PROJECT-BASED LEARNING

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Open Learning & Teaching Collaborative, PSU
Spring 2026

A TALE OF TWO DNA EXTRACTIONS

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.
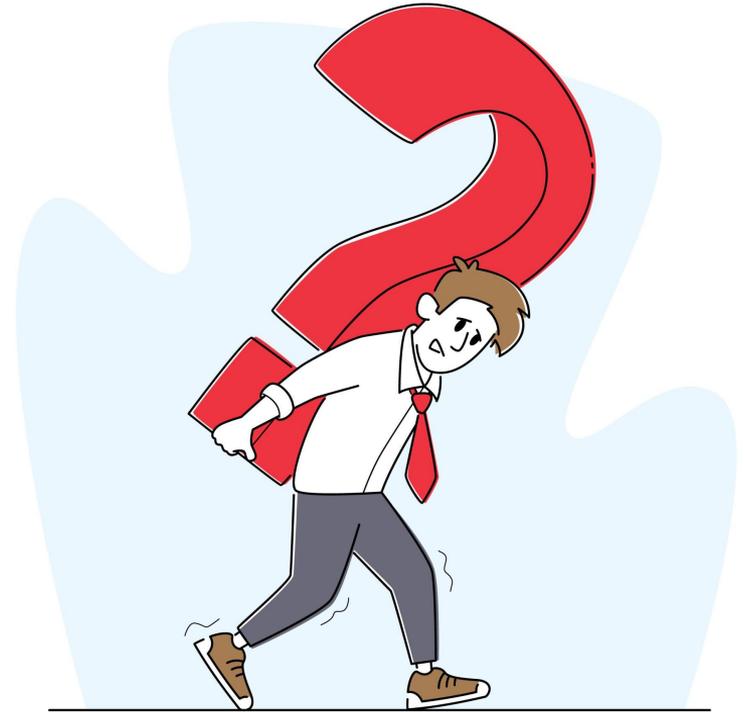
~Cathie LeBlanc
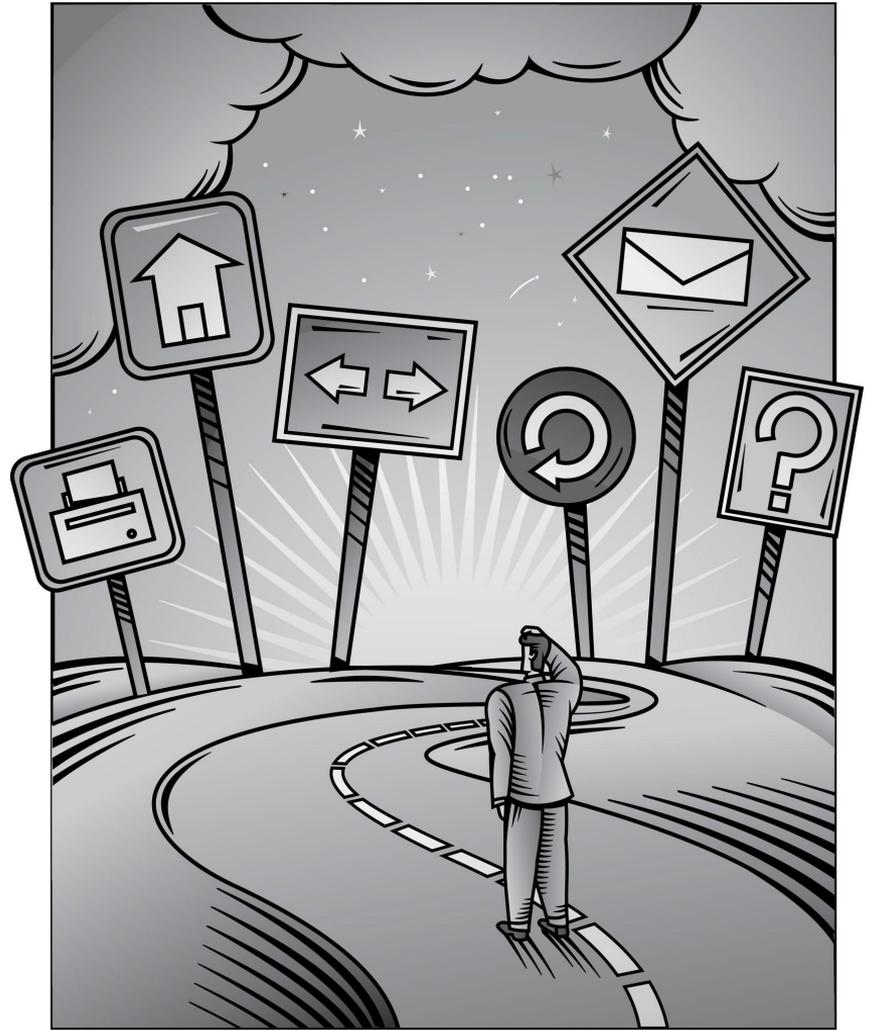
PROJECT-BASED LEARNING...

A challenging question or problem

The project is framed by a meaningful problem to be solved or a question to answer, at the appropriate level of challenge

Sustained Inquiry

Students engage in a rigorous, extended process of posing questions, finding resources, and applying information.

Authentic

The project involves real-world context, tasks and tools, quality standards, or impact, or the project speaks to personal concerns, interests, and issues in the students' lives.
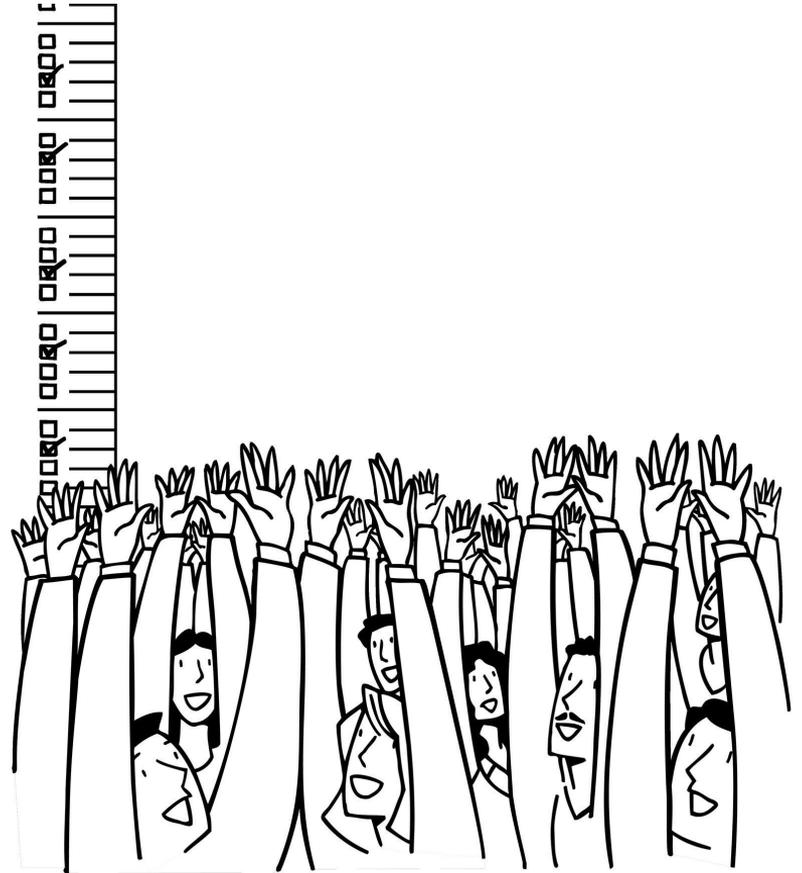
Reflection

Students and teachers reflect on the learning, the effectiveness of their inquiry and project activities, the quality of student work, and obstacles that arise and strategies for overcoming them.
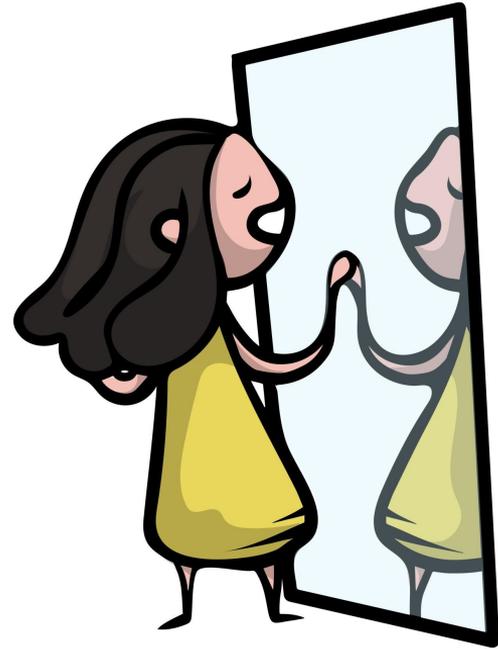
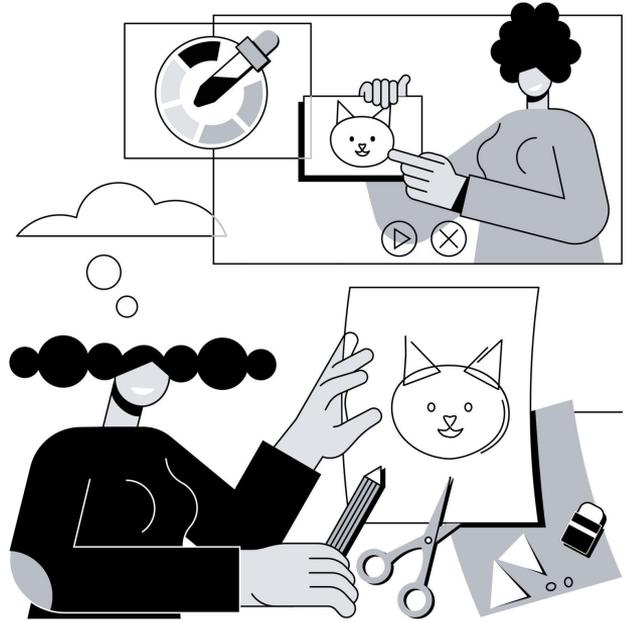# Student Voice & Choice

Students make some decisions about the project, including how they work and what they create.

Critique & Revision

Students give, receive, and apply feedback to improve their process and products.

Public Product

Students make their project work public by explaining, displaying and/or presenting it to audiences beyond the classroom.
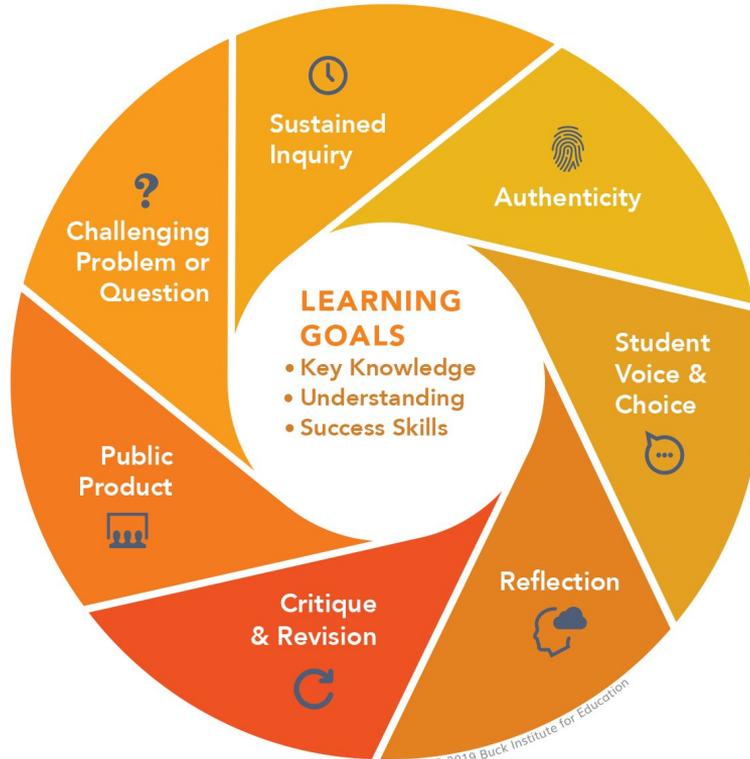
PROJECT-BASED

PROJECT-ORIENTED

A challenging question or problem

The project is framed by a meaningful problem to be solved or a question to answer, at the appropriate level of challenge

A question with a single or clear answer/solution

The project has been chosen by the professor because completing it is "acheivable" and will lead to a clear answer or outcome.

Sustained Inquiry

Students engage in a rigorous, extended process of posing questions, finding resources, and applying information.

"Bounded" Schedule

Students work through assigned steps on a predetermined, shorter schedule, leading to the clear project conclusion.

Authentic

The project involves real-world context, tasks and tools, quality standards, or impact, or the project speaks to personal concerns, interests, and issues in the students' lives.

Artificial

The project draws on "ideal" conditions in order to ensure students' experiences are predictable and lead to the "right" outcome.

Reflection

Students and teachers reflect on the learning, the effectiveness of their inquiry and project activities, the quality of student work, and obstacles that arise and strategies for overcoming them.

Goal-Oriented

Students work is focussed on completing the project steps and arriving at the end. There isn't built-in time for reflection or metat-cognition.

Student Voice & Choice

Students make some decisions about the project, including how they work and what they create.

Instructor Driven

The focus, scope, and steps of the project have been chosen and vetted by the professor.

Critique & Revision

Students give, receive, and apply feedback to improve their process and products.

Instructor Graded

The product is completed, a final "product" is turned in, and the instructor provides a grade (with or without feedback). Iteration/revision is not a feature.

Public Product

Students make their project work public by explaining, displaying and/or presenting it to audiences beyond the classroom.

Class Product

Beyond the instructor, the project might be shared with other students in the class, but not beyond that.

REFLECTION: LIFELONG LEARNING

What is something you learned recently, for work or for your personal life?

Why did you want/need to learn it?

How did you go about learning it?

How did you know how to tackle the learning?

Did you consult with/work with anyone else?

What motivated you to keep going when it got hard?"

What did you take away from the learning?

Given what we've discussed, what kinds of outcomes might we identify for students through PBL?

What kinds of problems might arise doing project-based learning?

Presenting with animations, GIFs or speaker notes? Enable our Chrome extension

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What do you need in order to introduce PBL in your class? Or to improve how you are doing PBL now?

Resources

- [Project-Based Learning PSU Resources](#)

- [Sample Syllabi and Assignment Descriptions](#)

- [Self-Assessment for Team Prep](#)

- [Self- and Team-Evaluation Template](#)

- [Another Self and Team Evaluation Template!](#)

- [Devaluing the Right Answer](#)

- [Capstone Project Instructor Toolkit](#)

- [Library Collaborations for PBL](#)

- [Helping Students Write Reflectively](#)

- [A Framework for High Quality PBL](#)

- [Critique Protocols](#)

- [DEI Tools for Teamwork](#)

- [Reflective & Equitable Ungrading for PBL](#)

- [Tracking Learning with Design Journals](#)