



Sustainability

ENVIRONMENT

A Presentation to the Katonah-Lewisboro Board of Education

April 25, 2023

This Evening's Presenters

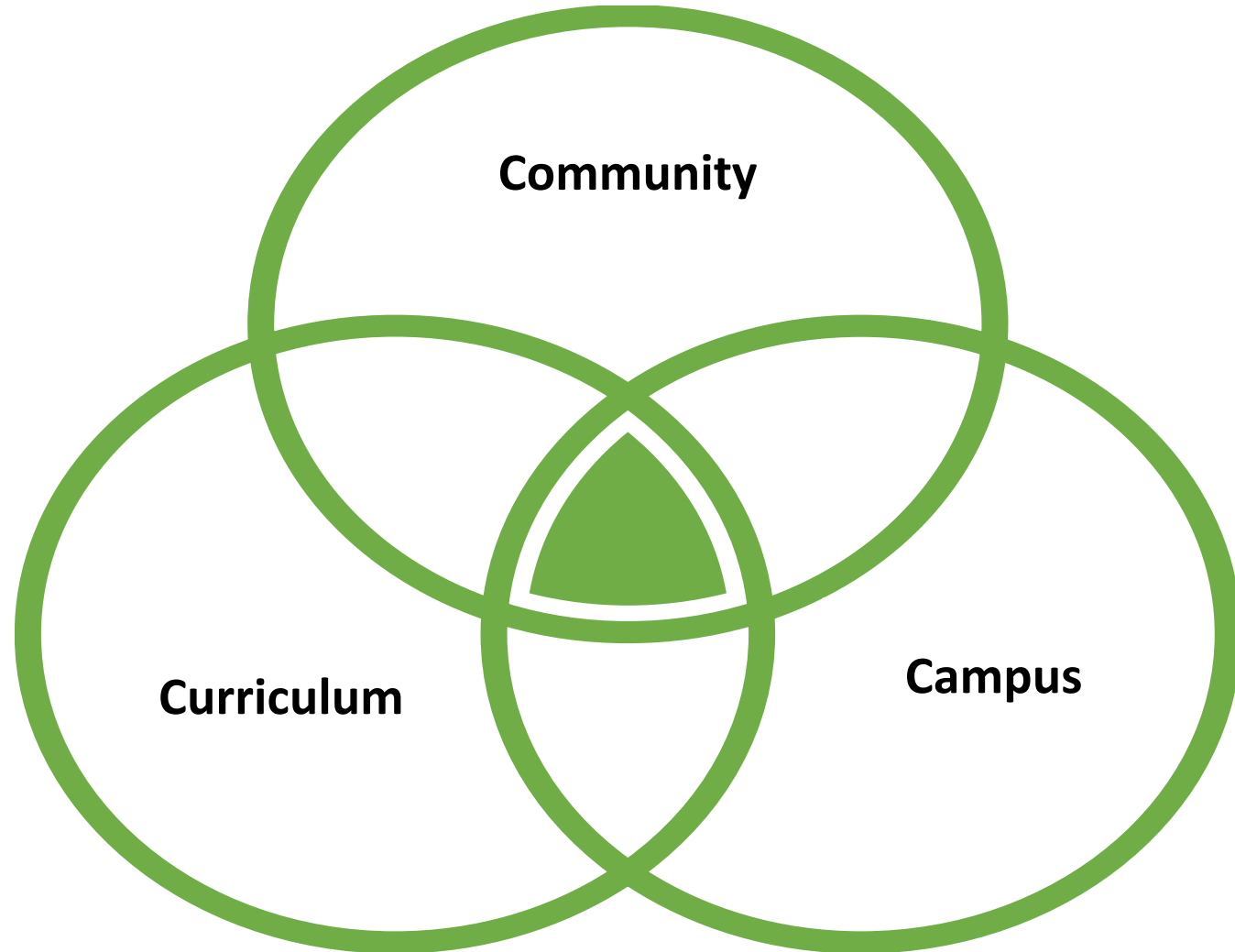
- **Melissa Brady**, Curriculum Integration Leader and Middle School Family and Consumer Science Teacher
- **Jane Emig**, Green Team Advisor, Increase Miller Elementary School
- **Lara Monasch**, Green Team Advisor, Meadow Pond Elementary School
- **Sharon Paige**, Green Team Advisor, Katonah Elementary School
- **Jim Panzer**, Curriculum Integration Leader and High School Science Teacher
- **Mark Thielking**, Member of the BOE Sustainability Committee
- **Steve Wysmuller**, Member of the BOE Sustainability Committee
- **Steve Zoeller**, K-12 Staff Developer for STEAM and Sustainability



KLSD Focus Areas



Framework for Sustainable Schools



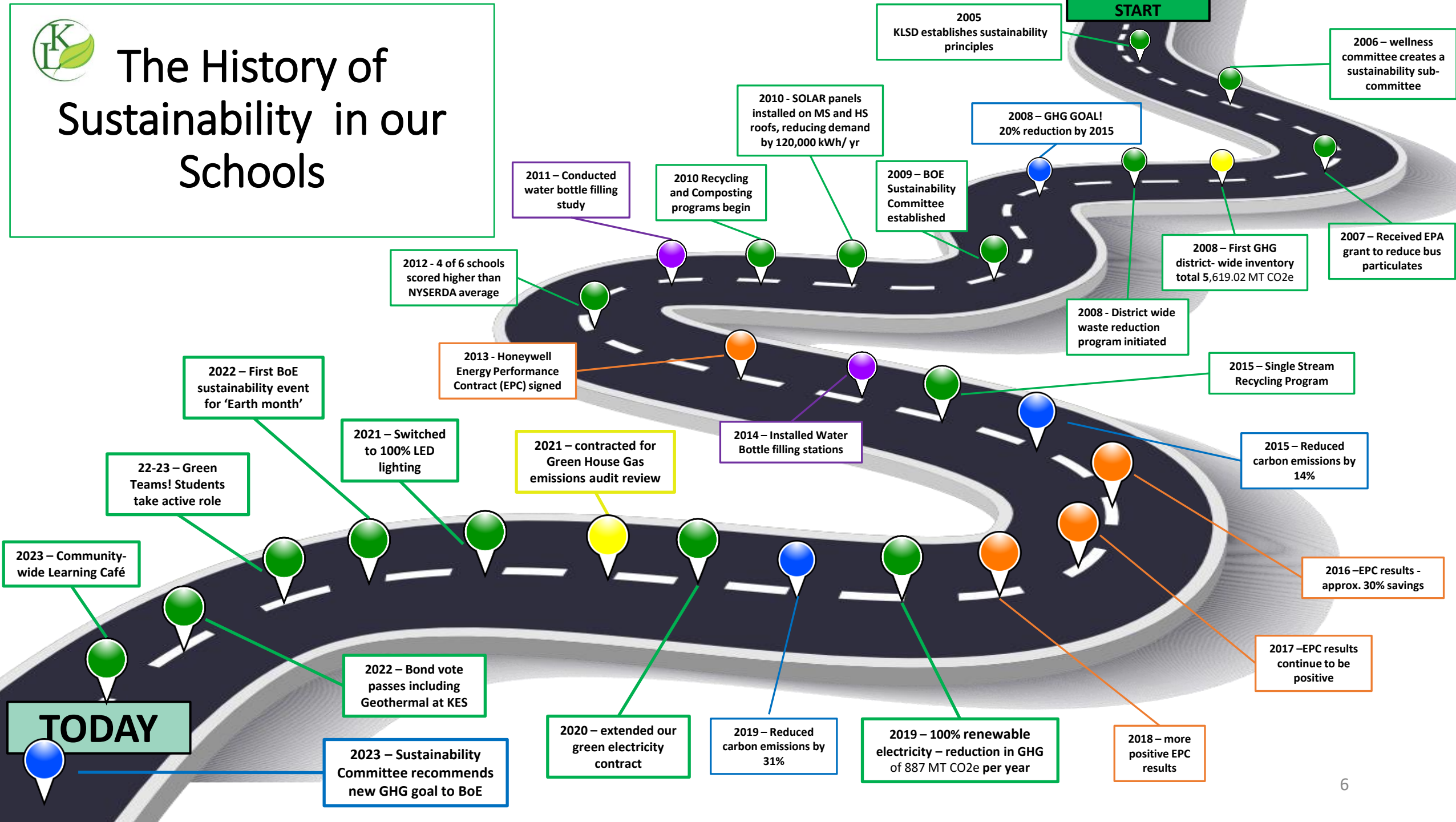
United Nations Definition of Sustainability

Sustainable development has been defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

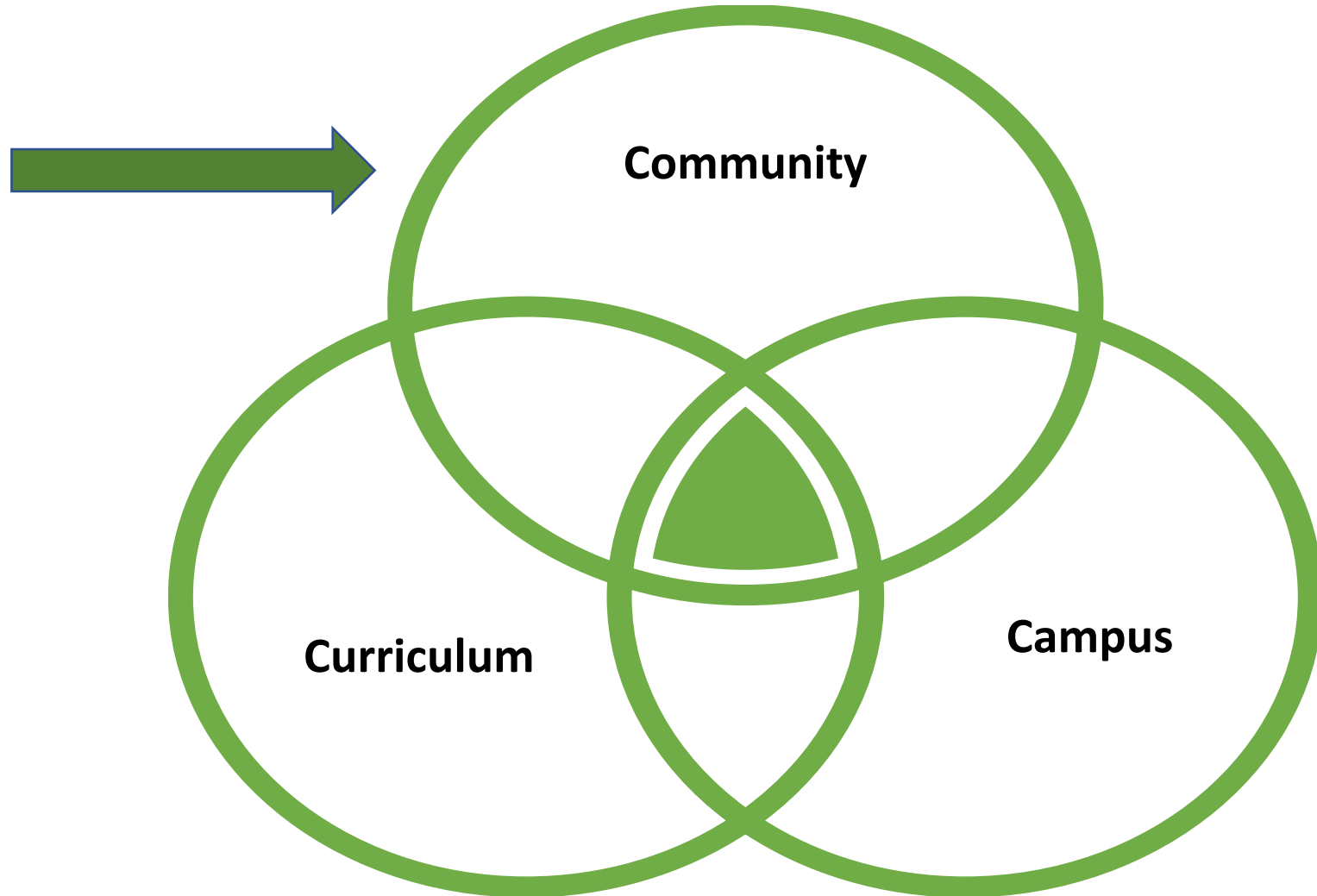




The History of Sustainability in our Schools



Framework for Sustainable Schools



School Community

BOE Leadership:

- BOE Sustainability Sub-committee
- Sustainability Policies (5410, adopted 2009; 8920, adopted 2008, revised 2012 & 2016)

Faculty Leadership:

- Sustainability Leader positions
- Staff Developer position
- Sustainability In Our Schools Committee

Student Leadership:

- District-wide Green Team
 - Sustainability Clubs at each school
 - Student members come together at the building and district level



Teacher Leadership Team

Melissa Brady, Curriculum
Integration Leader, Middle
School Family and
Consumer Science Teacher

Jim Panzer, Curriculum
Integration Leader, High
School Science Teacher

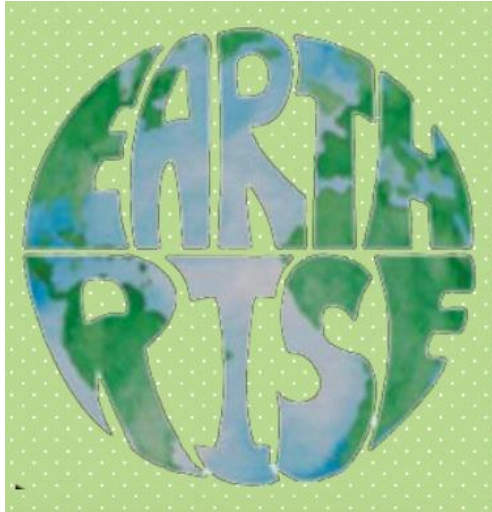
Steve Zoeller, K-12 Staff
Developer for STEAM and
Sustainability



District-wide Green Team

- Students and teacher advisors from all five schools
- Focus on student voice and action
 - Student Panel on February 17th Superintendent's Conference Day
 - Student session on Workshop Wednesday at the High School

Green Team clubs are active in every school!



JJHS Earth Rise

- Clothing Drives
- Lip Balm and Salve sales
- Two Finalist Teams for the Bedford 2030 Greenlight Awards

JJMS Green Team

Spreading the word about caring for the planet, the animals and the people on it

Ongoing project to promote change from plastic to paper cups



Green Team clubs are active in every school!

Katonah Elementary

- Planning Walk-to-School Wednesdays
- Looking at ways to reduce paper waste in bathrooms

Meadow Pond

- Created infomercials for Meadow Pond Live
- Presented at Community Meetings (assemblies)

Increase Miller

- 3-5 Green Team and K-2 Green Team Jr.
- Planning assemblies with skits on sustainable behaviors

Larger Community

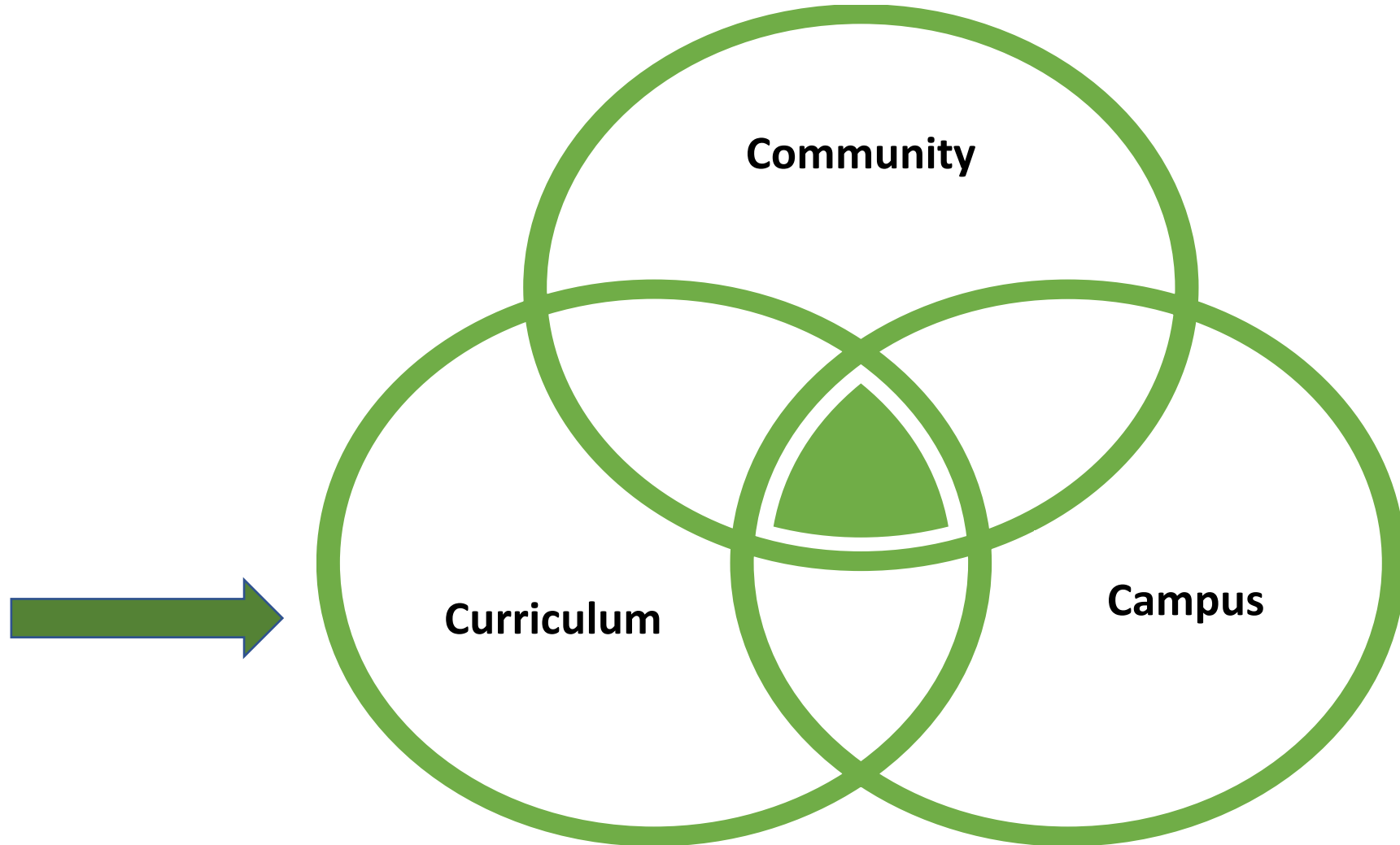
Organizations:

- Bedford 2030
- Lewisboro Sustainability
- Sustainable Westchester
- Climascope Project
- World Savvy
- Vassar College
- Institute for Humane Education

Community Engagement:

- Sustainability Celebrations
- BOE Presentations
- Learning Café (April 19th)
- Student Club events
- Participation in budget and bond process and votes
- District-wide communication about actions and efforts

Framework for Sustainable Schools



United Nations Sustainable Development Goals



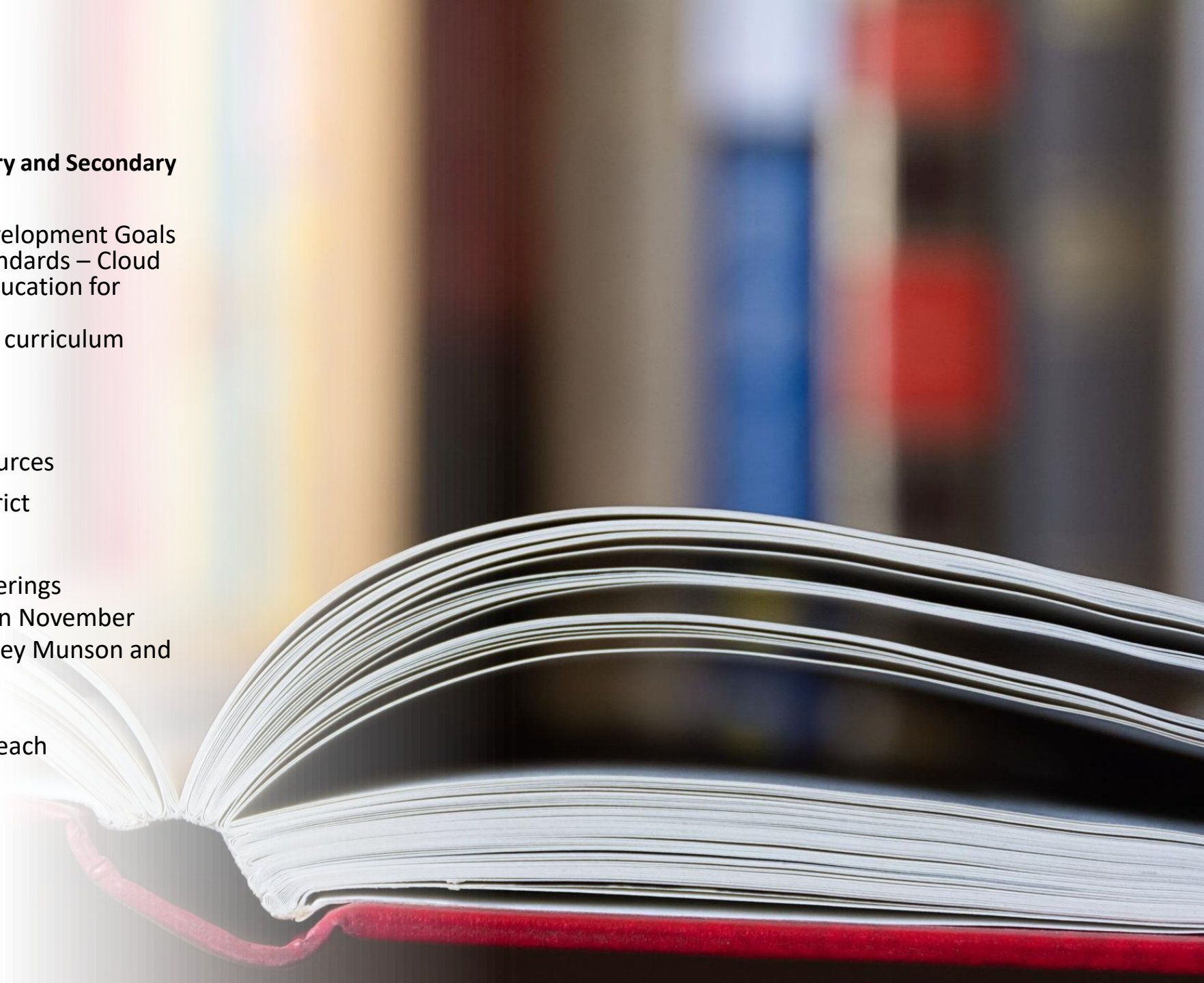
Curriculum

Curriculum Integration Leaders: Elementary and Secondary

- Developing awareness of:
 - United Nations Sustainable Development Goals
 - Education for Sustainability Standards – Cloud Institute, US Partnership for Education for Sustainable Development
- Developing and sharing resources for curriculum integration
 - Curriculum design template
 - Schoology group
 - Padlets filled with teacher resources
- Connecting educators across the district

Professional Learning:

- Superintendent's Conference Day offerings
 - Keynote with Cheney Munson in November
 - Small group sessions with Cheney Munson and KLSD teachers
 - Student panel
- Book study: The World Is What We Teach
- Staff Developer support
- Consultant support
- Sharing of individual teacher projects



Curriculum
and
School
Learning at
Each Level

High School

Middle School

Elementary Schools



Cross-level Curriculum Connections

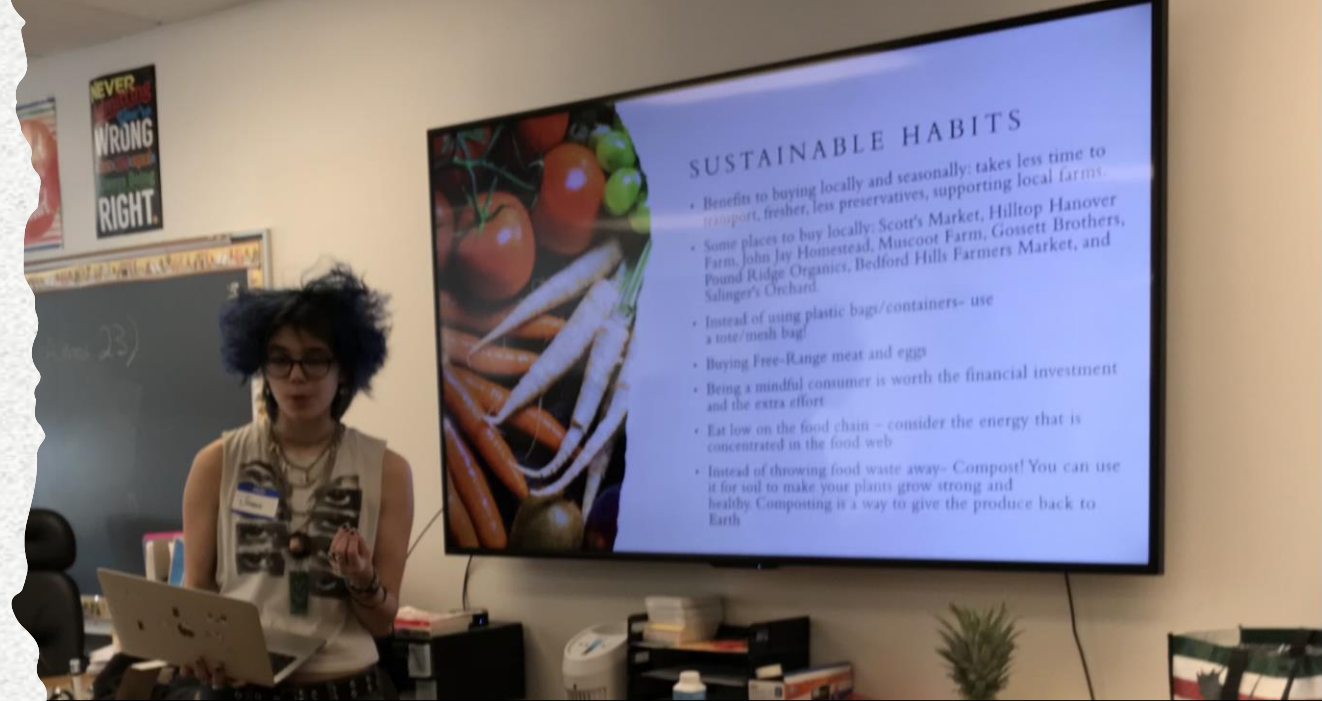
High school students visited elementary students to teach about sustainability through the Passive House Project.

Elementary, middle, and high school students presented on sustainability issues related to food at Workshop Wednesday for JJHS Juniors and Seniors.

High School

Highlights:

- Humanities Research
- Science Research
- Environmental Science
- World Language
- Wilderness Class



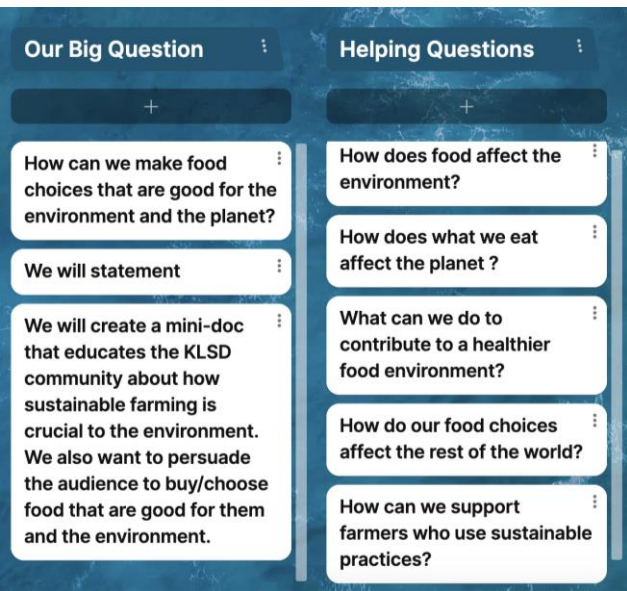


Middle School

Middle School students are creating educational media and action projects to answer the question:

How can we make food choices that are good for the environment and the planet?

Connection
with **Hilltop Hanover Farm
and Environmental Center**



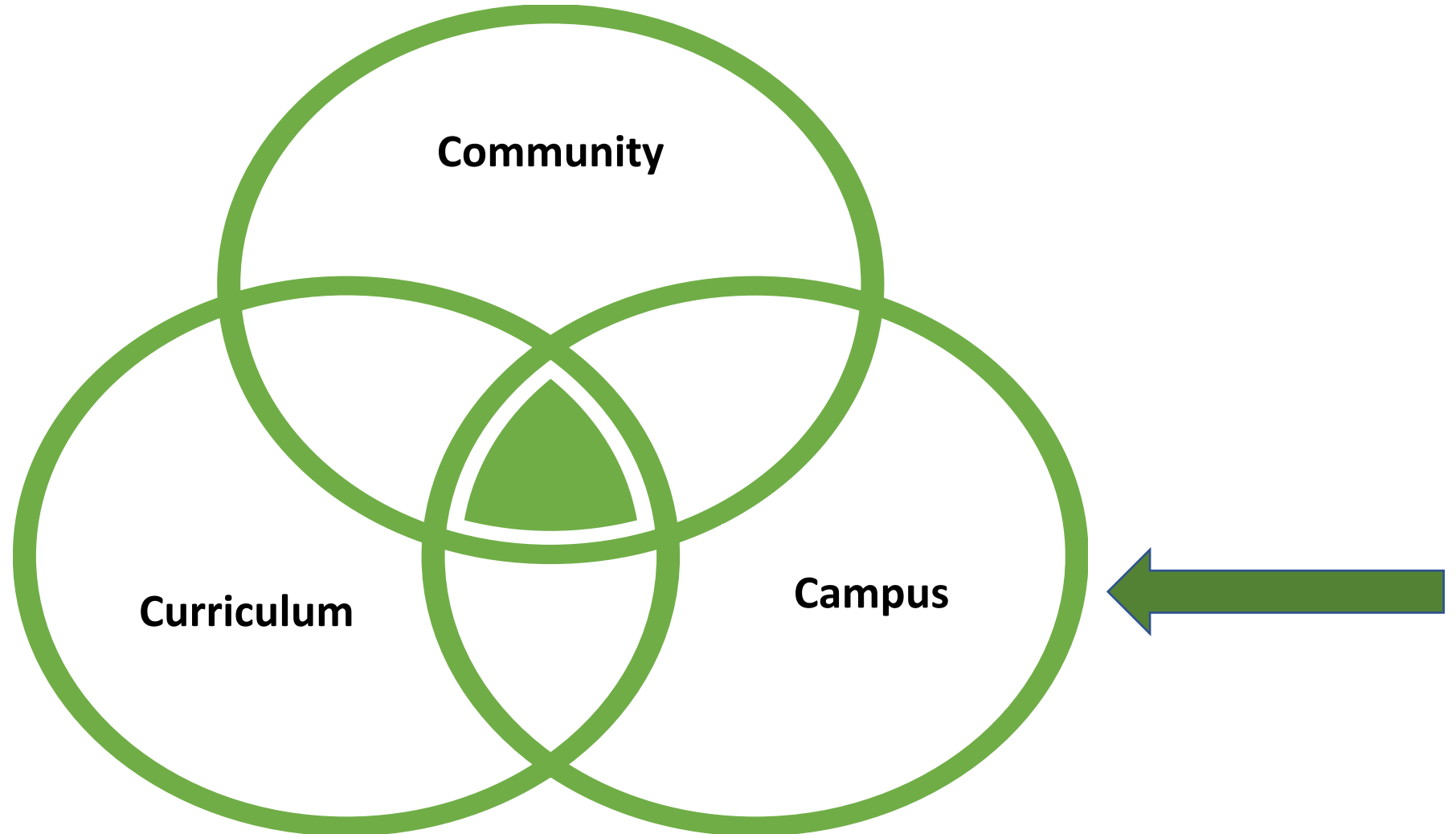
Elementary



Highlights:

- Meadow Pond Kindergarten students study wind turbines
- Increase Miller 4th Grade students create Earth appreciation art projects from recycled materials
- Katonah Elementary students work in the garden to learn about plants and the seed-to-seed cycle
- Science units on energy, weather & climate, plant & animal relationships

Framework for Sustainable Schools





Campus

- Greenhouse Gas Emissions Reports
- Facilities
- Transportation



New NYS
Legislation:
Climate
Leadership and
Community
Protection Act
(CLCPA) and
School Bus
Requirements

40% reduction in Greenhouse Gas emissions by 2030

85% reduction in Greenhouse Gas emissions and a carbon neutral economy by 2050

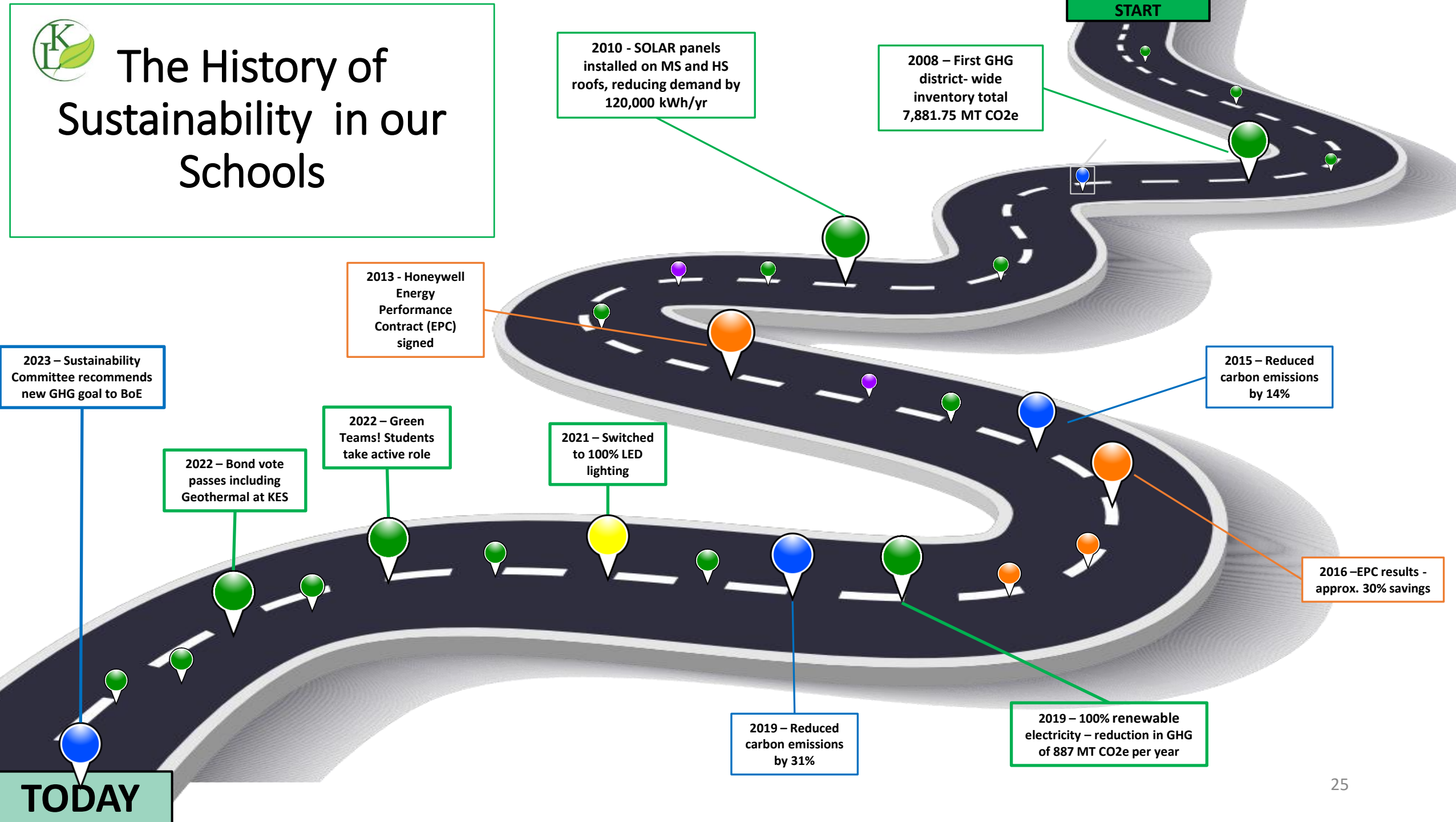
70% renewable energy 2030

100% fossil free electricity by 2040

All new school bus purchases must be zero-emissions by 2027, Fully electric fleet by 2035



The History of Sustainability in our Schools



Types of Emissions

The Greenhouse Gas Protocol recognizes three distinct categories of emissions as follows:

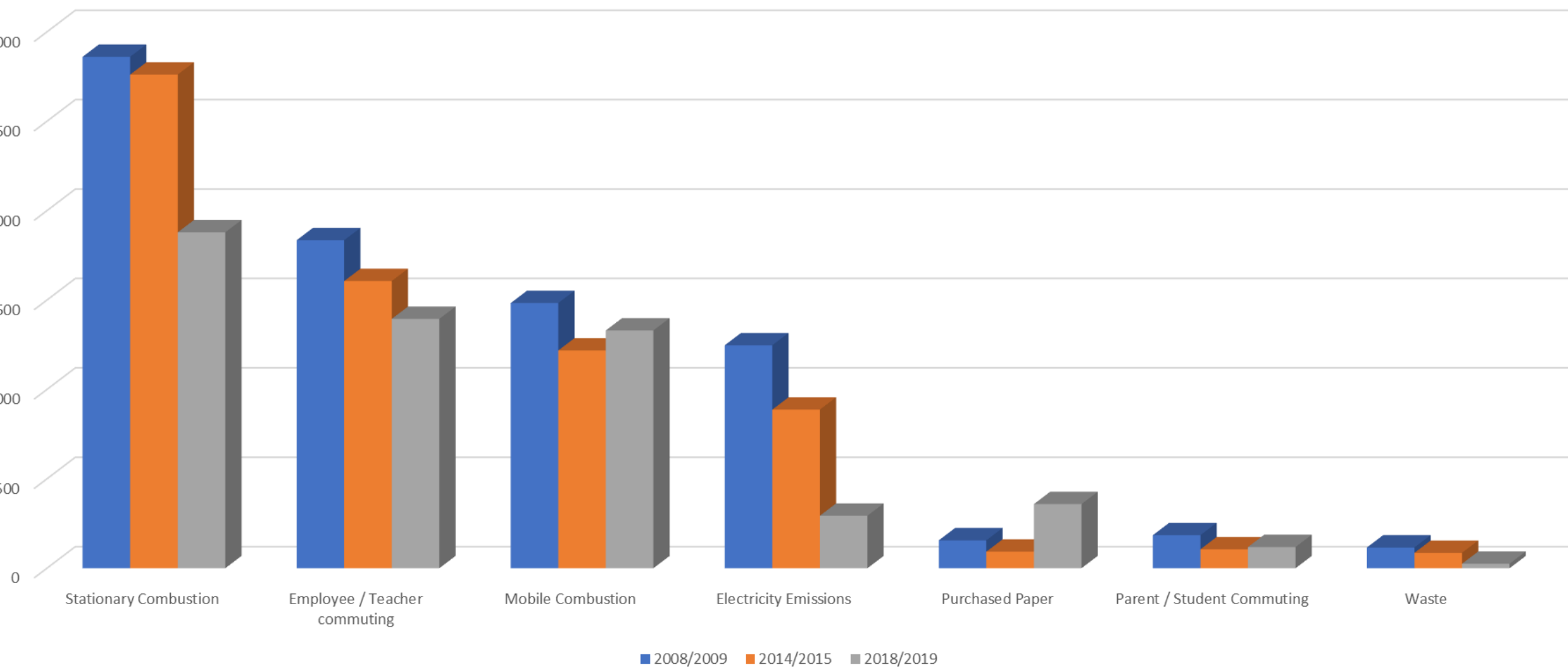
- **Scope 1** emissions are defined as emissions generated onsite from the activities an organization owns or controls.
- **Scope 2** category includes indirect emissions generated from purchased energy.
- **Scope 3** emissions are all those emissions an organizations responsible for, but which happen outside of its walls and are controlled by other parties up and down the value chain.

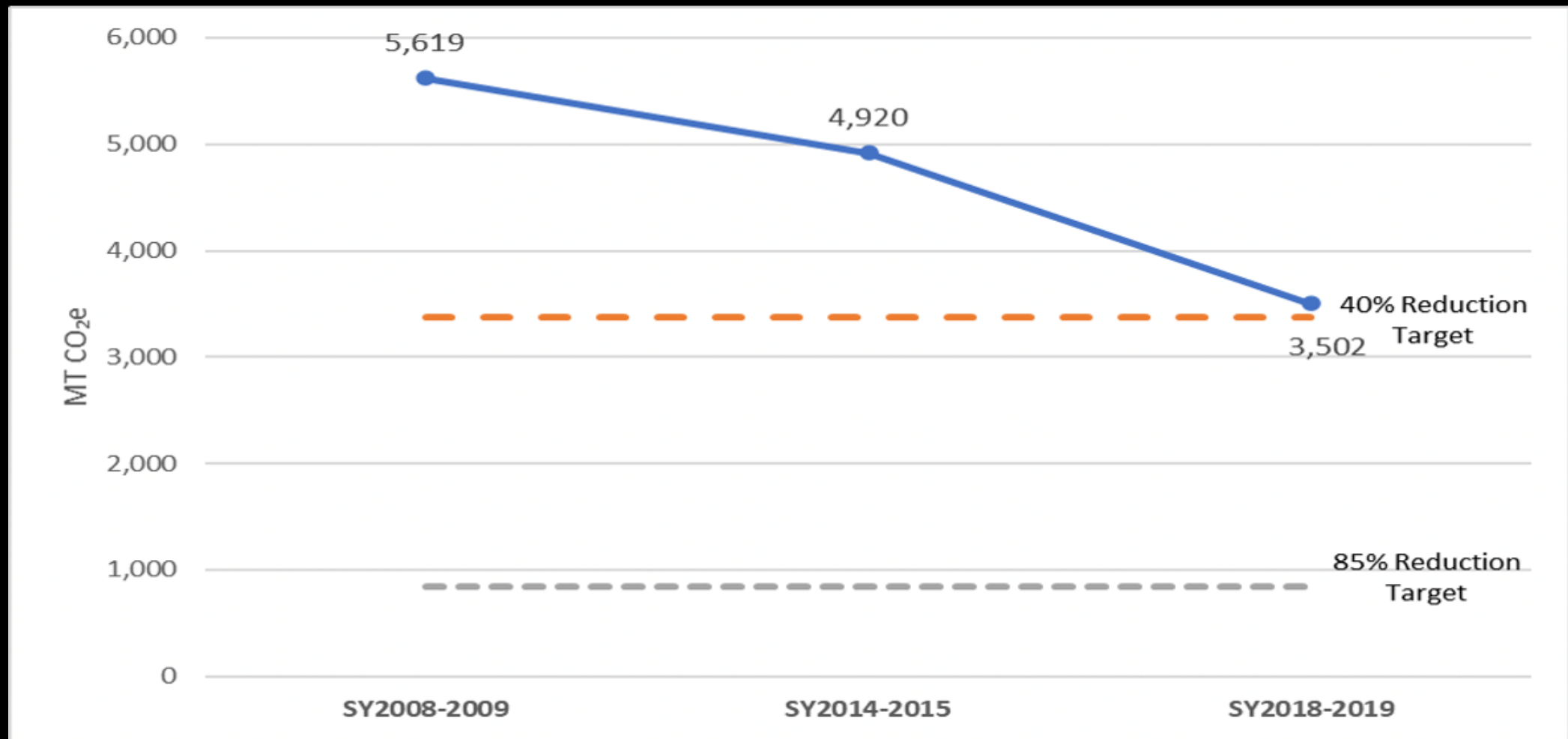
KLSD Reported Emission Types

| Scope 1 | Scope 2 | Scope 3 |
|---------------------------------------|-----------------------|--------------------------------|
| Stationary Combustion (Heating) | Purchased Electricity | Teacher / Employee Commuting |
| School Buses | | Parent / Student Commuting |
| Maintenance Fleet (trucks, equipment) | | Waste Disposal - Landfill |
| Building and Mobile Refrigerants | | Purchased Paper (Supply Chain) |

Measuring Our Emissions

KLSD CO² Emissions by Type





Greenhouse Gas Emissions Reports

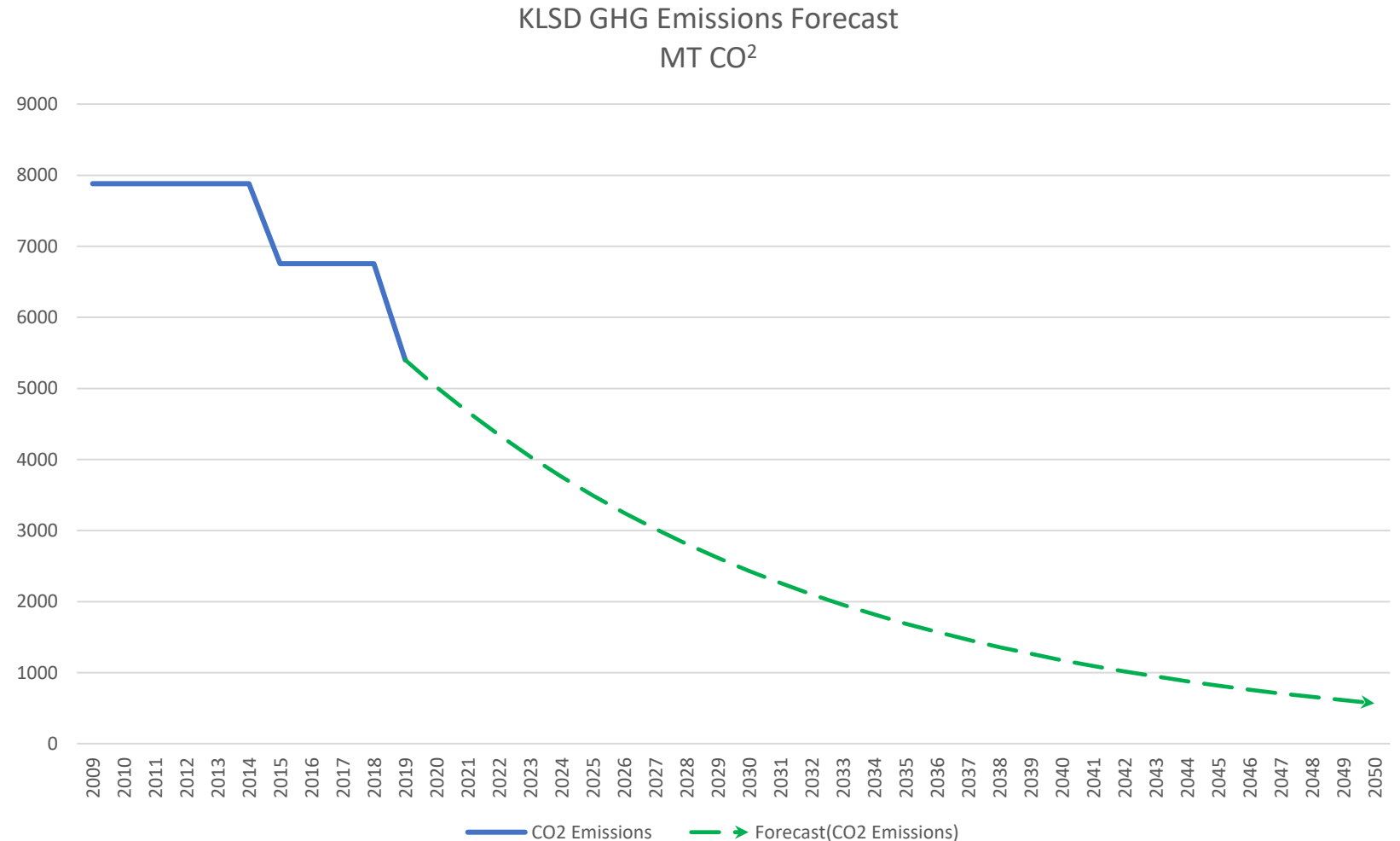
The background image shows the interior of a large, arched greenhouse. The structure is made of a dark metal frame covered with translucent plastic. Rows of young green plants are visible in the foreground, stretching towards the far end of the greenhouse. The lighting is soft and even, highlighting the repetitive structure of the arches and the uniformity of the plant rows.

Discussion of New Greenhouse Gas Emissions Proposal

District CO² Emissions History and Forecast

District Initiatives that will contribute to the reduction of our GHG Emissions

- Conversion of Aging Infrastructure at end of useful life
- Transition to zero-emission school buses
- More efficient commuter transportation (Increase in the number of EVs & more efficient fuel burning engines)
- Investment in EV charging stations
- Continued commitment to purchasing 100% fossil free energy



Next Steps on our Journey

A wooden boardwalk made of light-colored planks curves through a coastal dune landscape. The path is bordered by dense green grass and low-lying vegetation. In the background, rolling sand dunes are visible under a cloudy sky. The overall scene is serene and natural.

- Campus planning to meet or exceed CLCPA targets
- Continued engagement with the BOE Facilities Committee
- Strengthening and expanding connections to community organizations at the local, regional and national levels
- Expanding curriculum work to impact all students at every level
- Expanding opportunities for professional learning for all faculty

Thank you to our Community Members

Community members on the BOE Sustainability Sub-committee:

- Steven Lichtin
- Kim Rosenberg
- Mark Thielking
- Steven Wismuller

BOE Trustees:

- Rory Burke
- Julia Hadlock
- Catharine Oestreicher

Thank you for your sustained commitment to sustainability!

