

A close-up, slightly blurred photograph of a wooden pencil and a metal ruler resting on a sheet of graph paper. The pencil is positioned diagonally from the bottom left towards the center. The ruler is positioned diagonally from the top left towards the center. The background is a soft-focus grid of graph paper with some faint numbers visible.

PROJECT BASED LEARNING

SESSION 2: PLANNING AND MANAGING A PBL LESSON

<http://karenogen.weebly.com/my-presentations.html>

<http://www.lexrich5.org/webpages/kogen>

Seven Oaks Elementary MEDIA Magnet

What are the Essentials of PBL?

1.

Significant Content

- A project is developed that is focused on specific content and concepts (derived from the standards).

Pages 20 and
29.

What are the Essentials of PBL?

2.

The Driving Question

- A driving question is presented to focus student exploration of the topic.
- Students will use the driving question to guide their learning: asking questions, using resources, and developing answers.

Pages 38-41.
Tubric from
BIE.org.

What are the Essentials of PBL?

3.

The Entry Activity

- The teacher launches the project and driving question with an activity to grab students' interest.
- Discussion, video, images, field trip, story, news article, website, guest speaker, graph...

What are the Essentials of PBL?

4.

The “Need to Know”

Facilitating the “Need to Know” Discussion:

1. Review the project requirements and ask students what they need to know to complete the task.
2. Record students’ questions (list, K-W-L, etc.)
3. Do not answer student questions, students will discover their own answers.
4. Keep the list on display and check off items as they are answered.

What are the Essentials of PBL?

5.

Facilitating Inquiry

Facilitating Inquiry in Your Classroom:

1. Provide a variety of learning materials for students to investigate (books, articles, pictures, videos, websites, etc.)
2. Provide note-taking guides or materials for students to record information
3. Conduct mini-lessons to teach specific content
4. Create word walls/concept walls that students can also add to.
5. Incorporate reading and writing (choose books that relate to the topic, use fiction and non-fiction works)
6. Provide additional resources and experiences: field trips, guest speakers, work with experts, etc.

Pages 88-91.

What are the Essentials of PBL?

6. Developing 21st Century Skills

- Collaboration
- Communication
- Critical thinking/problem solving
- Technology Integration

Pages 30-36
and 49-50.

What are the Essentials of PBL?

Collaboration Goals:

- Group work where students take responsibility for quality and timeliness of work.
- Students use strategies to help them learn.
- Students respect the ideas, opinions, abilities, and feelings of others.
- Students prioritize goals, organize resources, create timelines, and monitor their own progress.

Pages 31, 49-52
and 93-97.
Rubric 134.

What are the Essentials of PBL?

Communication Goals:

- Students organize ideas and develop content for their audience.
- Students use effective presentation skills.
- Students create media and visual aids to enhance their delivery of content.
- Students respond to questions appropriately.

Pages 31 and
49-52.

Team Contract
137.

What are the Essentials of PBL?

Critical Thinking Goals:

- Students recognize, define, and solve problems.
- Students gather information from a variety of sources and evaluate the quality of the sources.
- Students develop conclusions and solutions to problems through organization and analysis of information.
- Students consider alternatives, implications, and consequences.

Pages 31, 49-52
and 98-103.

What are the Essentials of PBL?

Technology Integration Goals:

- Students learn skills through technology and multimedia.
- Students identify tools to perform different tasks.
- Students use technology tools to solve problems, create and publish, to collaborate, and to evaluate.
- Students create presentations with digital media.

What is technology integration?

Using Technology	Technology Integration
Technology usage is random, arbitrary & often an afterthought	Technology usage is planned & purposeful
Technology is rare or sporadically used in the classroom	Technology is a routine part of the classroom environment
Technology is used purely for the sake of using technology	Technology is used to support curricular goals & learning objectives
Technology is used to instruct students on content	Technology is used to engage students with content
Technology is mostly being used by the instructor(s)	Technology is mostly being used by the student(s)
Focus on simply using technologies	Focus on using technologies to create and develop new thinking processes
More instructional time is spent learning how to use the technology	More instructional time is spent using the technology to learn
Technology is used to complete lower-order thinking tasks	Technology is used to encourage higher-order thinking skills
Technology is used solely by individuals working alone	Technology is used to facilitate collaboration in & out of the classroom
Technology is used to facilitate activities that are feasible or easier without technology	Technology is used to facilitate activities that would otherwise be difficult or impossible
Technology is used to deliver information	Technology is used to construct & build knowledge
Technology is peripheral to the learning activity	Technology is essential to the learning activity

Where are you on the technology matrix?

Technology Integration Matrix		Levels of Technology Integration into the Curriculum				
		Entry: The teacher uses technology to deliver curriculum content to students.	Adoption: The teacher directs students in the conventional use of tool-based software. If such software is available, this level is the recommended entry point.	Adaptation: The teacher encourages adaptation of tool-based software by allowing students to select a tool and modify its use to accomplish the task at hand.	Infusion: The teacher creates a learning environment that infuses the power of technology tools throughout the day and across subject areas.	Transformation: The teacher creates a rich learning environment in which students regularly engage in activities that would have been impossible to achieve without technology.
Characteristics of the Learning Environment	Active: Students are actively engaged in using technology as a tool rather than passively receiving information from the technology.	Students use technology for drill and practice and computer based training.	Students begin to utilize technology tools to create products, for example using a word processor to create a report.	Students have opportunities to select and modify technology tools to accomplish specific purposes, for example using colored cells on a spreadsheet to plan a garden.	Throughout the school day, students are empowered to select appropriate technology tools and actively apply them to the tasks at hand.	Given ongoing access to online resources, students actively select and pursue topics beyond the limitations of even the best school library.
	Collaborative: Students use technology tools to collaborate with others rather than working individually at all times.	Students primarily work alone when using technology.	Students have opportunities to utilize collaborative tools, such as email, in conventional ways.	Students have opportunities to select and modify technology tools to facilitate collaborative work.	Throughout the day and across subject areas, students utilize technology tools to facilitate collaborative learning.	Technology enables students to collaborate with peers and experts irrespective of time zone or physical distances.
	Constructive: Students use technology tools to build understanding rather than simply receive information.	Technology is used to deliver information to students.	Students begin to utilize constructive tools such as graphic organizers to build upon prior knowledge and construct meaning.	Students have opportunities to select and modify technology tools to assist them in the construction of understanding.	Students utilize technology to make connections and construct understanding across disciplines and throughout the day.	Students use technology to construct, share, and publish knowledge to a worldwide audience.
	Authentic: Students use technology tools to solve real-world problems meaningful to them rather than working on artificial assignments.	Students use technology to complete assigned activities that are generally unrelated to real-world problems.	Students have opportunities to apply technology tools to some content-specific activities that are based on real-world problems.	Students have opportunities to select and modify technology tools to solve problems based on real-world issues.	Students select appropriate technology tools to complete authentic tasks across disciplines.	By means of technology tools, students participate in outside-of-school projects and problem-solving activities that have meaning for the students and the community.
	Goal Directed: Students use technology tools to set goals, plan activities, monitor progress, and evaluate results rather than simply completing assignments without reflection.	Students receive directions, guidance, and feedback from technology, rather than using technology tools to set goals, plan activities, monitor progress, or self-evaluate.	From time to time, students have the opportunity to use technology to either plan, monitor, or evaluate an activity.	Students have opportunities to select and modify the use of technology tools to facilitate goal-setting, planning, monitoring, and evaluating specific activities.	Students use technology tools to set goals, plan activities, monitor progress, and evaluate results throughout the curriculum.	Students engage in ongoing metacognitive activities at a level that would be unattainable without the support of technology tools.

What are the Essentials of PBL?

7.

Student Voice and Choice

- Students are gaining knowledge, understanding concepts, and applying skills.
- Students are given some choice as to how they work and the products to be created.
- Students are creating new products in response to the Driving Question.

Pages 20 and
29.

What are the Essentials of PBL?

8.

Feedback and Revision

- Students use rubrics and project checklists to self-assess their work and progress.
- Establish peer-review protocols.
- Set regular checkpoints in the project calendar.
- Use traditional assessment methods throughout the project: observations, quizzes, guided practice, written assignments, etc.

Pages 48-49
and 103-106.
BIE.org Teacher
Resources

What are the Essentials of PBL?

9.

Publicly Presented Project

- Students present their findings to demonstrate the outcome of their inquiry, to practice real-world skills, and to take ownership of their learning.

Pages 108-112.
Presentation Plan
& Checklist 140-
141.

Which classroom do you want?

What does LEARNING look like?

Teacher delivers instruction.

No room for risktaking.

Teachers ask all questions.

Goal is good grades.

Students are scores.

Memorizing information focus.

Finishing stacks of papers.

One assignment for all.

Teacher creates rules.

Disconnected learners.

Technology is an event.

Teacher facilitates learning.

Risk Taking encouraged.

Kids ask BIG questions.

Goal is authentic learning.

Students are people.

Problem solving focus.

Creating, designing, & connecting.

Products and projects for each.

Student created norms.

A classroom community.

Technology is embedded.

<http://venspired.com/?p=3449>

Misconceptions of PBL:

Misconception #1

PBL is the same as "making something," "hands-on learning" or "doing an activity."

Fact Check: PBL is often focused on creating physical artifacts, but the artifacts are not as important as the intellectually challenging tasks that led to them. For example, it's not truly PBL if students are simply making a collage about a story, constructing a model of the Egyptian pyramids, or analyzing water samples from a lake. These artifacts and activities could be part of a rigorous project if they help students meet a complex challenge and address a Driving Question. And not all "projects" involve creating a physical product. A broad definition of PBL includes projects in which students solve a complex problem and defend their solution in an oral presentation or in writing.

Misconceptions of PBL:

Misconception # 2

PBL isn't standards-based. It focuses on "soft skills" like critical thinking and collaboration, but doesn't teach enough content knowledge and academic skills.

Fact Check: Some projects in the past may have been guilty of being "content-lite" but PBL models today are different. In well-designed projects students gain content knowledge and academic skills as well as learn how to solve problems, work in teams, think creatively, and communicate their ideas. When planning a project, teachers should align the Driving Question, student products and tasks with important standards, and use rigorous assessment practices to document evidence of achievement. PBL marries the teaching of critical thinking skills with rich content, because students need something to think critically about -- it cannot be taught independent of content.

Misconceptions of PBL:

Misconception # 3

PBL takes too much time.

Fact Check: It is true that projects take time, but it is time well spent. A project is not meant to "cover" a long list of standards, but to teach selected important standards in greater depth. The key is to design a project well, so it aligns with standards, and manage it well, so time is used efficiently. Not all projects need to take months to complete -- some can be only two weeks long. And a teacher does not have to go all-PBL, all the time -- even one or two projects a year is better than none. Some teachers are concerned that planning a project takes too much time. PBL does require significant advance preparation, but planning projects gets easier the more you do it. You can also save planning time by collaborating with other teachers, sharing projects, adapting projects from other sources, and running the same project again in later years.

Misconceptions of PBL:

Misconception # 4

PBL is only for older students . . . or fluent English speakers . . . or those who don't have learning disabilities.

Fact Check: Elementary-age students benefit from engaging, authentic projects just as much as high school students. Teachers might have to manage a project differently with young children, but PBL can and is being done successfully in many K-5 schools today. To those who think young children are not ready for rich content, point out that knowledge plays an important role in early literacy. Content-rich projects, often based in science or social studies, build background knowledge that influences comprehension. Literacy skills can be taught in the context of the project. Projects can increase student motivation to read, write, and learn mathematics because they are engaged by the topic and have an immediate, meaningful reason to apply these skills.

Misconceptions of PBL:

Misconception # 5

PBL is too hard to manage and/or it would not fit with my teaching style.

Fact Check: Although some teachers do find project work to be "messy" -- they aren't in total control of their students' every step -- they can use project management practices to make the work time productive. It is important to teach students how to work well in teams, manage time and tasks, conduct inquiry, and use formative assessment to improve their products. For teachers only used to direct instruction, it may be challenging at first to manage students working in teams and handle the open-endedness of PBL, but with more experience it gets easier. And teaching in a PBL environment does not mean giving up all traditional practices; there's still room for teacher-directed lessons, mini-lectures, textbooks, and even worksheets. PBL may not be for everybody, but most teachers who stick with it say they would never go back.