

## Project-Based Learning Lesson Framework

Lesson Principle	Guiding Questions	Might Look Like
<p>1) “Hook” students by introducing them to the conceptual question to be answered or problem to be solved</p>	<ul style="list-style-type: none"> <li>• What conceptual relationships do I want students to uncover in this project?</li> <li>• How can I make this question or problem relevant, urgent, and interesting?</li> <li>• How can I get kids to “wonder” about the question or problem without feeding it to them?</li> <li>• How can I connect the concepts to students’ emotions, personal interests and concerns, culture, or identity to draw them in?</li> </ul>	<ul style="list-style-type: none"> <li>• A gallery walk of photos, statistics, and quotes related to the problem to be solved (ex: migrant crisis in Europe, global water shortages)</li> <li>• Watching a short video or reading a short story through which the question might surface (ex: read e.e. cummings poem and ponder the role of punctuation, grammar, and word order in writing)</li> <li>• Discuss a real-life or school-based scenario that correlates to the concepts (ex: discussing a mother appeasing a toddler throwing a tantrum in a candy store before inquiring into the foreign policy of appeasing Hitler in the 1930s)</li> <li>• Partner with a local organization to extend a challenge or pose a question to students (ex: a representative from a local watershed protection society comes to class to enlist student help in reducing pollution in local waterways)</li> <li>• Distribute a written overview of the project to students, complete with rubric and deadlines, to help them envision the challenge</li> </ul>
<p>2) Help students plan their inquiry</p>	<ul style="list-style-type: none"> <li>• How much support and direction will I provide to students during the inquiry process?</li> <li>• Which contexts should all students study? Which other contexts might students choose to investigate as part of their inquiry?</li> <li>• What resources would best help students deeply inquire into the question or problem?</li> </ul>	<ul style="list-style-type: none"> <li>• Students brainstorm possible approaches to the question or problem as a whole class while the teacher scribes on the board</li> <li>• Provide a sample research calendar to each group and ask them to modify it or divide tasks among them</li> <li>• Supply a list of resources for each context (books, videos, articles, images, etc.) to get students started</li> <li>• Help students brainstorm ways to extend their inquiry: interviewing experts, taking a field trip, designing an experiment, conducting an opinion poll, etc.</li> <li>• Give students a written research guide that outlines your expectations (specific contexts they must study, optional contexts, types of acceptable sources)</li> </ul>

<p>3) Monitor student inquiry process and guide student reflection</p>	<ul style="list-style-type: none"> <li>• What scaffolding will students need to help them conduct their own research?</li> <li>• How will I serve as a coach for each group during the inquiry process?</li> <li>• What questions will I pose to students to challenge them?</li> <li>• How will I make sure students are focused on the concepts?</li> <li>• When and how will students reflect on their understanding and the inquiry process?</li> </ul>	<ul style="list-style-type: none"> <li>• Provide graphic organizers to help students organize information</li> <li>• Ask students to keep a journal of their research (they should summarize their findings and also reflect on the inquiry process); provide comments and feedback</li> <li>• “Interview” each group about the concepts at various intervals throughout the inquiry process</li> </ul>
<p>4) Support students as they construct high quality products through critique and revision</p>	<ul style="list-style-type: none"> <li>• How will students know what quality work looks like?</li> <li>• How can I ensure that students thoughtfully critique their own and each other’s work?</li> <li>• How will students know how to revise or strengthen weak areas of their product?</li> </ul>	<ul style="list-style-type: none"> <li>• Provide rubrics, checklists, and models of exemplary work</li> <li>• Ask students to use formal critique and feedback protocols when responding to each other’s work</li> <li>• Bring in experts to provide feedback based on the standards of quality in your field</li> </ul>
<p>5) Organize students to publish or present their products to a real-world audience</p>	<ul style="list-style-type: none"> <li>• Who is the primary audience for this work? How can I help students get the attention of their target audience?</li> <li>• Can we present these products off campus or outside of school hours?</li> <li>• How will students prepare to discuss their work with others?</li> </ul>	<ul style="list-style-type: none"> <li>• Invite the school community – parents, teachers, other students – to a “gallery opening” or “invention fair” with student products on display</li> <li>• Conduct a “teach-in” where students present their conclusions to others in order to inform or persuade</li> <li>• Organize a panel of experts – lawyers, engineers, environmentalists, college professors – to respond to and evaluate student speeches</li> <li>• Post student videos to a YouTube channel or create a website to convey student findings to the outside world</li> </ul>
<p>6) Provide opportunities for reflection about the content and the process</p>	<ul style="list-style-type: none"> <li>• How will students reflect on the conceptual relationships they uncovered, the facts that support these relationships, and the significance of their new understanding?</li> <li>• How will students reflect on their learning process?</li> <li>• How will students reflect on their role within the group and the group dynamic?</li> <li>• How will students reflect on the quality of their final product?</li> </ul>	<ul style="list-style-type: none"> <li>• Ask students to write journal entries using the prompt: “At the start of the project I thought...but then...so now I think...”</li> <li>• Have students record video blogs where they verbally express their reflections (similar to a reality show “confessional”)</li> <li>• Require students to write letters to their group-mates, the audience of their product, or you (the teacher) to explain how these people contributed to their learning</li> <li>• Have groups write a group reflection in the form advice for next year’s students</li> <li>• Have students list “lessons learned” on sticky notes and then categorize and debrief them as a class</li> </ul>