2017-2018 Discovery Woods Project
We are the Discovery Woods YES! Team

- Our YES! coach is Heidi Auel
- Seven students were members of our YES! Team throughout the year
SUMMARY OF ACCOMPLISHMENTS

We identified a energy efficiency project our school and community could benefit from, then did an analysis of the energy savings.

Energy Analysis Work

Estimating cost savings of replacing library and computer lab lights

**Current cost of electricity in library area**

Wattage of lights:
Hours lights are on:
Convert to Kilowatts:
Usage per month (multiply by how many days lights are on):

**kWh/month:**
Cost per kWh: .0830 (8.3 cents)

Cost per month for current lighting:

**New cost of electricity in library area**

Wattage of new LED lights:
Hours lights are on:
Convert to Kilowatts:
Usage per month for new lighting (multiply by how many days lights are on):

**kWh/month:**
Cost per kWh: .0830

Cost per month of new lighting:
Savings per month:
Students devised a plan to show the benefits of LED lighting compared to other types of lights. They have four types of bulbs and show with a wattmeter the comparison between them.

After retrofit

Practicing for the EE exhibition with halogen, LED, incandescent, and CFL bulbs
GOAL SETTING & TEAMWORK

• The students worked together on figuring out the KWh savings and are still working together on the presentation for the annual EE exhibition. Students together devised the idea to show the differences in watt use per light, as they had been shown at the fall conference.
• Students worked together to brainstorm pros and cons of each type of bulb use.
COMMUNITY ENGAGEMENT

• We have lessened our school’s carbon footprint and will provide an example for how to retrofit historic buildings to the community by inviting the city planner and opening the school up for tours as requested.

• The team has learned that it takes creative solutions to make an older building more efficient, that the cost of innovation starts high but can decrease over time.
We learned that being energy efficient costs more at first, but saves you money at the end. We learned how climate change is caused, by CO2 gases being trapped in the atmosphere. That sea levels are rising due to glaciers melting, not icebergs. By trying to use less non-renewable resources through changing our light bulbs we saved energy emitted less CO2.
ECOLOGICAL IMPACT & LITERACY

Metrics of Before LED Light Project and After

Cost of Electricity Use (average)

Amount of kWh

Dollars

Kilowatts

Before
After

Before
After
WOW! FACTOR

• “Our building was built during the depression and is historic in the town of Brainerd. The building is not efficient so we are making it more efficient with new lighting.”
• We can educate the community about the cost benefit of LED lighting
Thank You for your good work to make our planet a better place to live!
YES! PROJECT REPORT