

# Global Project-Based Learning (PBL)

*Creating a Learning Environment for  
21<sup>st</sup> Century Skills*



*Laura S. Hickey  
National Wildlife  
Federation*

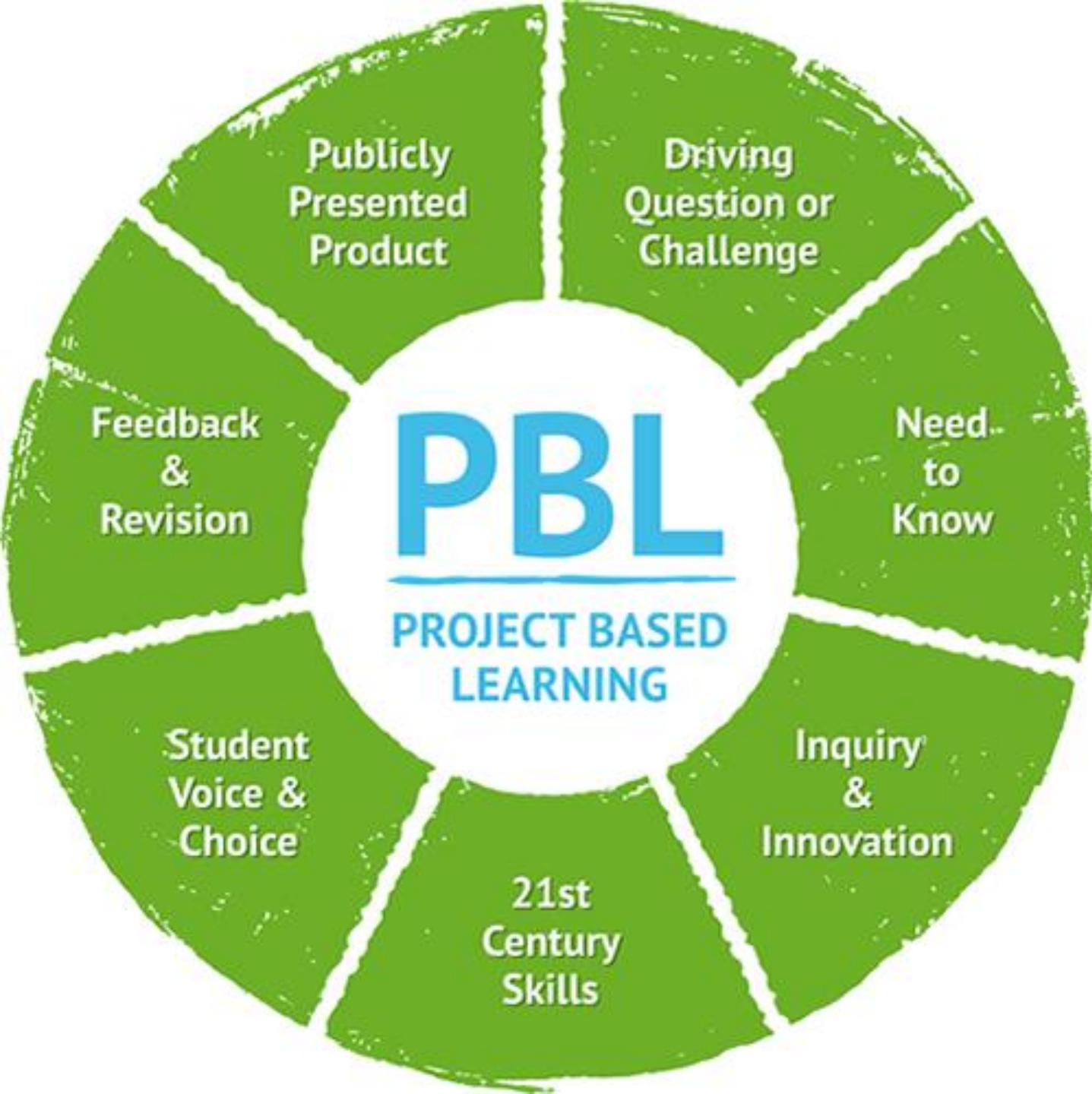
# What is Project-Based Learning (PBL)?

*Project Based Learning* is a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging and complex question, problem, or challenge.



The “*Environment*” is a perfect theme for Project-Based Learning.





**7**

*Essential Elements  
of  
Project-Based  
Learning (PBL)*

# In a Nut Shell



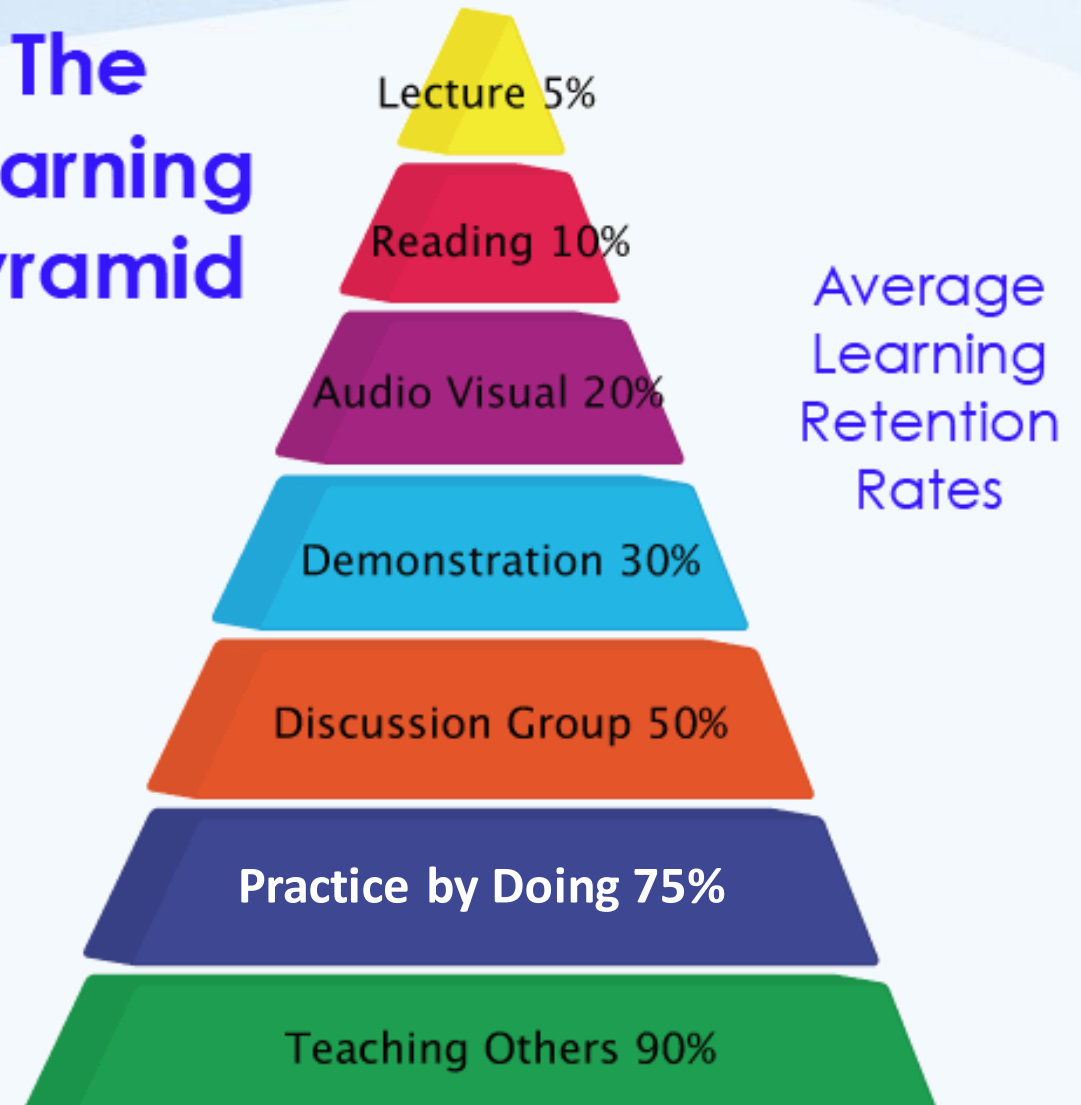
Students work in  
**TEAMS**  
to experience and  
explore **RELEVANT,**  
**REAL-WORLD**  
**PROBLEMS,**  
**QUESTIONS, ISSUES,**  
and **CHALLENGES;**  
then create  
**PRESENTATIONS** and  
**PRODUCTS**  
to share what they  
have learned.

# How Children Learn

I hear, I forget.  
I see, I remember.  
I DO, I UNDERSTAND.

– Confucius  
(551 BC – 479 BC)

## The Learning Pyramid



Adapted from NTL Institute for Applied Behavioral Science



# Project Learning is Skill-Based

To learn collaboration -

Work in teams

To learn critical thinking -

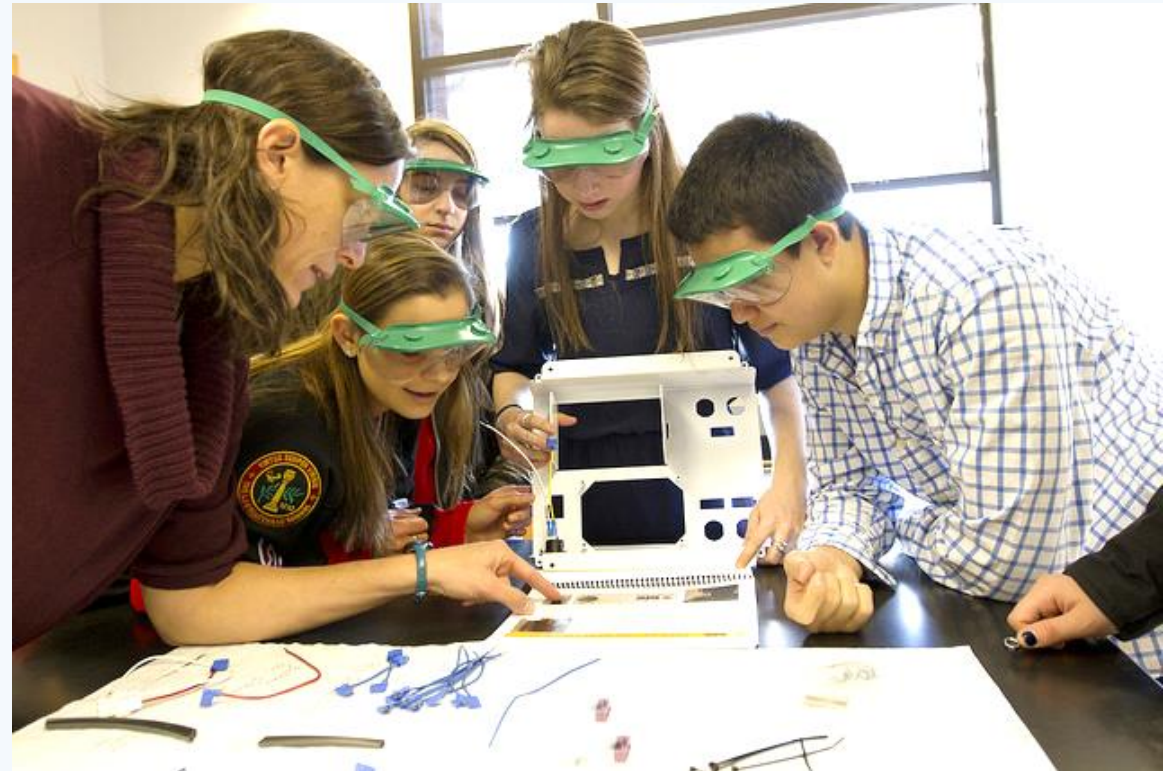
Take on complex problems

To learn oral communications -

Present

To learn written communications -

Write



# Project Learning is Skill-Based

To learn technology –

Use technology

To develop citizenship –

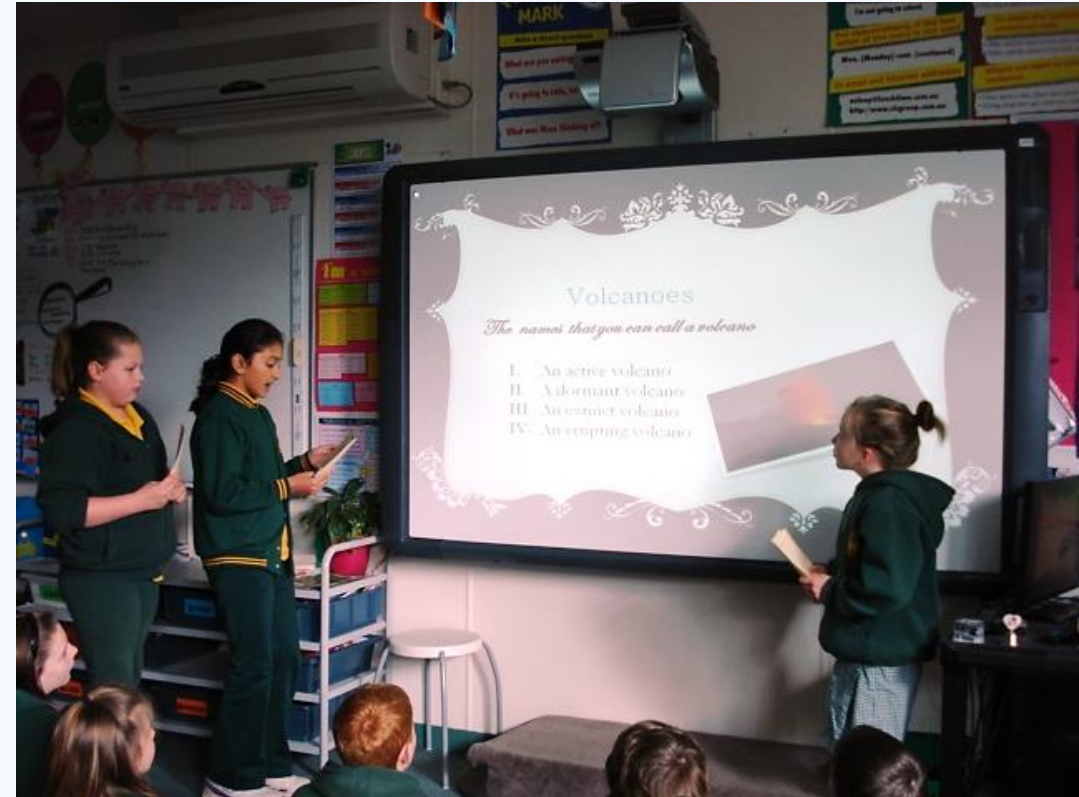
Take on civic and global issues

To learn about careers –

Do internships

To learn content –

Research and do all of the above



# A Project Learning Classroom is....

- Project-centered
- Open-ended
- Real-world
- Student-centered
- Constructive
- Collaborative
- Creative
- Communication-focused
- Research-based
- Technology-enhanced
- 21<sup>st</sup> Century reform-friendly

*Hard, but fun!*



# In a Project Learning Classroom

- The teacher's role is one of coach, facilitator, guide, advisor, mentor...
- Not directing and managing all student work



# Students develop needed skills in:

- Information searching and researching
- Critical analysis
- Summarizing and synthesizing
- Inquiry, Questioning, and Exploratory Investigations
- Design and Problem-solving



# *Global Project-based Learning*

- We have a video!*



# How Do We Create Effective Driving Questions?

- A driving question helps teachers and students better focus on the goal of their work and gives the project a sense of purpose.
- The question should be open-ended and have more than one answer.
- The question is simple enough for students to understand but has complex answers.
- In order to answer the question, students need to learn the content and skills from set education standards.
- Other classes are answering the same or a similar question for joint project work.

# Different Types of Questions

## Direct or Closed Question

- Based on facts
- Have only one correct answer
- Can be used to guide students thinking

## Open Ended Question

- Based on concepts or ideas
- Have at least one correct answer
- Require students to research, investigate, or reflect before responding

## Driving Question

- Meaningful to students
- Includes relevant content
- Lends itself to collaboration
- Is broad and complex enough to allow individual investigation
- Has more than one solution or path
- Supports self-directed learning

# Examples:

<i>Direct Question</i>	<i>Open-Ended Question</i>
<i>Who was the last emperor during the Ming Dynasty?</i>	<i>How did the Ming Dynasty impact Western Civilization?</i>
<i>What is an atom?</i>	<i>How has the discovery of the atom impacted science?</i>



# Changing Ineffective Driving Questions into Effective Questions

Topic	Not This	But This
Global Warming	What is global warming?	How will global warming affect our community?
Nature / Biodiversity	Is nature interconnected?	What does the study of our local pond teach us about the oceans?

# Group Activity: *Developing Driving Questions*

1. *Identify important learning outcomes (work backward from a topic – use the 10 Environmental Themes)*

- a. *Choose a central idea, concept or principle*
- b. *Think of a typical assignment, end-of-chapter questions*
- c. *List learning outcomes*

2. *Identify relevant content*

- A. *Consider real-world context*
  - i. *Map your community*
  - ii. *Match what people do in their daily work*
  - iii. *Tie project to local and national events*
  - iv. *Focus on community service*

# Group Activity: *Developing Driving Questions*

## *2. Identify relevant content*

*B. Develop a story within which to embed the key idea identified in Step 1.*

- i. Be aware of current “stories” in the news that address relevant content*
  - a) Water quality of local creek*
  - b) Complaints of special needs students who can't use their wheelchairs on city sidewalks*
  - c) Air quality around and in the school*
  - d) Waste not being recycled*





*Thank you!*