

Inquiry Celebration | April 1, 2011 | Lakeview  
**Research Intensive PDS – Marion County Project-Based Learning Units**

## Project Description

Project-Based Learning (PBL) is an over-arching teaching approach that engages students in authentic and meaningful problems. PBL units use an entry event to stimulate student curiosity and a desire to learn more. A specific driving question frames student activity, which may involve problem solving or designing a solution or approach to answer the question. Student-developed products provide the assessment.

A proposal to the Benedum Collaborative, submitted Fall 2010 for the Research Intensive PDS Project, was approved. Four Marion County PDSs, East Park ES, East Dale ES, White Hall ES, and Rivesville Elementary/Middle implemented PBL units in Spring 2011. A WVU course organized Interns through four phases of activity: a one week (3-5 lesson) Unit Design (January) using the WVDE template, Unit Teaching (February), a Professional Development event at each PDS sharing the teaching results (March), and a revision of the PBL unit (April) for possible publication on the WVDE Teach 21 website.

<http://wvde.state.wv.us/teach21/pbl.html> The assessment data for each phase is summarized below:

Unit Design – Jan	Unit Teaching – Feb	PD Event – Mar	Unit Revision - Apr
WVDE part 1 rubric	Modified WVDE rubric	KWL chart	WVDE part 2 template
<input type="checkbox"/> PDS host teacher <input type="checkbox"/> PDS PBL-trained teacher <input type="checkbox"/> WVU instructor	<input type="checkbox"/> PDS host teacher <input type="checkbox"/> PDS PBL-trained teacher	<input type="checkbox"/> PDS teachers	<input type="checkbox"/> WVU instructor for intern <input type="checkbox"/> RESA training for PDS teacher - future

Unit development was coordinated by the EDP 740 Principles of Instruction course, a WVU spring elective for interns. All course materials, template, narrated modules, and rubrics can be found at:

<http://web.me.com/nshambaugh/EDP740-Spring2011/Description.html>

The WVDE unit template can also be found at:

<http://wvde.state.wv.us/instruction/pbltemplate.html>

To see an example of a published unit using this template, it's helpful to view:

<http://wveis.k12.wv.us/teach21/public/project/Guide.cfm?upid=3512&tsele1=1&tsele2=102>

## PBL Units

<b>East Park:</b> Rebecca Cline Host Teacher: Jeff Garvin <b>White Hall:</b> Katie Goodrich Host Teacher: Gina DeLorenzo <i>Frugally Fixing Frosty</i>	<b>East Dale:</b> Emily White, Bethany Hamrick, Madison Cebular Host Teacher: Debbie Wilson <i>Money Doesn't Grow on Trees</i>	<b>East Dale:</b> Lisa Leventry, Karri Lisowski Host Teacher: Alice Jean Muto <i>Will I or Won't I Eat It?</i>	<b>Rivesville:</b> Katie Armentrout Host Teacher: Nancy McCutchan <i>Literacy Stations Through the Striped Pajamas</i>
<b>4<sup>th</sup> Grade:</b> How to construct a 3D snowman given a budget and location?	<b>3<sup>rd</sup> Grade:</b> Why should I know how to use and budget money?	<b>6<sup>th</sup> Grade:</b> How do I make appropriate proportions when preparing meals?	<b>7<sup>th</sup> Grade:</b> What are the major literary elements in a novel and how are they applied in our lives?
			
<b>Solo:</b> peer and collaboration assessment, PBL survey <b>Group:</b> budget proposal, blueprint design, snowman, photos, PPT presentation	<b>Solo:</b> money dictionary <b>Group:</b> bar graph of store prices, family meal costs, restaurant menu	<b>Solo:</b> recipes with proportions, meal description <b>Group:</b> themed restaurant menu	<b>Solo:</b> character trait chart, plot mountain, comic strip, symbolic life object, FB page <b>Group:</b> children's book, movie script

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**Marion County Results of Unit Design and Unit Teaching Feedback**

<b>Category from WVDE Unit Template</b>	<b>Feedback summarized from Unit Design and Unit Teaching Feedback</b>
Authenticity	Potential to connect to other content areas throughout the school day Ss become aware of solving problems with limited resources PBL may introduce students to new concepts, ideas, or applications. Introduces Ss to reality and the world they'll become increasingly involved in.
Academic rigor	Multiple CSOs, content areas Prior knowledge of other content areas may be lacking, so that some pre-assessment may be useful or discovered in actual student work. PBL units may create their own WV power standards PBL units can include both content standards and 21 <sup>st</sup> century standards.
Applied learning	PBL units provide Ss with very practical problem they will all face. Units frequently help to create awareness in ideas, concepts, and dispositions. PBL units need specific details on behavioral rules, policies, and procedures. Team performance should be included as a learning outcome. Group membership depends on knowing makeup of the participants and where the Ss are in the school year, as well as the demands of the learning tasks. PBL can generate incidental learning outcomes (e.g., awareness that assessment is not always tests).
Active exploration	Explore real world adult institutions as well as ideas, skills. Give Ss more exploration opportunities. Group performance needs to be specified.
Adult relationships	Adults play a supporting but critical role: listener, feedback, example-providing, questioning, prompting. PBL can be facilitated faster through grade level teacher teams. PBL can be about adult situations and adult institutions. PBL may be very useful when the special ed teacher co-teaches with the regular ed teacher.
Assessment	Multiple forms of performance need multiple rubrics from teacher, Rubric development will need several trials to optimize. Introduce students to self-assessing activities. Use backward design: 6 facets of assessing understanding Multiple forms of media useful for students, especially older students. Multiple assessment options help to motivate older students.
<b>What worked</b> Entry event Research Role play Student work <b>What didn't</b> <b>Changes</b>	Details need to be adjusted. Provide meaningful examples, clear instructions Review what Ss need to know before continuing with unit. Like all teaching innovations, adjusting for time will require trying out and revision. Ss need time to practice developing and delivering presentations – need a lesson just for practice. Math may need more teaching time (e.g., lessons to give Ss time to measure and experience success and failure) Ask Ss if unit title needs to be changed. Invest them in the unit design.

**More information**

External course website provided for teachers:  
<http://web.me.com/nshambaugh/EDP740-Spring2011/Description.html>  
 Email contact:  
[Neal.Shambaugh@mail.wvu.edu](mailto:Neal.Shambaugh@mail.wvu.edu)