



IPRO 332

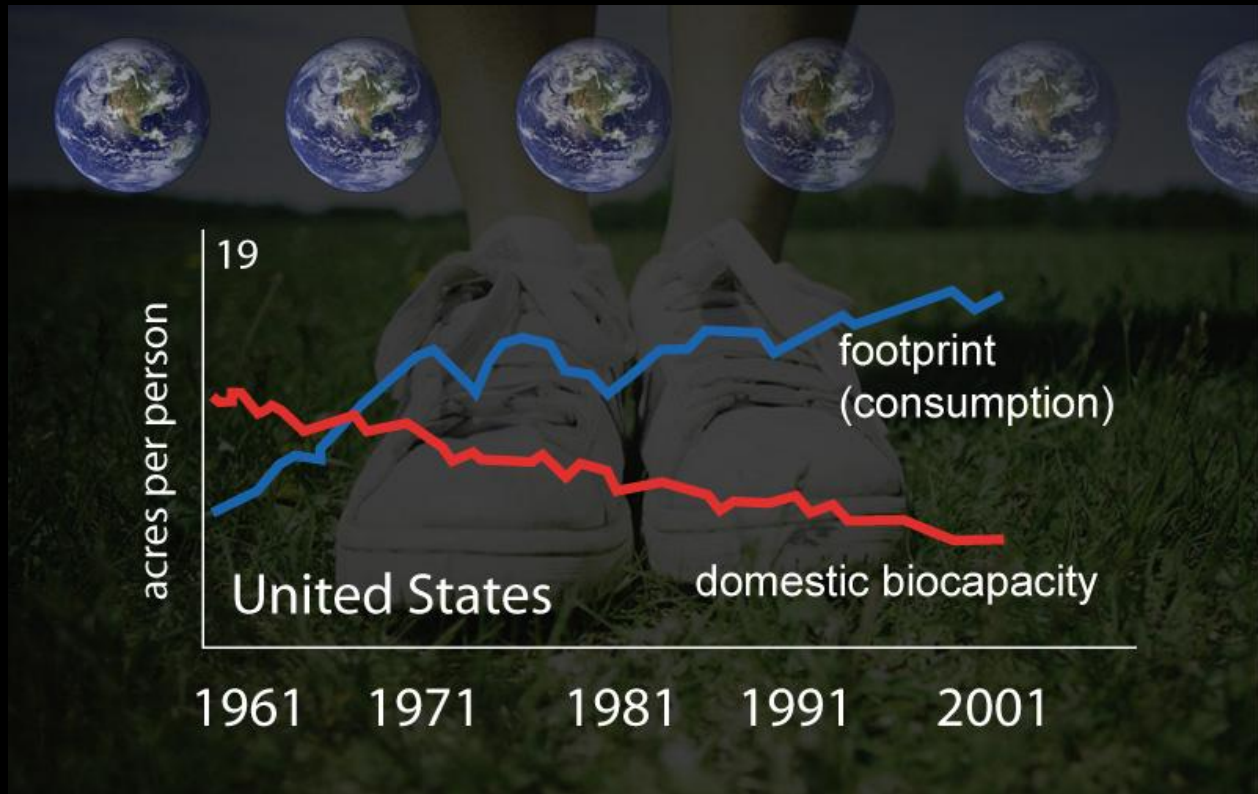
Our Energy Future

Michael LaGiglio
Sarah Leingang
Andrew Martin
Tony Osborn
Sara Pfau
Sasha Romanova-Smith
Kurt Ziegel

Advisor: Jim Braband

1.1 Problem

- Consumers lack knowledge about the effects of their energy choices



1.2 Objectives

- To provide comprehensive information about the way consumer choices affect our environment

Example

Water: 1 lb. of beef = 1 week of showers

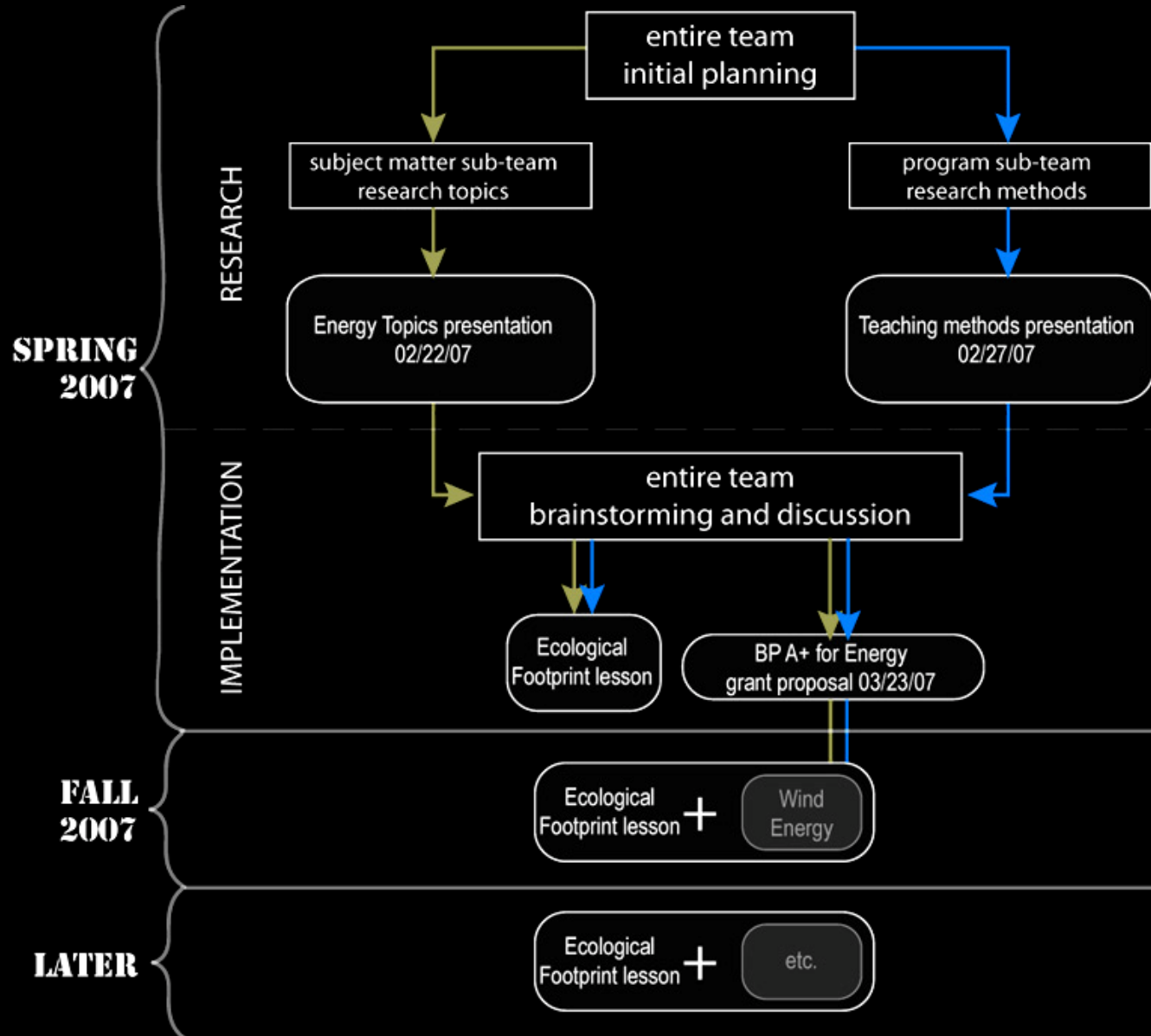
Petroleum: 1 lb. of beef = 1 gallon of gasoline



1.3 Goals

- Create Energy Education Module
- Establish Relationships
- Plan for Continuation

2.1 Team structure



2.2 Subject Matter sub-team

THEMES

Bioremediation, Phytoremediation, Climate Change, Endangered Environments, Energy Conservation - Home, Energy Conservation - Transportation, Non-Renewable Energy Sources, Renewable Energy Sources, Political Influence, Recycling, Waste

FILTERS

Student Interest

Curriculum Gaps

Difficulty to Obtain Expertise

Timeless

Grant Proposal

"Bang for the Buck"

SUBJECT

ECOLOGICAL FOOTPRINT

OUR ENERGY FUTURE
PRO 332

2.4 The Ecological Footprint

- The area of ecologically productive land and water needed to provide resources for one person and to assimilate his or her waste



2.5 Features of the Eco Footprint

- Relatable
- Comparison-based
- Interesting
- Cross-curricular



3.1 Program sub-team

TOOLS

Video, Virtual Environment Simulation, Multimedia Equipment
Humor Teaching Methods, Physical Model, Interactive Museum Method
Construction Project, Programming Activity, Classroom Extension Activity,
Extra-Curricular Activity, Whiteboard Method, Lecture Method

FILTERS

Engaging

Effective

Reusable Materials/
Supplies

Time-sensitive

Comparison-Based

Portable Materials/
Supplies

METHOD

INTERACTIVE MULTIMEDIA



3.2 BP A+ for Energy Grant

- Proposal submitted March 26:
- Fall 2007 “Wind Energy” Module
 - Install a wind turbine on the roof of De La Salle High School
 - Track energy production
 - Report back to class in terms of “Ecological Footprint”
- Expanded Goals:
 - Student Leadership
 - Long-term Planning
 - Bigger, Better Tools
 - Closer Relationship with De La Salle High School

3.3 De La Salle testing

- Day 1: Introduction to the Ecological Footprint
 - Discussion Starters
 - Pre-Test
 - Lecture
 - Calculate Individual Footprint
 - Activity (discuss energy in processing, use, waste)
 - Homework Assignment
 - Post-test



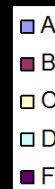
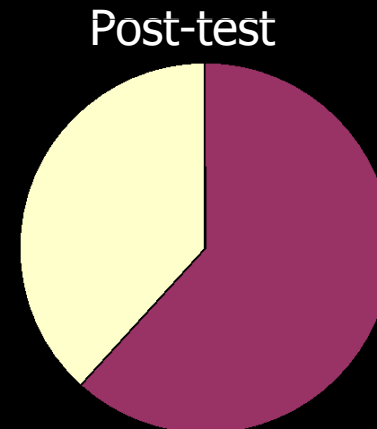
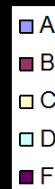
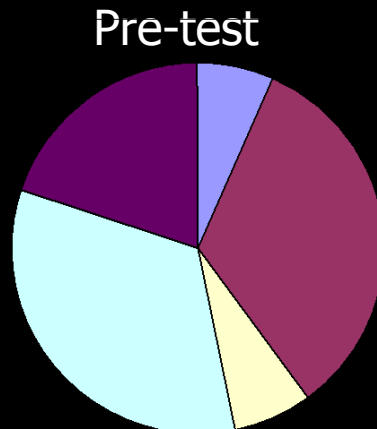
3.4 De La Salle testing

- Day 2: Comparing Ecological Footprint sizes
 - Discussion Starters
 - Quick Review
 - Video
 - Comparisons Activity
 - Evaluations



4.1 Testing accomplishments

- Student evaluation feedback
 - "The video helped me see that others...[also] don't know much about the actual impact one makes on the environment."
 - "[I liked] calculating my own ecological footprint and seeing how it compares to the rest of the people."
 - ""I like learning the amount of energy that I use in a daily basis and its effect on the world/community."
- Performance on the Eco Footprint tests



4.2 Continuation: semester 2

- Fall 2007
- Construct 2 follow-up modules (recommend: parts of EF)
 - One incorporating the Wind Turbine acquired from the BP A+ for Energy Grant
- Expand into the Chicago Public School system
- Design a long-term Sustainability Plan
- Explore possibility of creating a business plan

4.3 Continuation: semester 3+

- Spring 2008 – later
- Construct 2 more follow-up modules
- Find other community groups and interested partners to implement the EF modules
- Implement Sustainability Plan
- Design a business plan, if feasible

4.4 Conclusion

- Produced a portable energy education module that is ready for use in area schools
- Used the feedback and results from the De La Salle classroom testing to improve our tools
- Environmental Science van – portable library for CPS teachers
- Ready for next semester's team to elaborate on



4.5 What we learned

- All team members played a crucial role in the success of the module
- Teamwork and communication were vital assets throughout our process
- Project plan changed and was updated throughout the course of the semester
- Used methods of presenting information that adhered to classroom standards
- Having an impact on the De La Salle students' education was very rewarding





Questions and answers

Thank you for your attention.