Project-Based Learning
A Working Model for Student Engagement

Angela Wall and Bernard Green

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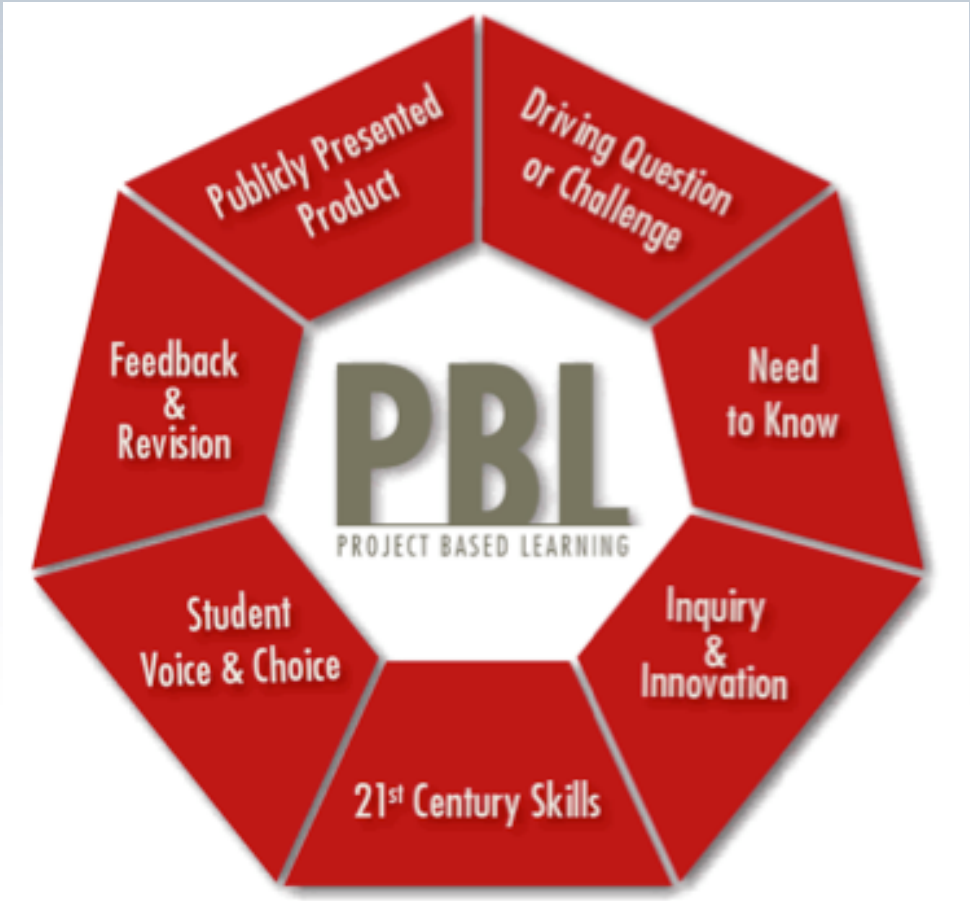
Solutions to the Dropout Crisis

National Dropout Prevention Center/Network at Clemson University

What is Project Based Learning?



Based on an Open-Ended Question or Challenge

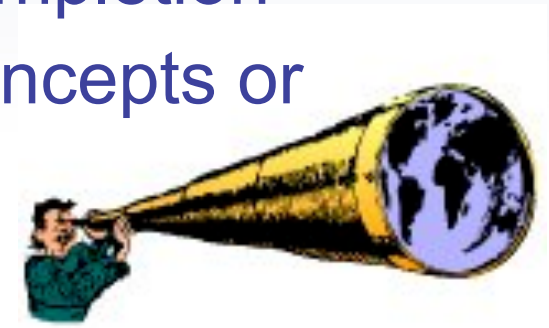
- Significant Issues
- Debates
- Questions
- Problems
- Can be Physical or Philosophical in Nature

Creates a Need to Know

- Traditional projects present concepts first then expect students to apply them later

PBL on the Other Hand…

- Presents a vision for a finished project and lets students decide the pathway to completion
- Forces students to discover the concepts or skills they need to know



Requires Student Inquiry and Innovation

Students must collectively…

- Recognize what information they know
- Identify what information they need to know
- Investigate utilizing sources outside the classroom
- Obtain **skills** needed to complete the project

Student Voice and Choice

Students learn to…

- Independently gather information
- Explain their positions to teammates
- Make and defend choices
- Compromise with teammates
- Critique the work of others appropriately
- Take responsibility for their work

Incorporates Feedback and Revision

Students Use…

- Self-Evaluation
- Teammate Evaluation
- Peer Evaluation
- Critiques

To…

- Improve their skills
- Produce higher quality projects

Results are a Publicly Presented Product

Students…

- Demonstrate what they know
- Hone their presentation skills
- Market their "solution" to the problem
- Open their data and conclusions to scrutiny
- Are critiqued by area business and industry leaders
- Answer impromptu audience questions
- Learn appropriate dress and mannerisms

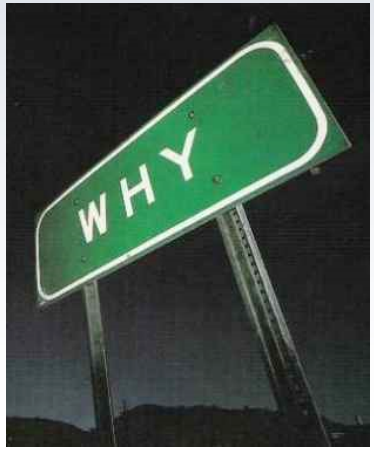
And the Most Important Aspect of PBL….21st Century Skills

- Critical Thinking
- Problem Solving
- Collaboration
- Communication
- Team Work
- Listening
- Presentation Abilities
- Entrepreneurial Skills
- Confidence

Why Use PBL?

Students…

- Deeper understanding of concepts
- Build vital workplace skills
- Develop lifelong learning habits
- Network with adult mentors
- Experience audiences beyond the classroom
- Are motivated by relevancy
- Get **Better Test Scores** in other subjects!



How is PBL Best Taught?

When…

- Teams are composed of 3-4 students
- Teachers act as the “Guide on the Side” and resist being the “Sage on the Stage”
- A learning community of interdisciplinary teachers can collaborate in teams
- There is a nontraditional atmosphere that encourages movement and oral communications

How Can I Use It?

- As the entrée or side dish of knowledge attainment
- Projects can vary from a few hours to an entire semester in length
- At all grade levels and subjects
- During a traditional class, after school, club, camp, service project, etc.
- Great for career and technical education (CTE) or alternative programs

Results of PBL

Math – Introductory Algebra

- 92% Success Rate
- 18% Better than Semester Average
- Averaged 6 Points Higher on Finals

English – Composition Strategies

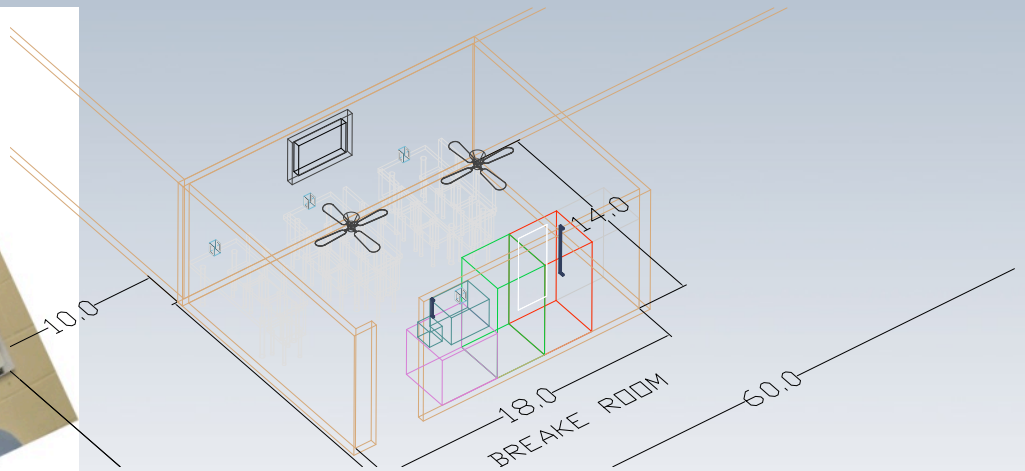
- 8% Better than Semester Average
- 100% Minority Success Rate

Tech/Science – 81% Success Rate

Examples of PBL

- In-Class Projects - Technology Gateway and others
- Community - Carowinds “Education Days”
- Hands-On Camps – Camp kill-A-watt
- Competitions – SumoBot Wrestling
- Campus-Based – Time Capsule, Energy Auditing, Composting, Gardens, etc.
- Business and Industry – R & D Projects

Classroom Projects

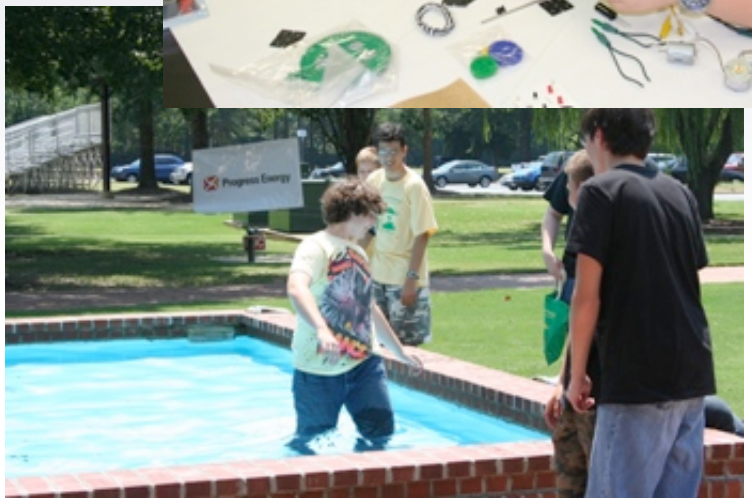


Community Projects

Carowinds Education Days

Hands On Camps

Camp kill-A-watt



Competitions

Sumo Bots

Campus-Based Projects

50th Anniversary Time Capsule

Pickle Snack-Paks

Mount Olive Pickle Co., Inc.

Thank You!

For more information, contact:

Angela Wall, Program Head
Industrial Systems Technology
Wayne Community College
Goldsboro, NC
awall@waynecc.edu