P R O J E C T D E S I G N : O V E R V I E W

Name of Project: "Whatever Floats Your Boat" ****Driving Question: "Can I create a boat that floats with the most cargo?"**		**Duration: 2-3 weeks**
Subject/Course: Science	**Teacher(s): Christine Rydlicki**	**Grade Level: 1st**
Other subject areas to be included, if any: Math, Science, Writing		

Significant Content (CCSS and/or others)	P.PM.01.11 W.1.8 S.IP.E.1 1.OA.A.1 1.OA.C5			
21st Century Competencies (to be taught and assessed)	Collaboration: Work as a whole group/small group		Creativity and Innovation: design a boat that will float while carrying cargo.	
	Communication: Presentation of plan/final product		Other:	
	Critical Thinking: Choose materials appropriate for creating a functional boat.			
Project Summary (include student role, issue, problem or challenge, action taken, and purpose/beneficiary)	Students will investigate objects that sink and float, and use that knowledge to create a boat that will float while carrying cargo.			
Driving Question	How can we design a boat that will float while carrying cargo?			
Entry Event	Watch video of large ships. If time of year allows, take students on boat ride (diamond Jack River Tour) and view ships/boats on the river.			
Products	Individual: *Journal entries *Conference with teacher *Presentation of idea		Specific content and competencies to be assessed: * Completed boat that will hold cargo *Prediction of how many pennies boat will carry *	

	Team: *Presentation of completed boat *Participation in creating boat	Specific content and competencies to be assessed: *Ability to answer questions about boat *Use of tools to complete project.

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Public Audience (Experts, audiences, or product users students will engage with during/at end of project)	Peers, teachers			
Resources Needed	On-site people, facilities: *School engineer *Parents			
	Equipment: Large container to hold water			
	Materials: Clay, paper, Styrofoam, wood, metal, foil, plastic,			
	Community Resources: Local Boat tour company (Diamond Jack)			
Reflection Methods (Individual, Team, and/or Whole Class)	Journal/Learning Log: Math/Science Journal		Focus Group:	
	Whole-Class Discussion: Various discussions		Fishbowl Discussion	
	Survey		Other:	

Notes:

PROJECT DESIGN: STUDENT LEARNING GUIDE

Project:

Driving Question:

Final Product(s) Presentations, Performances, Products and/or Services	**Learning Outcomes/Targets** content & 21st century competencies needed by students to successfully complete products	**Checkpoints/Formative Assessments** to check for learning and ensure students are on track	**Instructional Strategies for All Learners** provided by teacher, other staff, experts; includes scaffolds, materials, lessons aligned to learning outcomes and formative assessments
(individual **and** team)	I can identify the differences between sinking and floating. I can identify different things that can float.	Science journal	• Teacher models writing in science journal. • Teacher models finding information about sinking and floating.
	I can identify items that float and sink.	Science journal	• Teacher provides students with supplementary samples of things that sink or float.
	I can plan a design for my boat.	Science journal	• Visit to the boat, watch boats on internet.
	I can present my plan to the group and discuss why I think my plan will work.	Write/ draw in science journal	• Teacher facilitates discussion among presenter and peers.
	I can build my boat using the materials provided to me.		• Teacher facilitates creation of boats.
