EduProject.org Facilitator's Guide #1

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Introduction

This facilitator's guide is intended for use by educators at the elementary, secondary, and post-secondary levels. The guide focuses on the following Edutopia.org video:

http://www.edutopia.org/video/5-keys-rigorous-project-based-learning

This video is one of the most widely viewed project-based learning (PBL) videos on YouTube.

Organization of the Video

The video is 6 minutes and 30 seconds in length. It is designed to serve as an introduction to PBL and five core strategies that underlie PBL. The video is the first in a video series from Edutopia that builds on these core strategies.

The video is organized into the following segments:

1. **Introduction**
   This is a short introduction to PBL and its importance as a teaching strategy.

2. **Key Component #1 – Real World Connections**
   This segment focuses on building real world connections in projects and how students are more engaged when their learning is directly connected to the worlds they live in.

3. **Key Component #2 – Core to Learning**

PBL is based on core standards and this section shows how projects can be used to challenge and raise questions with students, whilst covering core learning goals.

4. **Key Component #3 - Structured Collaborations**
   PBL provides opportunities for students to practice skills related to critical thinking, collaboration, communication, and creativity – all 21st century habits of mind that are important for learning at all levels. This segment focuses on ways to optimize the environment so that teamwork and collaborative communities are established in the classroom.

5. **Key Component #4 – Student Driven**
   The partial shift from teacher to student control over learning is one of the characteristics of PBL. Students are directly involved in planning and steering the projects they participate in. As a result, students are more invested in their own learning and feel empowered.

6. **Key Component #5 – Multifaceted Assessment**
   Assessment is integrated into PBL in many ways. This segment discusses a selection of tools for measuring student understanding throughout a project.

7. **Conclusion**
   This segment highlights research on PBL and includes a summary that incorporates the voices of students talking about the impact of PBL on their learning.

Big Ideas that are Embedded in the Video

- Students use their knowledge and apply it to real world situations and solve problems, reason through complex questions, and create high-quality products as a result of their thinking;
- Teachers facilitate learning by helping students to frame relevant and authentic questions and present logical arguments. Teachers guide students as they seek answers and carry out research. Teachers help students develop the necessary social skills they need to complete projects successfully.

Professional Learning Session

Learning Goals

- To develop a better understanding of PBL and its key features;
- To explore high-yield strategies that improve student learning through PBL;
- To explore the use of effective questioning to probe and guide student thinking when implementing PBL.

Social Goals

- To build strong working relationships among and between members of our education communities.

Facilitator's Guide for Video

1. Introduction	Notes
• Introduce the video the participants are about to watch. Navigate to the edutopia.org website which is the source of the video. Show the participants the section of the website that is dedicated to PBL. • Show the first part of the video: 0:00 to 1:12 • Stop the video for questions and discussion. Guiding Questions	The video "Five Keys to Rigorous Project-Based Learning" has several focusing questions for each segment of the video – some before and some after viewing each section. It is recommended that the video be viewed segment by segment, stopping where indicated. (Time codes are provided.)

1. What fraction of time in your classroom/school is dedicated to problem solving and working on questions that have students critically thinking? Is there too much or too little focus on critical thinking? Give reasons for your views. 2. Consider the learning goals and project presented in this segment. How does the project align with the goals? What are your initial thoughts on completing this type of project with your students? Can you foresee any problems associated with this type of project?	
## 2. Real-World Connections • This segment of the video on real-world connections runs from 1:13 to 2:02. • Stop the video for questions and discussion. ### Guiding Questions 1. Speaking within the context of your specific teaching role, why is there a need for there to be authentic connections to the real world for students?	## Notes If you would like to learn more about real-world connections: http://www.edutopia.org/video/real-world-connections-keys-pbl-series-1

2. What are some examples of projects that seem like real world problems, but are not necessarily authentic problems for students? 3. With a partner, create a list of criteria that authentic real world problems should strive to meet. Does your criteria apply to the examples shown in the video?	
## 4. Core to Learning • This segment of the video emphasizes the importance of aligning PBL to the curriculum standards. PBL should not solely be an 'an add-on.' • It is recommended that you read the pre-viewing guiding question (below) and discuss it before showing the video. • Following this, view this segment of the video: 2:03 to 2:40. • Stop the video and discuss the post-viewing guiding questions. ### Pre-viewing Guiding Question 1. What do teachers need to keep in mind in order to ensure that PBL features academic rigor? ### Post-viewing Guiding	## Notes If you would like to learn more about building rigorous projects that are core to learning: http://www.edutopia.org/video/core-to-learning-keys-pbl-series-2

### Question 1. Rather than designing a lesson to teach a set of standards or outcomes, consider employing a collaborative approach – defining your learning goals and outcomes, and then choosing a project that will help students learn the content. Discuss what a project might look like for a selection of learning outcomes in your subject area.	
## 4. Structured Collaboration • To support PBL, consider designing collaborative spaces for your classroom that promote team work and collegial learning. • Show the video from 2:41 to 3:20. • Stop the video and complete the following activity in small groups. ### Guiding Activity In small groups, read the following project scenario for a high school math class: *You are working on a project with the Creative Candy Company. You are preparing a report and a*	## Notes If you would like to learn more about structured collaboration: http://www.edutopia.org/video/structured-collaboration-keys-pbl-series-3

prototype that details your packaging recommendations for the candy. You need to design an aesthetically pleasing package that can contain 500 candies, each having a volume of 0.4 cm^3. Decide how you would introduce and structure the project.	
## 5. Facilitating Learning in a Student Driven Environment • The role of the teacher shifts in project-based learning. This segment of the video discusses how PBL teachers become facilitators as students assume more control over their learning. • Show the video from 2:42 to 3:21. • Stop the video and discuss the guiding questions. ### Guiding Questions 1. The video states that a facilitator needs to be able to ask good questions. What do you consider to be the qualities of "good questions" within the context of PBL?	## Notes If you would like to learn more about facilitation learning in a student-driven environment: http://www.edutopia.org/video/student-driven-learning-keys-pbl-series-4

6. Multifaceted Assessment

- One of the more challenging aspects of PBL is assessment.
- Use the pre-viewing guiding question to launch a discussion about assessment.
- Show the video from 4:11 to 4:46.
- Stop the video and discuss the post-viewing questions.

Pre-viewing Guiding Question

- We know the importance of using three types of assessment: assessment for learning, assessment of learning, and assessment as learning. How would you address these types of assessment within the context of PBL? Which of these would be the most difficult to incorporate into PBL?

Post-viewing Guiding Questions

- Some claim that PBL leads to deeper learning compared to more traditional instructional approaches. Agree or disagree? Provide reasons for your answer.
- How can you build individual

Notes

If you would like to learn more about multifaceted assessments:

http://www.edutopia.org/video/multifaceted-assessment-keys-pbl-series-5

accountability when students are collaborating in teams? What strategies can you use to assess group work? How do you assure the fair assessment of each student? • Waiting until the end of a project to begin assessing students is never a good idea. The video talks about check-ins. What other strategies can you use to keep students on track with a project, ensuring that each is doing their best work?	
7. Conclusion • Show the video's concluding segment from 4:47 to the end. Guiding Questions 1. Some common phrases that are associated with PBL are: "Don't be afraid to make mistakes." "Model active listening and full-group attention." "Be realistic and flexible in planning." Discuss the meaning of these questions. How would you bring these questions to life in a PBL unit you are facilitating? Do you have	

any other phrases that could be added to this list? 2. In small groups, discuss how PBL can play a role in your individual instructional context. (Identify the who, what, when, and where.) Do you anticipate any resistance from colleagues, administrators, or students etc.? How would you overcome this resistance? What do you see as the best features of PBL for your specific classroom or subject area? What are some of the challenges to be on the look out for?	

Facilitator Notes: