

iPoly Staff Handbook

About the Learning

What is Project-Based Learning (PBL)?

There is no one accepted definition of project-based learning. At iPoly, we define project-based learning as a teaching strategy that organizes learning around inter-related, complex tasks or components that are based on challenging questions or problems. These questions and problems drive the project and standards-based curriculum, encouraging real world application.

Students and/or teachers may generate questions. They provide the impetus for projects. They should include who, what, where, when, how, and the all-important why. Moreover, they should include brainstorming and imagination skills.

The Big Idea and Essential Questions

During the first three years of a student's high school experience, iPoly teachers plant the seeds of learning by presenting the big ideas that will be investigated. These big ideas, which address real-world issues, establish the general picture of what a student will study. From these big ideas, teachers write essential questions that guide students to encounter (and struggle with) the central concepts and principles of a discipline. Class assignments, discussions, essays, journals, case studies, group and individual projects are initiated by the essential questions that students answer and are encouraged to investigate further.

In the senior year, students take their three years of experience and are guided by a teacher advisor as they develop their own senior project organized around big ideas and essential questions. Each senior project culminates with a formal lesson plan, usually a two-hour presentation to peers, staff and parents.

Tasks/Components

Projects consist of complex tasks or components that students must complete in order to answer the essential questions. The complex tasks or components integrate the subject matter, resulting in an applicable and real world strategy.

Teaming/Collaboration

The projects encourage the teamwork approach to solve real-life challenges and problems in a creative and challenging manner. Students learn cooperative and conflict-resolution skills as they collaborate and mitigate team level discussions throughout their iPoly experience. Team meetings occur after school at iPoly/Cal Poly or in students' homes. Parent assistance with hosting and providing transportation is encouraged.

Inquiry Learning

Inquiry learning is a process that leads students to deeper levels of understanding requiring students to investigate ideas and to propose alternative ideas and/or solutions. Facts and figures are taught in context of real life conditions.

By asking and pursuing important questions, students are transformed from passive receivers of information into active learners, thinkers and problem solvers. Through inquiry, students take ownership of both knowledge and the knowledge-gathering process.

Students often find that, depending on the source, questions have more than one answer. This leads to still more questions, which in turn becomes the basis for a lifetime of inquiry and learning. Teachers become learning facilitators, guiding students along the path of inquiry as they ask questions and master skills, concepts and content material.

While all iPoly teachers have a specialty and present materials in specific disciplines, the school is structured so that teachers are also resource specialists, curriculum writers, workshop facilitators, and more. They also bring in scholars and guest speakers from the university and the “real world.” Additionally, teachers can utilize their knowledge and experiences in other subjects in class. In many ways, teachers actively learn and produce along with students, demonstrating, once again, that learning is for life.

Interdisciplinary Education

As iPoly students pursue questions and examine global issues and events from a variety of perspectives, they discover the inter-connectedness of people, systems and information. These connections are reflected in the iPoly curriculum, which is interdisciplinary. An interdisciplinary course of study breaks down many of the artificial walls between subject areas.

Through the use of team teaching, interdisciplinary unit themes, projects and exhibitions, new and different demands are made on students which nurture their own curiosity and guide them towards a broader understanding of the world. Facts no longer remain “uncombined.” Research demonstrates that students enrolled in an interdisciplinary course of study have better attendance, more developed writing and thinking skills, and go on to four year, post-secondary education more often than their counterparts in traditional classes. The iPoly teachers work cooperatively in teams to design and teach projects which meet state content standards and fulfill the vision of the school as a place of inquiry and international studies.

Interdisciplinary Projects

These projects provide a forum for students to demonstrate their level of mastery of important concepts and skills through the practical and creative application of those concepts and skills, rather than rote memorization and testing.

Projects range from the simple to the complex, from basic research and presentation skills to designing and constructing a year-long senior project. Projects contain specific criteria and deadlines for completion. Through the projects, students acquire important process skills, such as time management, personal responsibility, interpersonal communication, etc.

All projects are “hands-on,” providing a bridge between the classroom and the “real world.” Projects incorporate basic skills and higher-order thinking skills in ways, which challenge students to take risks, make their own connections, and ultimately, take responsibility for their own learning.

Criteria For Interdisciplinary Projects

Inquiry

Includes all means of data gathering, including observation, experiential activities, research, experimentation, database searches, etc. and include skills such as note taking and outlining.

Expression

Students must present their projects using either designated or self-chosen means of expression, including writing, speaking, performance, demonstration, lecture, drawing, singing, video, multimedia, etc.

Evaluation/Analysis

Students are involved in the process of looking at their own learning processes, recognizing strengths and developing means of improvement.

Universality

Students should gain an acknowledgment, understanding and tolerance of various perspectives, interpretations and conclusions.

Application

The project should enable students to make interdisciplinary connections, as well as “real life” connections with current issues requiring problem solving and critical thinking.

Student Project Guide and Culminating Events (Teacher Developed)

Each semester students will receive a project guide that conforms to the categories presented below. Students take these guides home to review them with their parents. We expect that parents will review each *Student Project Guide* and respond to teachers, using the contract that is attached to the *Student Project Guide*, that they have read and understood the guide or that they have questions that they would like answered.

Project Description A general introduction to the project.

Project Justification A brief statement of the purpose for and value of doing the project.

Essential Questions Important questions that provide direction, depth and meaning; all of which helps the student to complete and understand the project.

Assumptions A brief statement of what students and teachers will be expected to do during the project.

General Learning Outcomes A statement of what students will be expected to learn as a result of completing the project.

General Evaluation Methods A brief statement describing how students will be evaluated.

Project Components A brief description of each component of the project, that is, what students will be expected to produce, either individually or as members of a group.

Timeline and Due Dates This is a list of the dates on which each component of the project is due. This list will be accompanied by a calendar that also indicates when project components are due.

Materials List This list indicates what materials students will need to complete the project.

Exhibitions/Culminating Events

Final presentations are special events at iPoly.

Students participate in a culminating experience at the conclusion of each project. During this event, students display accomplishments and present understanding of knowledge and skills, using a variety of methods.

They may include exhibitions, simulations, debates, stage shows, and other significant performances.

Presentations generally have three major components including written, visual and live presentation/demonstration. Group-project presentations occur in ninth, tenth, and eleventh grades. Group and individualized culminating exhibitions occur at the twelfth grade level.

Although components will vary from project to project, exhibitions afford students an opportunity to both demonstrate and celebrate their knowledge and talents.