

Saint Agnes School - The NEED For Green

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We are sixth graders from St. Agnes' energy team. We have worked to accomplish several goals this year. We taught our school about the uses of energy and nonrenewable versus renewable sources through an energy carnival. We had booths where students went up to and learned about energy in fun ways. We continued to work on reducing idling on our school campus. We were invited to train about 60 bus drivers at Miller Transportation about Idling and the owners of the company incorporated our ideas and had all their drivers sign an agreement not to idle on any school campus in the city except in extreme situations. We handed out notes to parents at dismissal explaining why they shouldn't idle. We measured the surface temperature of our blacktop, soccer field, and roof using an infrared thermometer. We painted a section of the blacktop a lighter color to see if the temperature was different from the regular blacktop. We visited Male High School to learn more about urban heat islands and their study on reducing the heat in them. We presented a powerpoint presentation to our Buildings and Grounds committee about urban heat islands. We invited a member of KAIRE to talk to us about how the air quality can transition depending on our actions. We won the Hope in Action award and spoke at the Community Awards Presentation and we went to Assumption High School to share what we have been doing in our energy team with their energy team.

Goal #1

Educating our Community



Our first goal was to educate our school and local community about energy use. We held a Green Apple Day where our entire school worked to reduce our carbon footprint within the building. We kept our lights turned off all day in the building, our cafeteria served cold lunches so that our ovens wouldn't use energy, and we went outside for the first half of the day and participated in a variety of energy related activities. These activities included our Energy Carnival, educational programs with First Responders, a service project painting flower pots and planting flowers then taking the plants to Nazareth Home, we asked the local Master Gardeners Association to do activities on composting and vermiposting and we worked with the Earth and Spirit Center to help with maintaining our wetlands and gardens. We planned these activities for the entire school to participate in and learn about energy and our environment.

Goal #1

Student Leadership

We spoke at The Kentucky Interfaith Power and Light dinner where we received the Hope in Action award. This award is given to an organization instilling Environmental Consciousness in the community. We gave a brief speech about the projects we have been doing and about our Energy Team to the community members in attendance.

We also spoke at Assumption High School where we shared our goals and projects. We shared about our Energy Club and all the activities we continue to work on.



Goal 1 continued

Energy Carnival

Activities and Tasks

- ❑ We held an Energy Carnival for students, parents and our community.
- ❑ We invited first responders so they could educate students on equipment.
- ❑ We went on hikes to our wetlands and participated in service projects.
- ❑ The energy club had booths that taught about energy as participants visited.

Energy Content and Resources

- ❑ NEED youth awards program guide
- ❑ Carnival wheel for “Wheel of Energy”
- ❑ Aluminum cans with energy sources taped on them for “Energy Knockdown”
- ❑ Buzzers for “Energy Jeopardy.”
- ❑ We played Polar Bear Around the Ice Hole



Goal #2

Reducing idling on our school campus



Our second goal was to advance our project on eliminating idling on our campus. Last year we presented to Miller transportation to try to get a no idling policy with their bus drivers. They invited us back to talk to the bus drivers at their training session. We explained how idling can harm student's lungs and the buses themselves. The owners of Miller Transportation decided to have their drivers sign a contract saying they would not idle except in extreme circumstances on any school campus within the city. The energy club also handed out pamphlets to parents picking up their children in afternoon carpool. The pamphlets informed the adults about the risks of idling and encouraged them to turn their engine off.

Miller Transportation Presentation

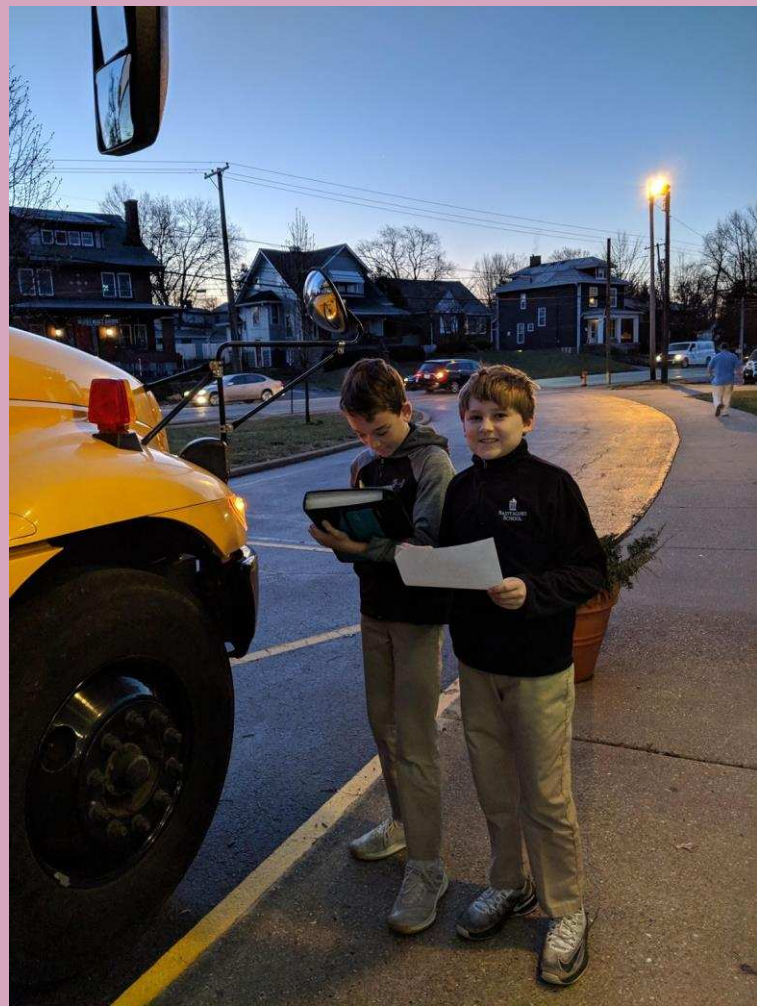
- ❑ We explained how idling can harm student's lungs.
- ❑ We also provided alternatives to idling.
 - ❑ Instead of running the heater, the bus drivers could install a thermal storage system or a generator.
 - ❑ Instead of running the vehicle's air conditioning they could use a battery AC.

Energy Content and Resources

- ❑ Idling pamphlets
- ❑ Handed out Lifesavers to idling cars with a pamphlet explaining the hazards of idling.

Goal #2-Student Leadership

- ❑ We were invited by Miller Transportation to come and train the bus driver's about the effects of Idling in August. Miller was so impressed that they had all their drivers sign a contract agreeing not to idle at any school in Louisville, KY.
- ❑ Watch us on the local news! <https://www.wlky.com/article/louisville-students-simple-idea-to-stop-bus-idling-earns-them-environmental-award/29415913>



Goal #3

Reducing the Urban Heat Island



Our final goal is to help reduce Louisville's urban heat island, starting on our school campus. We visited Male High School to learn about their project on urban heat islands. We took measurements with an infrared thermometer of our blacktop, and soccer field. We painted a section that gets a lot of traffic to test the durability of the paint and compare the temperatures of the painted area, the black top, and the grass. In the end we wanted our school too either permanently paint the whole parking lot a lighter color or choose a different material for our parking lot. These solutions were both to decrease the amount of heat absorbed from our parking lot. We asked KAIRE to talk to us about air pollution and how humans contribute to it. As well as collecting data from our blacktop and soccer field we also collected data from one of the roofs outside a classroom. We invited MSD to speak with us about other options to control water runoff. MSD has agreed to help us install a rain garden in the center of our parking lot to help with water runoff and cooling of the parking lot.

Urban Heat Island

- ❑ We presented our data to St. Agnes' Building and Grounds committee in order to get approval for painting part of the parking lot a lighter color.
- ❑ We then painted a fraction of the blacktop white, to reflect heat instead of absorb it and use this area as our test strip.

Energy Content and Resources

- ❑ Infrared thermometer
- ❑ White color paint

Student Leadership

- ❑ We presented to the buildings and ground committee to get permission to paint.
- ❑ We collected data, comparing the white paint, the blacktop and the grass area.









Speaker from KAIRE


Green Day of Service and Learning



Donating plants from our Green Day of Service and Learning

Miller Transportation's Idle Free Agreement

All bus drivers signed this agreement!



The exhaust from idling vehicles and buses poses an often unnecessary health risk for children, drivers, and the community at large. In addition to these health risks, idling wastes fuel and impairs air quality.

This policy is intended to protect the health of students, drivers, the public, and the environment from exposure to vehicle exhaust; reduce wear on vehicle engines; decrease fuel consumption; and minimize operational costs. The responsibility to meet this anti-idling policy is all of ours. Our mind-set should always be, "whenever possible, shut it down!"

School bus drivers must:

Turn off the bus in all circumstances where it is not necessary to keep the bus running.

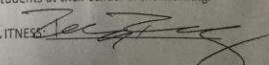
Examples of this are:

- Immediately after all pre-trip inspections and prior to leaving for your route/trip
- Between routes
- While waiting to load students prior to a route or trip
- Anywhere in which you will be stopped for more than 1 minute (except as provided below)

Exemptions:

The policy of turning off vehicles when stopped does not apply for the period or periods during which idling is necessary under the following circumstances:

1. To provide for the safety of vehicle occupants, such as in cases of extreme cold or heat conditions.
2. When using lift equipment during loading or unloading of children with special needs.
3. When stopped in traffic, such as when waiting at a traffic light.
4. When specific traffic, safety, or emergency situations arise.
5. When stopped while in line to drop off students at their school in the morning.

DRIVER: _____ WITNESS: 

Evaluation

- ❑ We educated students and faculty about energy on our News, at the Building and Grounds Meeting
- ❑ We held booths for other students to come and learn at our “Green Apple Day of Service and Learning”
- ❑ We informed and encouraged parents not to idle by encouraging them to be lifesavers and be idle free. We handed out lifesavers and fliers that gave facts on clean air.
- ❑ We helped Miller Transportation install an idle free rule for their bus drivers.
- ❑ We collected data to assess the temperature of our parking lot and of the roof on our building.
- ❑ We presented to a committee about urban heat islands.
- ❑ We invited a member of KAIRE to teach us about air pollution.
- ❑ We painted a section of our blacktop in order to determine if lighter colors reduce the temperature of the parking lot.
- ❑ We presented to Assumption High School to share what we are doing with our Energy Team.
- ❑ We invited a speaker from MSD to teach us about cooling the Urban Heat Island.