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Project-Based Learning & The Integrated Science Program: A Comparison

Two Curricular Models
You may have heard about, or even tried, the project-based learning approach (PBL). This is a strong curricular model that we enjoy supporting teachers to use properly. Though many organizations tout their expertise in this type of curriculum design, the Buck Institute for Education (BIE) is usually our go-to resource for the latest and greatest in PBL.

Sometimes people ask us whether the Integrated Science Program takes a PBL approach. Integrated Science is not strictly PBL, but our model does align with <u>many</u> of the central tenets of PBL. PBL does not effectively accomplish other things that our Integrated Science Program does. And so, we provide you with a simple visual comparison below to help clarify.

**Italicized text is directly from The BIE Project Design Rubric, which may be found here:

Curricular Premise or Element	PBL	Integrated Science
Focal grain size for curriculum design is a single project. Classrooms complete one project and move to another. Skills and concepts may build from project to project, but it is not necessary to the PBL model.	★	
Focal grain size for curriculum design is programmatic, thus permitting coherence. Classrooms revisit compelling contexts over the course of the program. Skills and concepts spiral strategically and deliberately over 2-3 years.		★
Significant Content: focused on teaching students important knowledge and skills derived from standards and key concepts at the heart of academic subject areas	★	★
21st Century Competencies: A limited number of important competencies are targeted to be taught and assessed; adequate opportunities to build 21st century competencies and they are rigorously assessed.	★	★
21st Century Competencies: collaboration	★	★
21st Century Competencies: analysis, problem-solving, critical thinking *in an in-depth and sustained way*	★	★

Curricular Premise or Element	PBL	Integrated Science
21st Century Competencies: Students are given opportunities to use creativity and follow a process for innovation.	★	★
In-Depth Inquiry: Inquiry is sustained and academically rigorous • In the PBL model, students conduct a single in-depth inquiry over the course of a single project. In the Integrated Science Program, students continue to inquire about central issues and concepts of the discipline over the course of the entire program.	★	★
Driving Question: captures the project's main focus; is open-ended; is understandable and inspiring to students; require students to gain the intended knowledge, skills and understanding in order to answer	★	
Strand Map Questions: capture the Strand's main focus; may be close- or open-ended; *require students to gain the intended knowledge, skills and understanding in order to answer*		★
Need to Know: motivates students to learn new content knowledge or gain skills because they genuinely find the project's topic, question(s) *and tasks to be relevant and meaningful.*	★	★
Need to Know: The Entry Event will powerfully engage students, both emotionally & intellectually	★	
Pre-Lab Activities: powerfully engage students, both emotionally & intellectually, using authentic STEM resources and engaging in real-world, real-time STEM issues.		★
Voice & Choice: Students have opportunities to take significant responsibility and work independently from the teacher.	★	★
Critique & Revision: Students are provided with regular, structured opportunities to give and receive feedback about the quality of their work-in-progress; are taught how to constructively critique each other's work-in-progress; use feedback about the quality of their work to revise and improve it.	★	★
Public Audience: students share their work with other people from both within and outside the school, which may include online audiences; students present culminating products and defend them in detail & in depth. • In the PBL model, each project works toward a culminating product that is presented to an audience of peers or interested strangers. In the Integrated Science Program, students have several opportunities to do the same, however they do not do so at the end of every Strand.	★	★