YES! Project Guide

TURN DOWN THE THERMOSTAT

Category: Energy Conservation

Approximate Cost: 0

Desired Results

Project Goal: To save energy and money by reducing the heating of the school building

UNDERSTANDINGS	ESSENTIAL QUESTIONS
Students will understand… The relationship between heat and cost. The necessity of public perception for effective change. Alternative methods for keeping warm. Alternative methods for heating and keeping costs down.	How does the school heat its building? How much energy is used in one day to heat the building? How does the school insulate its building? How can students stay warm and still function efficiently? How long does it take for the temperature change when the thermostat is lowered?

Knowledge and Skills Acquisition

Students will know…	*Students will be skilled at…*
What a BTU is and how to calculate cost. How to effectively market a desired outcome. Understand effect of temperature changes on student achievement. Understand preferential temperature for cost and comfort. *How to communicate in a professional manner.* How to build relationships with the community.	Calculating energy use. Communication with administration, social and print media

Data

Impact Evidence

Qualitative (observations and descriptive data):
Pre test survey results of student comfort
Pre test survey results of student dress

Post test survey results of student comfort
Post test survey results of student dress

Quantitative (numerical data):
Pretest average temperature:
- Location A:
- Location B:
- Location C:

Calculated average cost per day for heating

Post test average temperature:
- Location A:
- Location B:
- Location C:

Calculated average cost per day for heating

Savings extrapolated during a full school year.

Timeline

Week one - Research temperature effects/ create surveys/ decide on outline for day/ get approval
Week two - Begin media campaign/ conduct surveys
Week three - Conduct energy monitoring
Week four - Have TURN DOWN THE THERMOSTAT day and tabulate results/ report results

Process

Contact administration for approval
Contact facilities director (custodian) for technical understanding of how building is heated. Also for approval of project.
Discuss reasons for occupants to "care" about project. This could be contests, information, posters,
Create media blitz - look at social media
Create survey for student dress and comfort (pre and post)
Create data table for pretest and posttest energy/cost collection
Monitor energy/cost for 1 week for baseline data
Conduct day / contests/ FUN
Summarize results for media/school dissemination

Resources and Other Tips

Temperature resources
http://healthyschools.cefpi.org/temperature.html
https://iaqscience.lbl.gov/performance-temp-school
https://www.uscranton.com/resources/teaching-tips/controlling-the-classroom-climate/#.WVKHrRPytAY
http://coolcosmos.ipac.caltech.edu/cosmic_classroom/light_lessons/thermal/differ.html
https://www.youtube.com/watch?v=wTi3Hn09OBs

BTU calculators
http://www.calculator.net/btu-calculator.html
https://www.irvingenergy.com/btu-per-dollar-calculator/

Public Relation / marketing resources
http://cahnrs.wsu.edu/fs/wp-content/uploads/sites/4/2015/09/A-Step-By-Step-Guide-to-Developing-Effective-Questionnaires.pdf

TIPS
Can have ugly sweater contest or unique clothing options.
Prizes can be rewards instead of cost items