

Project Based Learning with Primary Sources (1M)

Every student likes a challenge. Offer students the opportunity to learn by working on real world projects and you will find they are more engaged and motivated to learn.

What is project-based learning?

Project-based learning turns your classroom into a real life work-like environment. Learning core content becomes an interdisciplinary or cross discipline investigation in concert with academic content and, in some cases, 21st century learning and life skills. Ask students to grapple with a big idea like sustainability in action and this topic could become an example of an interdisciplinary approach to humanities or science or math or other related curricula in a project-based classroom.

This approach to learning is different from curriculum driven by traditional textbook based activities. It is a deliberate, well-planned instructional strategy focused on a broad topic or within subject matter that permits students to make connections between the traditional world of academic content and authentic real life approaches to learning. In this kind of classroom, students are given more responsibility for managing their own time, organizing their academic work, and are guided by the teachers as they work towards the construction of an artifact or project that demonstrates what is learned. Finally, students communicate the results to others.

For example, challenge students to make their community a more sustainable place to live in. This could become just the type of project that can transform your classroom.

Project-based learning curriculum can have some or all of the following characteristics:

- Open-ended, relevant, and authentic. Create a task, or focus on a problem, or challenge with real world relevance beyond traditional classroom studies.
- Demands an in-depth inquiry. Create a task or present a problem that will take some amount of study to complete.
- Complexity. The task or problem needs to have enough complexity so that it takes more than a few minutes to complete. Projects can take a few days, weeks, or longer.
- Diversity (multiplicity) of perspective. Allow students to investigate and examine a problem or challenge that offers multiple perspectives from a variety of sources.
- Relevance and judgment. Students can learn to separate relevant from irrelevant information and make a judgment that offers them an opportunity to reflect on their own beliefs and values.
- A collaborative structure. Working as a team is an essential element. This implies that individual students need to learn to work together to contribute to the completion of the task or project.
- Interdisciplinary or cross discipline. The task might be assigned in one content area, but to complete the inquiry, students will need to be thinking and using other domains.
- Assessment is ongoing, and both formative and summative. Check in frequently and offer constant feedback and direction to students throughout the learning experience.

Are there variations of project-based learning?

This type of curricula is referred to by several different names and each has a slight variation of approach in implementation and instructional strategy. Some teachers will approach project-based learning by using a problem-based learning format. Sometimes, teachers can use other formats such as challenge-based learning. In either case, these are considered to be strategies of implementation. They all exhibit many of the core principles and characteristics found in project-based learning.

In problem-based learning, projects can be focused on a specific, complex problem students are studying and solving. Students create realistic projects or presentations about the problem under investigation to demonstrate their learning. Problems to solve could be initially identified by the teacher or sometimes the students. Students can present their findings on the impact of recycling in a format sometimes used in the workplace – create a website, newsletters, podcast public service announcements, etc.

Challenge-based learning is a pedagogical approach that is rooted in realistic problem solving. It requires that students demonstrate their learning by taking action on a solution to make a difference. Instruction focused on the big idea of sustainability might challenge students to design, create, and actually manage a school recycling effort for their cafeteria. They will actually create and maintain the program and finally evaluate the new program effectiveness. This type of classroom environment takes full advantage of new media communication and collaboration technologies used by adults in today's workforce. It requires students to propose realistic solutions as their "project" makes a difference in the world they live in.

In all cases, teachers design instruction using a "constructivist" approach, which, as the term suggests, allows students to construct their knowledge as they work through a project.

What is the role of inquiry in this kind of classroom?

Inquiry plays a critical role. Students work on real tasks processing information through active investigative activities that promote questioning, comparison of complex information, and evaluation before they create and publish their project. It is just this kind of thinking that primary source investigations evoke when they are deliberately infused into core curriculum. In the earlier example of sustainability, we might direct students to investigate and compare an environmental impact study past to present in their community. Primary source materials from American Memory's "American Environmental Photographs, 1891-1936", (<http://memory.loc.gov/ammem/collections/ecology/>) is a collection where students can study topography photographs taken by ecologists from their documented travel of the American continent.

At the conclusion of a project, students will acquire a personalized understanding of new content based on their active participation, deep level of engagement with the project assigned, and use of inquiry oriented thinking processes. Projects, by design, need to be worthy of the time required to complete them.

What it is like to be the lead-learner (aka teacher) in this kind of classroom? How do you manage a classroom that puts students in charge of their learning?

Sometimes, classroom lessons can be presented in the style of a workshop. The role of the teacher in this setting is to work with students individually or in groups to provide feedback and guidance while students are working. In this classroom, the teacher is the "lead-learner" and guides the learning in the direction of the goals and outcomes identified originally by the design of the curriculum. Learning is active and occurs more naturally as teachers and students have multiple opportunities for ongoing dialogue about the project.

In short, students learn by working in collaborative groups. As they engage in real world problems or challenges, they have more opportunities to practice, apply, and acquire cross curricular skills. Individual contribution to the work of the group is a key component for the success of a project. Some commonly used group work structures for rich learning tasks are:

- set norms for working together

- teach students how to work together
- shift learning responsibility to students
- set-up diverse ability working groups

**How do I assure that all students are learning the core academic content and academics skills?
Are project-based learning classrooms aligned to state academic standards?**

Projects that are carefully designed with “end in mind” can be aligned to academic standards through careful consideration in curriculum design. Design the lessons to support the development of the project and identify the specific standards and skills students need to learn. Projects ideally have a predetermined set of academic learning goals and objectives. Subsequently, every lesson in class is aligned to support the curricular goals.

Throughout the course of study, students construct and demonstrate new knowledge through self-directed learning and active engagement with the content of the project.

Assessment Considerations

Carefully consider a variety of assessment points throughout the time students are working on a project. Be clear with students ahead of time about what they are expected to learn as a result of engaging in the project. Monitor student progress, provide lots of opportunity for feedback and allow for mistakes to be made and time for mistakes to be revised. Use a variety of assessment techniques to gain the full picture of what students have learned. Students learn best with ongoing careful and timely feedback. Learning is constant, not just a result.

Practical Tips

- Create a specific curriculum plan for teaching you can follow
- Make a project checklist for students
- Create an assessment rubric for the various projects
- Provide students with ongoing and constant feedback
- Help students with time management
- Allow sufficient time for in depth inquiry and project making
- Provide ample opportunities and encouragement for ongoing collaboration among students

Project-Based Learning – Current Research

Implementing Project-Based Learning to Create "Authentic" Sources: The Egyptological Excavation and Imperial Scrapbook Projects at the Cape Cod Lighthouse Charter School

<http://www.historycooperative.org/journals/ht/41.3/garran.html>

In this article from the journal *The History Teacher*, a seventh-grade charter school teacher describes her positive outcomes with the use of project-based learning to teach about ancient civilizations, helping her students become more knowledgeable about the rise and fall of these civilizations.

Powerful Learning: Studies Show Deep Understanding Derives from Collaborative Methods

<http://www.edutopia.org/inquiry-project-learning-research>

This review of research literature on project-based learning highlights the significant benefits derived from the cooperative learning and inquiry-based teaching that are hallmarks of project-based learning. For example, the authors cite research demonstrating that a deeper level of learning is achieved when students can apply the knowledge they have gained in the classroom to problems they face in the real world.

Project-Based Learning

http://www.ascd.org/publications/educational_leadership/feb08/vol65/num05/Project-Based_Learning.aspx

In this column from the Association for Supervision and Curriculum Development (ASCD)'s *Educational Leadership* online publication, the author compares the core idea of project-based learning with its reality in contemporary classrooms and summarizes research on the effects of project-based learning on student achievement.

Project-Based Learning

http://www.smallschoolsproject.org/PDFS/Planning_Resources/spring2003/spring2003-pbl.pdf

This resource demonstrates the numerous ways in which project-based learning (PBL) can be enforced in small schools while also taking into account the fact that instilling PBL into the school environment is an evolving process. This process “changes and grows incrementally with the amount and nature of choice students are granted in their learning, with the scope of the projects, and with the role of the teacher in project development and execution.” In order to demonstrate this process, schools that have exhibited success in taking PBL to new levels have been highlighted.

Project-Based Learning in Social Studies

http://www.vermontsocialstudies.org/resources/proj_based_learning/index.html

This online resource from the Vermont Alliance for the Social Studies provides a step-by-step outline of the phases of project development and information on designing integrated assessment using multiple sources of evidence.

Project-Based Learning Modules

<http://www.thinkfinity.org/ProjectBasedLearning.aspx>

This website provides teachers with outlines for different projects that they can use in their classrooms, as well as the age group for which each project is intended for use.

Project-Based Learning: The Online Resource for PBL

<http://pbl-online.org/>

This web site from the Buck Institute for Education [link to <http://www.bie.org/>] provides educators with a variety of resources to implement project-based learning within the classroom. Teachers are able to download a project planning form to aid them in designing their projects, search for projects developed by others and contribute their own work.

Project-Based Learning Space

<http://college.cengage.com/education/pbl/index.html>

This website is set up for teachers to be able to “do sustained inquiry on extended problems and projects, get background knowledge on its [project-based learning] theory and use in classrooms, and revisit generic teaching concepts.” The site provides teachers with five classroom projects, teaching concepts, and background information and knowledge about project-based learning.

A Review of Research on Project-Based Learning

http://www.bobpearlman.org/BestPractices/PBL_Research.pdf

“This review examines research related to a teaching and learning model popularly referred to as ‘Project-Based Learning’ (PBL). All of the research on Project-Based Learning has taken place in the past ten years and most of it in just the last few years.” This review covers eight topics ranging from a definition of PBL and the role of student characteristics in PBL, to future directions for PBL research.