YouthBuild Final Project Template
Designing a Project-Based Learning Lesson for your Content Area

Directions: You are to choose one area of Green Building (Water; Energy; Land; Food) from the course to design a Project-Based Lesson around for your content area.

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<th>Part I: Audience</th>
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<td><em>Who is your classroom audience? Age level, grade level, content area?</em></td>
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PYB students are between the ages of 17 to 24. These young people are struggling to pay their bills and make ends meet. Students come to the school deficient in some areas of academics. Often the students have not experienced success in school and this causes low confidence. This environment is one where students are open and trusting of the PYB staff and teachers. However these students do not have a background of environmental stewardship. This group often believes protecting our resources is someone else's job.

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<th>Part II: Learning Standards</th>
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| *Choose examples of learning standards that you wish to introduce, directly teach, or reinforce through a project. What do you hope students will be able to do by the end of this lesson?*

The primary goal or outcome of the project is for all students to be able to define the different energy sources that contribute to the simple act of turning on a light. This basic concept of sustainability is currently lacking. In addition, students should improve personal skills, such as making a time management plan and breaking tasks down to smaller steps. The group work will reinforce the need to find a way to achieve a group goal.

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<th>Part III: Essential Question</th>
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<td><em>What essential question will guide your students’ project-based learning? For more on writing essential questions visit: <a href="http://www.greekforme.com/writing.html">http://www.greekforme.com/writing.html</a></em></td>
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What happens when you turn on the light? An exploration into the types and sources of power.
Part IV: Alignment with GED

List here your considerations for aligning your lesson and project with the GED. Does your plan allow for some test preparation?

The construction department aligns with the academic standards of a typical high school, however the department has a stronger focus on interpersonal growth. As a result the primary focus of the project will not be test prep but sustainable concept development. As with most research based projects the activities will reinforce academic outcomes such as reading comprehension and writing skills.

Part V: Overview of Project

Give a brief overview of your project here—what will students be doing and what will the outcome of the project be? (a report, presentation, blog, demonstration, etc.) Who will the audience be for the final presentation?

Students will give a presentation illustrating one of the major sources of power in the US. The project can be executed in three phases; research and outreach to trades, creating the presentation or graphics, and delivering the presentations. If ALL students could define power and energy the project would be a success. There would also be secondary outcomes that align with the learning standards. Students should be able to explain the pros and cons of the power source researched. They should feel more confident managing their time and being a successful part of a team. In addition the students should feel more connected to the trades.

Part VI: Design the Learning Activities

Design specific learning activities students might undertake to address or solve this project problem while working towards the learning standards and competencies. Decide on what resources could be used as part of these activities. Be sure to include what the student product will be.

The Power project will be roughly 6 sessions with each session being about 2 hours. During first activity session the group will have a discussion to access understanding of power generation. Concepts such as renewable and nonrenewable will be explored and terms such as power and energy will be defined. The student will brainstorm a comprehensive list of all the sources of power; if time allows we will categorize them into renewable and nonrenewable. Students will choose from the six major types of generation; coal, natural gas, nuclear, hydroelectric, renewable, and petroleum.

At the next class students will be given the project parameters. The students will create a team to research and present to the class on their area of interest. This might mean some teams are larger and some are smaller. Larger teams will need more research and bigger reports. There will be required reading for each energy source for all members of the team. They will then divide the major tasks; finding information and local resources, making a graphic, and giving the presentation. The major presentation aids will be posters and power points. The group will write a speech as a team at 500 words. The final class will involve a presentation to the class and local professionals.
Part VII: Assessment & Student Self-Reflection

How will you assess student progress towards competencies and standards? Will you create a rubric to help guide students?

How will you build in student self-reflection? How will you build in room for your own reflection as a teacher? How will student work lead you to new or different instructional choices?

Reflection is a critical part of the learning process. I will ask students to reflect on their own work as well as their cohorts at each session. I would ask students to discuss the work from the previous week in small groups. I will ask them to write one sentence on a slip of paper about the work of themselves or their peers in a constructive manner and read the sentences out loud. I will also ask another staff member to sit (when possible) and that person will act as the teaching coach. A rubric will be developed to assess the following standards, content, completeness, and quality. Each member of the team will be required to evaluate their teammates according to the rubric. The average score of the students and my assessment will constitute the grade.

Part VIII: Community Connection

Finally, how will you and your students share this project with the community? What community?

A major objective in the construction department is a strong community connection. This goal serves multi-departmental objectives; it strengthens the trainings in the construction department and broadens the funding sources for the development team. In this project, students will have a professional development requirement. This can be satisfied by interviewing a member of the industry or visiting a power site. Any professional connections from this activity will be invited to the student presentation.