

PBL Project Design Plan	
Title of project: "The Inside Out Classroom"	Duration: 1 semester TBD (weather dependant)
Subject(s) & Grade-level: Natural Resources 1 and 2, 9-12	Teacher: M.Beasley
Global/ Local Issue: Human interaction with outdoor areas	
Key Knowledge and Understanding (CCSS and/or other standards)	Natural Resources I: 4.01- Describe the contents of soil and demonstrate the ability to properly evaluate and classify soils. Natural Resources II: 1.00- Understand leadership opportunities in natural resources 4.01- Understand soil conservation classes, management practices , and techniques used to properly sample soils and evaluate test results 7.00- Understand information related to the principles for natural resources recreational opportunities
Other Skills to Be Taught and Assessed (collaboration, public speaking, etc.)	Landscape design, construction, landscape install, plant id, soil remediation.
Driving Question	How can we promote outdoor use and conservation of our environment. How can we design and build an outdoor learning space that enhances the curb appeal of our school?
Project Summary (include issue/problem/ challenge that students will address, action taken and purpose of action)	Students will create a "sustainable" outdoor learning space on KHSCD campus, using resources that promote permaculture and least impact agriculture. This outdoor classroom will utilize an unused space on campus with low curb appeal. Our goal is to create a space that can be used as a classroom or collaborative space that will be used by all members of the KHSCD community. We will work with teachers to create garden plots that relate to specific objectives taught. Students will work as teams to design the outdoor classroom space and create scale blueprints at each step. Team designs will be presented to the class and the class will decide which elements will be a part of the final design. Once a final design is agreed upon by the class student teams will be assigned an area to become the lead design team of. These teams will be responsible for creating a plan of action and supply list. These action plans and supply list will be used by the team to present their element of the design to the Knightdale High School administration and the Business Alliance group to request funding/ donations.



	A week of build and install will occur at the end of the project and the students will work to plan a grand opening event in which staff, students and parents will tour the outdoor classroom space.	
Products	Individual Component(s): Vision drawing Sustainability peer teaching Draft outdoor classroom design Grand opening task	Specific content and skills to be assessed: Understanding of sustainable gardening Use of scale drawing, incorporation of sustainable elements into design Understanding of principles for using public spaces and land use regulations Demonstrate time management and leadership skills as they plan culminating event
	Team Component(s): Teacher survey Final design Construction Install “Curriculum” for tour of classroom space	Specific content and skills to be assessed: Time management, communication Ability to read and interpret plans Safe use of tools, proper planting techniques Knowledge of the objectives incorporated in the garden area of the classroom and how teachers can use the space
Making Products Public (include how products will be made public and who students will presenting)	Students will construct the classroom based on sustainable agriculture practices, and teacher input as to objectives the classroom gardens could be used to teach. After the completion of the install students will host a grand opening at which they will provide tours of the site to visiting students,staff, parents, etc.	
Launch Activity or Event	Think about classrooms activity. 1. Chalk talk protocol , students answer “What do you think about when you hear the word classroom?” 2. Idea session- after viewing pictures of outdoor classrooms, and the location on campus what would you like to see in ours	
Resources Needed	On-Site people, facilities: Classroom location, facilities modification if needed Carpentry teacher/ classroom to build needed elements	



	Equipment: Gardening tools Construction tools				
	Materials: Plant material Lumber Upcycled design elements				
	Community Members: CTE department leadership, county CTE leadership,KHS staff, Business alliance				
Assessment (include how individuals, team, & class will be formatively & summatively assessed on content and skills.)	Individually students will be assessed on their knowledge of sustainable gardening practices, ability to create a sketch and scale drawing of a project, time managements and problem solving as they plan grand opening Team assessments will be communication, time management, teamwork, completion of the project (accuracy in interpreting plans, safe and structurally correct install of built elements, creativity)				
Student Reflection (include how individuals, team, or class will reflect during & at end of project - journal, discussion, surveys, etc.)	Students will reflect on the project individually, during daily journal time. They will be prompted to write and share out about their progress, challenges and triumphs as they work through the projects. As a team students will reflect during teacher check ins, which will occur as needed (at least weekly). A final reflection paper will be written by each student to summarize and reflect on the experience.				
Teacher Reflection (include how teachers will reflect on the project and process)	Teacher notes during student meetings and observation/ evaluation of student work will guide the reflection and revision process. Due to the nature of the project teachers will have to revise and revisit as the project unfolds.				
Project Timeline (this is space to plan how	Day 1 Project outline	Day 2	Day 3 Survey teachers	Day 4 Sustainable	Day 5 Team design



long lessons will take, how often students will be assessed, etc) <i>Major lessons are listed in timeline. Due to collecting materials and weather constraints time may vary. See project outline for more details</i>	Launch activities Vision assignment	Site measurement and scale drawing	for design ideas Sustainable gardening peer teaching	gardening peer teaching Soil sample collection	creation
	Day 6 Team design creation Present draft designs to class Team check in with teacher	Day 7 Revise design based on feedback from classmates	Day 8 All teams work together to create final design using best elements from each design. Teams are assigned areas to be lead developers of	Day 9 Teams create action plan and materials list for their area of the design Teacher check in	Day 10 Compare soil sample results with Agronomy lab report. Students write lab report. Final design is finalized
	Day 11 Present design to administration and business alliance members. Request funding or materials	Day 12 create/ build new and up-cycled elements Install	Day 13 Install	Day 14 Install	Day 15 Grand opening event

