Thurston High School
AP Environmental Science

Creating continued place-based learning opportunities
for students in all grades
while increasing biodiversity and watershed health
Great Lakes Watershed field course

• National Oceanic and Atmospheric Administration (NOAA) B-WET grant
• Teacher training June 2017

• 20 educators from MI, OH, IL and WI
• Earth Force framework
• Schoolship experiences
• Canoeing the Boardman River to see effects of Dam removal efforts
• Learn about green roofs and other eco-friendly infrastructure in downtown TC
Earth Force Framework

• Step 1 – Community Environmental Inventory
• Step 2 – Issue Selection
• Step 3 – Policy and Community Practice Research
• Step 4 – Goal and Strategy Selection
• Step 5 – Planning and Taking Civic Action
• Step 6 – Review and Share
Community Environmental Inventory

- Energy Audit
- Recycling Audit
- Environmental/Carbon footprint
- Food Waste Audit
- Guided Walking Tour
  - Pervious/Impervious Material
  - Storm Water
  - Water Drainage
- Interviews
- Online Databases
Issue Selection

• Determined Community Strengths and Potential Issues

• Researched Issues further:
  • Explore cause and effect
  • Explore assets and constraints involved
  • Does it meet the goal of improving watershed health?
Issue Selection

• Groups presented potential projects
• Class came to a consensus about which issue to address
• Identified:
  • Questions they still have
  • How they will find the information
  • Who will find the information
Goal and Strategy Selection

• The class decided on criteria for choosing a strategy that students will focus on. Some considerations when identifying criteria for selection of a strategy:
  • **REALISTIC** | will students be able to carry out the strategy given the available resources?
  • **PRECEDENT** | how have others used this strategy before, and how well did it work?
  • **RELEVANCE** | how much does the strategy actually address the project goal?
  • **SIMPLICITY** | how easy or difficult will the strategy be to carry out?
  • **IMPACT** | how likely is it that the strategy will have a lasting impact?
  • **OPPOSITION** | how much opposition will you likely get from other people or organizations?
Planning and Taking Civic Action

Students formed task committees

• Soil type
• Native plant selection
• Equipment budget – determine best vendors
• Permitting for herbicide
• Herbicide choice
• Methods of mechanical removal and disposal
• Meeting with Superintendent for project approval

Fulfilled their designated responsibilities with facilitation from Ms. Hereau
Planning and Taking Civic Action

Developed a project timeline

• Herbicide treatment - no permit necessary (last fall)
• Mechanical removal and/or controlled burn (late winter/early spring)
• Start seeds in greenhouse (late winter/early spring)
• Install plants in garden (spring)
• Install Bird feeders and nesting boxes and observation benches (spring)
• Continued maintenance and planting and spot treat with herbicide (summer/fall)
• Learning lab installations - benches, signage, platform/deck/boardwalk (summer/fall)
• Field trip curriculum design (summer/fall)
• Invite classrooms and schedule field trips (fall/spring)
Still in the removal stage

• Herbicide treatment - no permit necessary (last fall)

• Start seeds in greenhouse (late winter/early spring)

• Mechanical removal and/or controlled burn (sadly did not get permission for burn)
Review and Share

• Here we are!
• What’s next?
• Long-term goals and sustainability
Funding

• Lots of grant writing and a few awards!
  • Cornell Lab of Ornithology Garden Grant - $1000
  • MAEOE Grant - $500
  • NOAA B-WET Grant (through Watershed Field Course) - $300
  • MWEA/MSTA Dan Wolz Clean Water Education Grant - $1000
  • Knight Center for Environmental Journalism Grant - $1000
  • Michigan Lottery Excellence in Education Award 2018 - $500
  • NOAA Planet Stewards Education Project 2018 - $2500
  • MDSTA Mini Grant - $500
  • Plus Generous Donations from the Community!