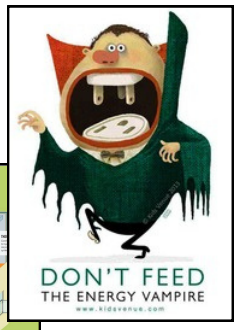
As LCPS stakeholders work together to articulate iterative workplans that advance sustainability goals, **possible metrics** to help evaluate progress under Goal 1 could include:

- Number of schools participating in energy conservation programs/initiatives
- Number of schools earning ENERGY STAR recognition
- Number of students/staff participating in conservation & efficiency trainings
- Average Energy Use Intensity (EUI)
- Percentage change in Average EUI
- Calculated energy savings - estimated / guaranteed / actual
- Funds committed to energy conservation and efficiency projects

Making the Connection

- Energy Detectives analyze their school's energy data and celebrate national ENERGY STAR recognition, ***Catoctin Elementary***
- Students hunt down "vampire power" and learn about energy conservation practices
- Students interested in environmentally-friendly design & construction explore the multiple LCPS projects currently seeking LEED certification









GOAL 2:

PROMOTE HEALTHY SCHOOLS & PLANET

ENVIRONMENTAL

Why Healthy Schools & Planet?

Promoting healthy schools & planet **reduces environmental impacts** and **fosters healthy, safe & productive learning environments** for LCPS students & staff.

Recognizing our schools and campuses as ecosystems, in and of themselves, offers the opportunity to explore the potential impacts of our individual and collective actions. Lessons learned help us better understand implications for our broader communities, regions and world.

Goal 2 Targets

The following areas of impact are targeted under Goal 2:

Target 1. Renewable Energy

Renewable energy sources emit little to no greenhouse gases (GHG). They are readily available, naturally replenished and can be less expensive, over the long-term, than fossil fuels. Continuing to strategically integrate renewable energy into the LCPS built environment reduces environmental impacts, contributes to state and regional energy goals and exposes our students, families & neighboring divisions to the benefits of these technologies.

Examples: Solar power and geothermal integration



Target 2. Green Buses & Fleet

Transportation is the largest source of US GHG. K-12 school districts nationwide operate more than 480,000 school buses, plus other vehicles to support operations. Replacing diesel and gas school vehicles with zero or low emission options offers substantial GHG reductions, contributes to improved air quality and can enhance driver and rider satisfaction.

Examples: Electric & Propane Buses, EV cars & trucks, Safe Routes to Schools

Target 3. Waste Reduction & Diversion

Reducing and recycling waste avoids landfill emissions and saves energy. Food waste is of particular interest in K-12 settings, and addressing food waste provides hands-on student engagement. Waste reduction and diversion projects often lead to near-term, visible accomplishments that encourage student advocacy and action. Indeed, students are already leading the charge for recycling in many LCPS schools and calling for system-wide improvements.

Examples: Waste audits, student recycling clubs, reduce/reuse campaigns

Target 4. Healthy Learning Environment

A healthy learning environment directly impacts student and staff well-being, which in turn affects factors like academic performance, attendance, engagement and comfort. Healthy learning environments are critical to overall school success.

Examples: Indoor Air & Water Quality, daylighting, outdoor learning spaces, safe cleaning practices

Facilitating & Evaluating Change

As LCPS stakeholders work together to articulate iterative workplans that advance sustainability goals, **possible metrics** to help evaluate progress under Goal 2 could include:

- Number of schools with renewable energy
- Solar power generation capacity (MW)
- Percent reduction in CO2E emissions
- Percent of fleets comprised of alternative fuel vehicles
- Percent changes in waste streams
- Number of schools participating in recycling
- Indoor Air & Water Quality targets
- Student/staff perceptions on learning environment (indoor and outdoor)

Making the Connection



- Culinary Arts students compost food scraps from their test kitchens and enrich the soil in their gardens, ***Academies of Loudoun***
- Scholars design a whole-school, student-led recycling program then produce a manual to encourage other schools, ***Cardinal Ridge Elementary***
- Students learn behind the wheel of electric Driver's Education cars, ***Heritage High School***
- Host a student-led food waste audit in your school cafeteria, ***Belmont Ridge Middle School***
- Students interested in renewable energy and energy engineering study the nearly 30 rooftop solar arrays and 9 geothermal systems currently in operation, construction or design at LCPS schools









GOAL 3:

CULTIVATE ENVIRONMENTAL LITERACY FOR ALL

SOCIAL

Why Environmental Literacy?

LCPS understands environmental literacy as the **knowledge, skills and experiences** that enable students to **understand** and feel **equipped** and **inspired** to address environmental challenges.

Cultivating environmental literacy in all LCPS students connects them to their world in meaningful ways and prepares them to be problem solvers and changemakers, no matter the job, sector or community they find themselves a part of in the years to come.

Goal 3 Targets



The following areas of impact are targeted under Goal 3:

Target 1. Every Student Outdoors

Outdoor learning expands sensory experiences, creates meaningful connections to the environment, improves physical & mental health and helps students retain what they learn. Almost any lesson, standard or topic can be taken outside!

Examples: Campus exploration, *Get Outside* campaigns, standards-aligned outdoor lessons, field investigations

Target 2. Curriculum Integration

Ensuring integration of environmental literacy into existing curriculum helps students gain targeted knowledge and skills and makes learning experiences more relevant to the world around them. LCPS schools, campuses & communities become learning laboratories in which students make observations, identify challenges, collect data & test possible solutions - all while practicing Critical Thinking, Creativity, Collaboration, Communication and Citizenship (the 5Cs).

Examples: Meaningful Watershed Educational Experiences (MWEEs)

Target 3. Educator Support

Environmental literacy can't be "one more thing" for LCPS educators. Ready-to-use materials and fun professional learning can help build awareness & appreciation for alignment with existing curriculum and promote confidence and excitement for integrating knowledge, skills & experiences into everyday lessons.

Examples: Outdoor Learning Carts and Kits, targeted training opportunities

Target 4. Career Exploration & Readiness

Exposing students to environmental & sustainability jobs underscores the diversity of opportunities that exist. Community partners can help identify & build needed skills.

Examples: Community partnerships, Job for a Day opportunities, field trips



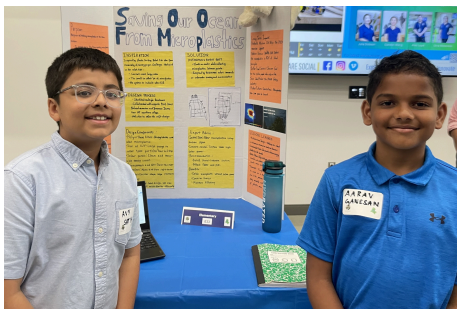
Facilitating & Evaluating Change

As LCPS stakeholders work together to articulate iterative workplans that advance sustainability goals, **possible metrics** to help evaluate progress under Goal 3 could include:

- Number of MWEEs integrated into curriculum
- Percentage of targeted schools reporting MWEE implementation and/or readiness
- Number of professional development (PD) offerings and participants; educator feedback
- Outdoor learning frequency & impact
- Formative assessment data from outdoor field experiences
- Percent of student projects in juried settings related to environment and sustainability

Making the Connection





- Hike along the Appalachian Trail to discover vernal pools and the unique species that depend on them, ***Woodgrove High School***
- Integrate nature journaling as a student practice across grade levels and content areas
- Participate in the annual *Student Environmental Action Showcase (SEAS),* which amplifies youth voices in environmental problem-solving
- Invite students to map daily sun and shade patterns to inform design of a school garden
- Join an EnviroThon Team and represent your school in local and regional competitions
- Host an Outdoor Learning & Career Day where community experts lead hands-on experiential learning, ***Mountain View Elementary***





GOAL 4:

MODEL A CULTURE OF SUSTAINABILITY

LEADERSHIP

Why Leadership & Culture?

Decisions and actions at every level are opportunities to demonstrate **behaviors, values and practices** that advance our sustainability goals. Leadership shapes culture, and culture influences the attitudes, mindsets and choices of students, staff and community members.

To successfully integrate sustainability into who we are and how we operate, LCPS needs **leaders in every school and at every level** who model a culture of sustainability.

Goal 4 Targets

The following areas of impact are targeted under Goal 4:

Target 1. Leading by Example

Decisions & actions at every level are opportunities to model what we teach our students. From individual choices to division-wide policy, we have the opportunity to uphold our shared values, prioritize our goals & inspire others. Collaboration fosters enthusiasm and belonging and elevates multiple voices and perspectives. Who can be a leader? Anyone. Who has a role? Everyone.

Examples: Student Sustainability Council, School Board policies, LEED certification, budgets reflect investments in sustainable practices

Target 2. Embracing Sustainable Practices

Building sustainable practices into students' everyday experiences cultivates environmental stewardship and creates opportunities for hands-on learning. Ensuring that all students & staff can participate regularly in practices like recycling, gardening and nature journaling helps illustrate how small actions can have far-reaching impacts and instills lifelong values of responsibility & connection to the natural world.

Examples: Green Teams Program, division-wide competitions & incentives

Target 3. Valuing Our Connectedness

Students, families, schools and communities are connected in countless ways. When we value that connectedness and promote shared responsibility & mutual support, we amplify our collective impact and create a more sustainable and resilient future for all.

Examples: Community partners, Sustainability Summit, shared learning experiences



3

Facilitating & Evaluating Change

As LCPS stakeholders work together to articulate workplans that advance sustainability goals, **possible metrics** to help evaluate progress under Goal 4 could include:

- Stories that celebrate sustainability in action
- Percent of schools actively recycling
- Number of schools with school gardens
- Number of schools with Green Teams
- Documented impacts of collective efforts in schools
- Number of community partners actively engaged with schools around the environment and sustainability
- Prioritization of sustainability goals in budgets, policies and programs



Making the Connection

- Student-coordinated milk bottle recycling in school cafeterias, ***Lovettsville Elementary***
- Soil science lessons with Loudoun Soil & Water Conservation District staff
- Virtual toolkits and civic impact training in partnership with Morven Park, ***Simpson Middle School***
- High schoolers leading environmental education for elementary students through outdoor learning stations and capstone projects
- Students and staff advocating for sustainable practices in their schools and offices
- Access to outdoor learning spaces at every LCPS School that meet the needs of all learners
- Student voices spotlighting programs, partnerships and accomplishments in community-facing platforms like morning news shows, community gatherings and School Board meetings



Connect & Collaborate

We'd Love to Hear from You!

Interested in learning more about something you've read in this Framework? Have a question or idea to share? Contact the LCPS Office of Sustainability:

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Appendix: Workplan

Timebound Work Plan

Forthcoming - to be added as a Living Document, created collaboratively by stakeholders across the division, that identifies the objectives, strategies and actions that are needed to advance incremental progress against each goal and target area.

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