PARENT RESOURCE

Project-Based Learning: How It Can Support Your Child

Project-based learning (PBL) is a form of instruction in which students explore real-world problems through projects and study important academic content while developing vital skills like critical thinking, collaboration, and communication.

Projects typically start with a meaningful question, such as, "How can we use energy outside to do everyday things in a new way?" Or perhaps, "What is the proper role of government in a democracy?" Then, over weeks or months, students work on a project and share it with an audience beyond the classroom.

It works

Strong evidence supports the use of high-quality project-based learning. Rigorous studies found students in PBL classrooms outperformed students in traditional classrooms across subject areas and grades.

For some adults, project-based learning may conjure up old memories of one-dimensional arts-and-crafts projects, unstructured classrooms, and the need for a lot of parent/guardian help to finish projects on time. But that's not what you'll find with strong PBL today.

Students learn core academic content through projects

We now know project-based learning isn't about making a shoebox diorama or hurriedly creating a poster at the end of a lesson. Instead, projects drive the learning. They're not tacked on at the end. So, for example, in sixth-grade science classrooms in San Francisco, students studying thermal energy learn about particle speed, kinetic energy, and temperature while designing a device, such as a solar oven, that can warm up their favorite foods and even bake cookies.

Amber Graeber, an instructional coach who has taught a PBL version of an Advanced Placement U.S. Government and Politics course in Iowa and Washington, puts it this way: *"It's very different from any kind of class where you would just have a lecture, do a worksheet or an activity, maybe make a poster at the end, and take a test. This is structured completely differently, so that from the very beginning, students have a role that they play and a need to know."*

Keeping it real

In rigorous project-based learning environments, students study core subjects and relate what they're learning to issues that are important to them and the world. In a PBL elementary science

curriculum used in Michigan, for example, students study plant life cycles while designing gardens that can provide fresh food for their communities.

Students in PBL classrooms also use real practices and materials that professionals use in their jobs, such as techniques and tools a biologist might use to study a specimen or a historian might use to research a key moment in time. Over the course of a project, teachers check for understanding and provide individual support as needed. In high-quality PBL classrooms, students lead their learning, but teachers guide, assess, and reteach as needed in a variety of ongoing ways.

Upon completing projects, students present their work to authentic audiences, which may include others at the school, families, and local leaders.

While using a project-based social studies and literacy curriculum, second-grade students in Waterford, Michigan, designed improvements to a local park and presented their ideas to a member of the city council who agreed to look into the kids' suggestions. The children were so enthusiastic. Students value learning experiences that have a purpose beyond school. Experiences like this can help students learn how to advocate for themselves and others and become active citizens of the world.

To see the Michigan students in action, check out this video.

VIDEO

Rooted in academic content

Projects are tied to academic standards and help students apply what they're learning to addressing real-world issues. Maggie Dominguez, an eighth-grade math and science teacher in San Francisco, linked a physics lesson on motion to an issue her students cared about—the safety of walking and cycling in the city. Students learned core content, including Newton's laws of motion, by studying collisions. And they came up with ideas for protecting cyclists and pedestrians, such as creating slow-street initiatives and instituting speed bumps.

PBL is great for studying various subjects in an integrated way. A PBL curriculum that connects social studies and literacy, for example, has been shown to boost reading skills and social studies knowledge. And in a third-grade PBL science curriculum, students engage in reading, writing, and math alongside science.

To see elementary school students engage in the PBL science curriculum that integrates literacy and math into science-related projects and lessons, check out this video.

VIDEO

Student and family engagement

In PBL classrooms, students work on their ability to collaborate, communicate effectively, and solve problems with their peers. Teachers set clear expectations and guide students to ensure all learners acquire these skills and participate equally. *"It's not busy work. Students are challenged to engage. You can't hide. You can't be overlooked. You have to participate. You're part of a team,"* explains Traci Wrycza, a middle school science teacher in San Francisco.

High-quality PBL instruction also provides students with opportunities to reflect on and improve their work, which can help them develop persistence and a growth mindset. And all this can lead to more-engaged students.

Family engagement also is important to a child's

academic success. While PBL shouldn't depend on parents to help complete projects, it's an approach that can engage parents in productive ways. Specifically, PBL empowers students to connect what's happening in the classroom with what's happening at home. For example, in a PBL version of an AP Environmental Science course, high school students conduct family interviews to investigate the carbon footprint of their household.

You can learn more about how project-based learning is integrated into high school AP courses by watching this video.

VIDEO

Making schools more equitable

Unfortunately, there are opportunity gaps between groups of students in the United States that mirror such gaps in society. However, research shows PBL is effective for all learners and can be a tool for improving equity. When schools provide the chance for underserved students to engage in high-quality PBL, their learning outcomes improve.

High-quality PBL emphasizes the strengths students bring to school. And it ensures learning experiences are relevant to all students. This kind of instruction lends itself to a strong school culture in which all young people feel safe to contribute, collaborate, receive feedback, and take intellectual risks.

Learn more

To learn more about PBL, particularly the evidence behind it, check out the publications available at Lucas Education Research.

You can also find numerous blog posts on project-based learning at Edutopia.org.

If you want to explore some of the project-based learning curricula mentioned here, check out the free resources available on the online portal Sprocket.

Images courtesy of Edutopia