Parkrose School District #3 *As Per Board Policy DLC/DLC-AR*

Request for Extended Travel

NAME: Matt Grubbs

DATE: 6.10.2013 DEPT/BUILDING Portland Christian Schools

PURPOSE: PCS has been lacking in STEM education, especially with a focus on engineering. Principles of Engineering will provide a needed focus on engineering and design elements of standards.

DISTRICT BENEFIT: To be able to implement Principles of Engineering at Portland Christian Schools.

TRAVEL DETAILS: 1. DESTINATION: Oregon Inst. of Technology, 3201 Campus Dr, Klamath Falls, OR 97601

2. DATES: 7/7 – 7/19/2013

ESTIMATED EXPENSES:	*DESCRIPTION*	*COST*
TRAVEL	Miles to and from event: 476 @ 55.5 cents per mile	$264.18
TRAVEL	Miles to and from event from place of stay in Klamath Falls: 4.3 @ 55.5 cents per mile	$57.36
MEALS	Dinner – $33 X 13 Nights	$429
LODGING	Klamath Falls KOA Campground 12 nights @ $25 per night Taxes: $27	$327
REGIS/FEES	Registration: $2,250	$2,250
TOTAL		$3,327.54

BUDGET SOURCE(S):

1. Title II:

- Registration: 230.3370.0641.854.000.000
- Mileage/Per Diem/Lodging: 230.3370.0342.854.000.000

mg 6/18/13

Request for extended travel

SUPERVISORS RECOMMENDATION AND COMMENTS:

Title IIA required that districts provide equitable services to private schools. This request is allowable and notates the ~~district's~~ private school's improvement plan.

SUPERVISOR SIGNATURE [signature]

SEND FORM TO SUPERINTENDENT/DESIGNEE:

SUPERINTENDENT/DESIGNEE RECOMMENDATIONS/COMMENTS:

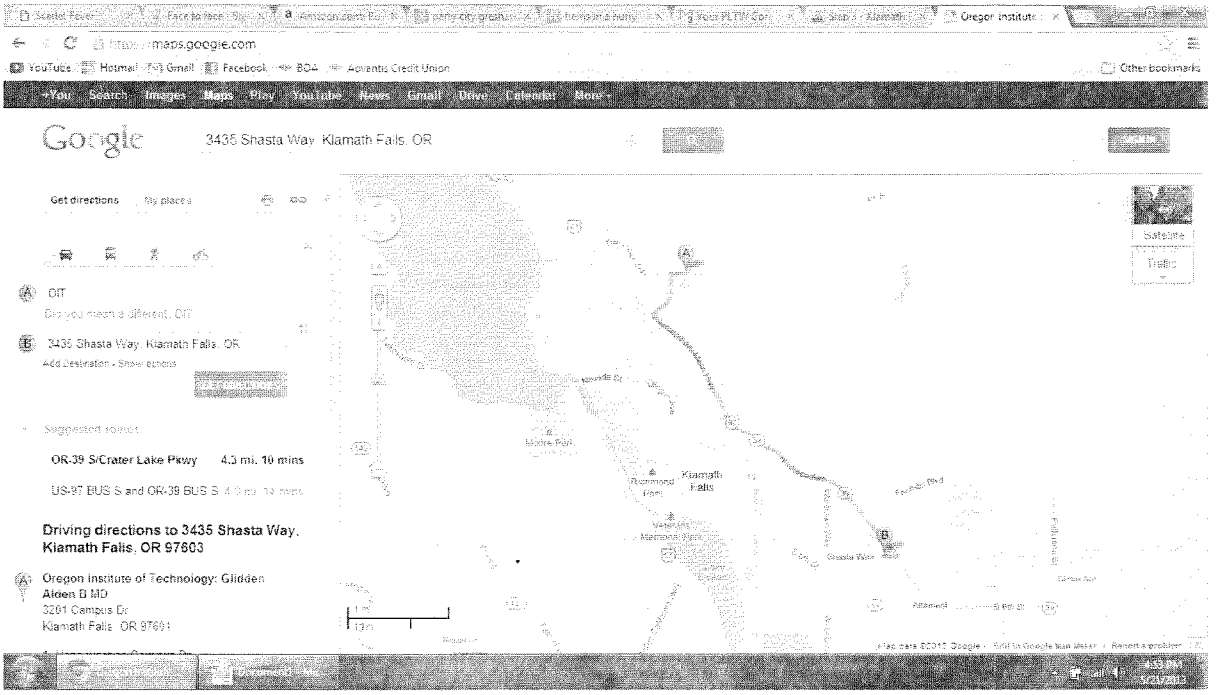
OK KGray 6/20/13

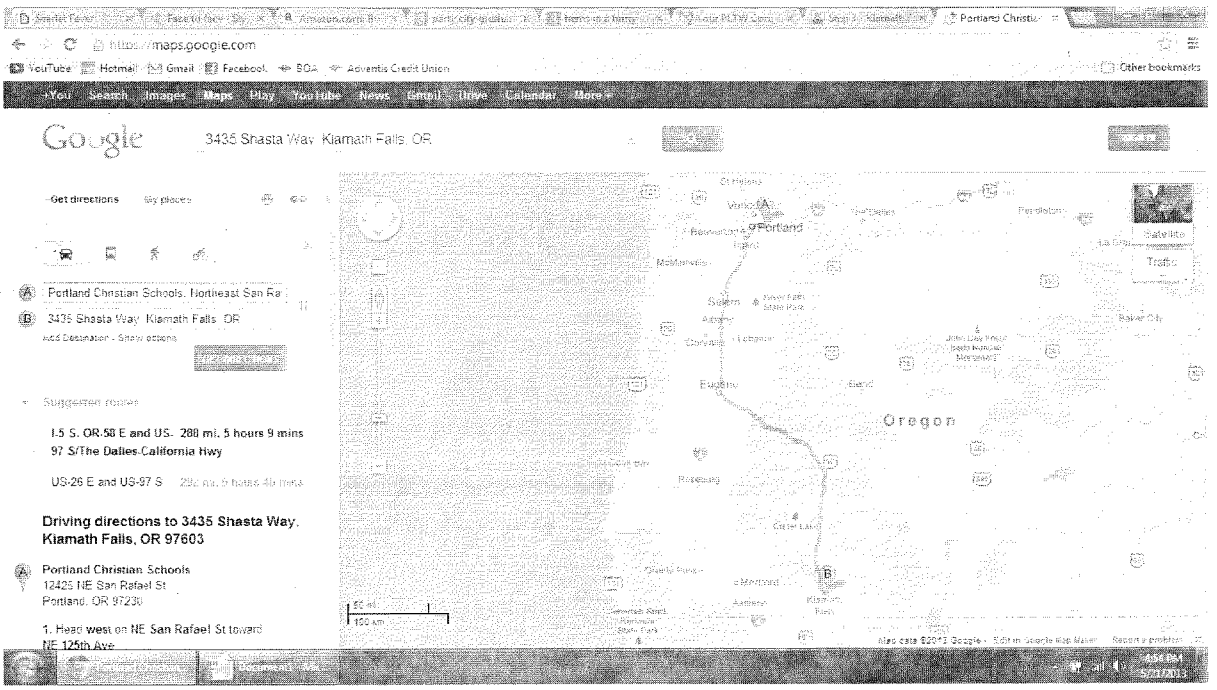
BOARD ACTION:_____APPROVED _____DISAPPROVED DATE:_____

I AGREE THAT ALL OF THE INFORMATION ON THIS FORM IS ACCURATE AND TRUE TO THE BEST OF MY KNOWLEDGE.

EMPLOYEE SIGNATURE: [signature] (Matt Gubbs)

DATE: 6/12/13


maps.google.com
Google
3435 Shasta Way, Klamath Falls, OR
Get directions
My places
OIT
Did you mean a different OIT
3435 Shasta Way, Klamath Falls, OR
Add Destination - Show options
Suggested routes
OR-39 S/Crater Lake Pkwy 4.3 mi, 10 mins
US-97 BUS S and OR-39 BUS S
Driving directions to 3435 Shasta Way, Klamath Falls, OR 97603
Oregon Institute of Technology: Glidden Alden B MD
3201 Campus Dr
Klamath Falls, OR 97601
Satellite
Traffic
Klamath Falls


maps.google.com
Google
3435 Shasta Way, Klamath Falls, OR
Get directions
My places
Portland Christian Schools, Northeast San Ra
3435 Shasta Way, Klamath Falls, OR
Add Destination - Show options
Suggested routes
I-5 S, OR-58 E and US- 288 mi, 5 hours 9 mins
97 S/The Dalles-California Hwy
US-26 E and US-97 S
Driving directions to 3435 Shasta Way, Klamath Falls, OR 97603
Portland Christian Schools
12425 NE San Rafael St
Portland, OR 97230
1. Head west on NE San Rafael St toward NE 125th Ave
Satellite
Traffic
Portland
Oregon

Parkrose School District

TitleIIA Preparing, Training and Recruiting
High Quality Teachers and Principals

Application for Funds

School Portland Christian Date 5/16/13

Requested by Matt Grubbs

1. Statement of Need: What student need is this request responding to and how were the needs identified? What data/assessment information supports the need?

PCS has been looking in STEM education, especially with a focus on engineering. Principles of Engineering will provide a needed focus on engineering + design elements of standards.

2. Who is involved in the planning, designing, and implementing of this training? (Describe how there will be systematic consultation with teachers, parents, and other groups involved in the implementation of this training.)

The training is provided at OJT by PLTW personnel. I will be attending the training and implementing it at PCS.

3. Goal: Overall, what do you plan to accomplish with this training?

To be able to successfully implement POE at PCS.

4. Describe specific training proposed. Conference (w/dates, etc. or trainer, etc.) Please be specific for each training proposed.

July 7 - 19

5. What are the specific instructional objectives to be addressed by this training? What will **students** know and be able to do as a result of this project?

The training is designed to equip teachers to successfully teach the POE course, especially in relation to projects.

6. How will you know that staff is using the training in the classroom? What actions will the school monitor?

Administration will monitor + review the class. A test by PLTW is also to be administered at the end of the course to assess student learning.

7. What evidence will you use to determine if the strategy is having an impact on student learning?

See above in relation to the end-of-course assessment.

8. Person responsible for oversight of the implementation and evaluation:

Jim Hill

9. Timeline:

2013-2014 school year

10. Estimate Costs (<u>detailed</u> budget for all costs for this activity)
    Include specific costs: (i.e, registration for conference, travel costs, trainer costs, etc.)

Registration: $2250

Room + Board: $327

Travel to + from Klamath Falls: $238

Daily travel to OIT: $1.60

Food: $260

Total: $3126.60

See attached for details

PROJECT LEAD THE WAY PLTW

Principles Of Engineering (POE)
Scope and Sequence
2013 Core Training Institute

Day	Estimated Time	Lesson	Learning Event	Deliverables		Due Date	Submission Type
			All Readiness Training Modules in the LMS			Prior to fist day of Core Training	
DAY 1	8:00 AM - 9:00 AM		Course Checklist				
		1.1	Review 1.1 Teacher Notes [DOC]				
		1.4	Introduction to Engineers Notebook [PPT]				
			Design Process Overview [PPT]				
	9:00 AM - 10:30 AM		Careers in Engineering and Engineering Technology [PPT]				
			Introduction to Careers Report				
		1.1	Simple Machine – Lever, Wheel and Axle, and Pulley [PPT]				
			Simple Machines – Inclined Plane, Wedge, and Screw [PPT]				
	10:30 AM - 12:00 PM		Vernier / LoggerPro - Introduction -				
		1.1	Activity 1.1.1 Simple Machines Investigation VEX [DOC]	Complete in Course Binder (pages)	x	DAY 1	PDF Scan
	1:00 PM - 2:00 PM	1.1	Cont. Simple Machines Investigation VEX [DOC]				
	2:00 PM - 3:00 PM	1.1	Gears, Pulleys, and Sprockets [PPT]				
			Activity 1.1.3 Gears [DOC]	Complete in Course Binder (pages)	x	DAY 1	PDF Scan
			Activity 1.1.4 Pulley Drives and Sprockets [DOC]	Complete in Course Binder (pages)	x	DAY 2	PDF Scan & CQ
	3:00 PM - 5:00 PM	1.1	Project 1.1.6 Compound Machine Design VEX [DOC]	Complete in Engineering Notebook	x	DAY 3	PDF Scan & CQ
	Homework	1.1	Activity 1.1.2 Simple Machine Practice Problems [DOC]	Complete in Course Binder (pages)	x	DAY 3	PDF Scan
		1.1	Activity 1.1.5 Gear, Pulley Drives, and Sprockets Practice Problems	Complete in Course Binder (pages)	x	DAY 3	PDF Scan
		1.3	Gather Materials for Project 1.3.4 Renewable Insulation				
		2.1	Review Threads and Thread Notes [DOC]				
		1.2	Read 1.2 Teacher Notes				
		1.4	Read Lesson 1.4 Teacher Notes				
			Review Introduction to Energy Sources [PPT]				

Day	Estimated Time	Lesson	Learning Event	Deliverables		Due Date	Submission Type
DAY 2	8:00 AM - 9:30 AM	1.1	Compound Machine Design VEX [DOC]	Complete in Engineering Notebook			PDF Scan, CQ
	9:30 AM - 10:00 AM	1.2	Introduction to Energy Sources [PPT] - *Discuss content and best practices for implementation*				
			Activity 1.2.2 Energy Distribution [DOC] - *Review Only* Discuss Possible Alternative - http://tcipg.mste.illinois.edu/				
	10:00 AM - 12:00 PM	1.2	Introduction to Electricity [PPT]				
			Activity 1.2.3 Electrical Circuits (physical) [DOC]	Complete in Course Binder (pages)	x	DAY 3	PDF Scan
	1:00 PM - 2:00 PM	1.2	Work, Energy and Power [PPT]				
			Activity 1.2.5 Mechanical System Efficiency [DOC]	Complete in Engineering Notebook	x	DAY 3	PDF Scan
		1.3	Review 1.3 Teacher Notes [DOC]				
			Activity 1.3.1 Solar Hydrogen System [DOC]	Complete in Engineering Notebook	x	DAY 2	PDF Scan
	2:00 PM - 3:00 PM	1.3	Introduction to Thermodynamics [PPT]				
			Activity 1.3.4 Renewable Insulation [DOC]	Complete in Course Binder (pages)	x	DAY 2	PDF Scan & LoggerPro File
	3:00 PM - 5:00 PM		Introduction to Design Briefs [PPT] & Decision Matrix [PPT]				
			Design Modification Chart [DOC]				
		1.4	Problem 1.4.1 Renewable Electrical Energy Generation & Distribution [DOC]	Complete in Engineering Notebook	x	DAY 2	PDF Scan
	Homework	2.1	Review Teacher Notes 2.1				
		1.2	Activity 1.2.4 Circuit Calculations	Complete in Course Binder (pages)	x	DAY 4	PDF Scan
DAY 3	8:00 AM - 10:00 AM	2.1	Introduction to Statics [PPT]				
			Introduction to Centroids [PPT]		x	DAY 3	PDF Scan & CQ
			Activity 2.1.1 Centroids [DOC]	Complete in Course Binder (pages)			
	10:00 AM - 12:00 PM	2.1	Introduction to structural member properties [PPT]				
			Activity 2.1.2 Beam Deflection [DOC]	Complete in Course Binder (pages)	x	DAY 3	PDF Scan & CQ
			Lesson on Beam Deflection using MD Solids				
	1:00 PM - 2:30 PM	2.1	Free Body Diagrams [PPT]				
			Activity 2.1.3 Free Body Diagrams [DOC]	Complete in Engineering Notebook	x	DAY 4	PDF Scan & CQ
			Calculating Force Vectors [PPT]				
			Activity 2.1.4 Calculating Force Vectors [DOC]	Complete in Course Binder (pages)	x	DAY 4	PDF Scan & CQ
	2:30 PM - 5:00 PM	2.1	Calculating Moments [PPT]				
			Activity 2.1.5 Calculating Moments [DOC]				
			Calculating Truss Forces [PPT]				
			Activity 2.1.6 Step by step truss system				
			Activity 2.1.7 Calculating Truss Forces	Complete in Engineering Notebook	x	Day 5	PDF Scan & CQ
	Homework	2.2	Review Teacher Notes 2.2				
		2.2	Review Introduction to materials [PPT]				

Day	Estimated Time	Lesson	Learning Event	Deliverables		Due Date	Submission Type
DAY 4	8:00 AM - 10:00 AM	2.1	Discussion on Truss Calculations from Activity 2.1.7				
	10:00 AM - 12:00 PM	2.1	Truss Design Project 2.1.8 [DOC]	Complete in Engineering Notebook	x	DAY 4	PDF Scan, Image & CQ
	1:00 PM - 2:00 PM	2.2	Introduction to materials [PPT]				
		2.2	Manufacturing Processes [PPT]				
			Activity 2.2.2 Manufacturing Processes [DOC] *Review only*				
	2:00 PM - 5:00 PM	2.3	Material Testing [PPT]				
			Tensile Testing Activity [DOC]	Activity 2.3.2 Tensile Testing [DOC]	x	Day 5	PDF Scan
	Homework	3.1	Read 3.1 Teacher Notes				
		3.2	Read 3.2 Teacher Notes				
		2.4	Review 2.4 PPT Presentations				
DAY 5	8:00 AM - 9:00 AM	2.3	Activity 2.3.1 Stress/Strain Calculations [DOC]	Complete in Engineering Notebook	X	DAY 5	PDF Scan & CQ
	9:00 AM - 10:00 AM	2.4	Design Problem 2.4.1 [DOC] (West Point Bridge Designer)	Complete in Engineering Notebook	x	DAY 5	PDF Scan & CQ
	10:00 AM - 12:00 PM		Fluid Power Introduction [PPT]				
			Activity 3.2.1 Fluid Power Applications [DOC] Presentation Only				
		3.2	Pneumatic Power[PPT]				
			Activity 3.2.2 Pneumatic Demonstration [DOC]				
	1:00 PM - 3:00 PM	3.2	Hydraulic Power [PPT]				
		3.2	Activity 3.2.4 Hydraulic Demonstration [DOC]				
		3.2	Fluid Power Practice Problems [DOC]	Complete in Course Binder (pages)	x	DAY 6	PDF Scan
	3:00 PM - 5:00 PM	3.1	Intro to VEX Robotics Platform and RobotC Software [PPT]				
			Build Testbed				
	Homework						

Day	Estimated Time	Lesson	Learning Event	Deliverables		Due Date	Submission Type
DAY 6	8:00 AM - 10:00 AM	3.1	Activity 3.1.1 Inputs and Outputs	Complete in Engineering Notebook	x	DAY 6	PDF Scan, RobotC File, CQ
			Program Design [PPT]				
			Activity 3.1.2 Basic Outputs Programing	Complete in Engineering Notebook	x	DAY 6	PDF Scan, RobotC File, CQ
	10:00 AM - 12:00 PM	3.1	Activity 3.1.3 Basic Inputs Programming	Complete in Engineering Notebook	x	DAY 6	PDF Scan, RobotC File, CQ
		3.1	While and If-Else Loops [PPT]				
			Activity 3.1.4 While and If-Else Loops	Complete in Engineering Notebook	x	DAY 6	PDF Scan, RobotC File, CQ
	1:00 PM - 3:00 PM	3.1	Variables and Functions [PPT]				
			Activity 3.1.5 Variables and Functions	Complete in Engineering Notebook	x	DAY 6	PDF Scan, RobotC File, CQ
	3:00 PM 5:00 PM	3.1	Activity 3.1.6 Open and Closed Loop Systems	Complete in Engineering Notebook	x	DAY 6	PDF Scan, RobotC File, CQ
		3.1	Activity 3.1.7 Machine Control Design	Complete in Engineering Notebook	x	DAY 7	PDF Scan, RobotC File, CQ
	Homework						
DAY 7	8:00 AM - 12:00 PM	3.1	Activity 3.1.7 Machine Control Design				
	1:00 PM - 5:00 PM	3.3	Problem 3.3.1 Design Problem (Material Sorter)	Complete in Engineering Notebook	x	DAY 9	PDF Scan, RobotC File, & CQ
	Homework						
DAY 8	8:00 AM - 12:00 PM	3.3	Problem 3.3.1 Design Problem (Material Sorter)			DAY 9	
	1:00 PM - 5:00 PM	3.3	Problem 3.3.1 Design Problem (Material Sorter)			DAY 9	
	Homework		Complete Self Reflection [LMS]				
			Kinematics [LMS]				

Day	Estimated Time	Lesson	Learning Event	Deliverables		Due Date	Submission Type
DAY 9	Self Reflection		Schedule and participate in an exit interview with an instructor	Self Reflection Review Interview	x	DAY 10	
	8:00 AM - 10:00 AM	3.3	Present Material Sorters and clean up				
	10:00 AM - 12:00 PM	4.2	Introduce Activity 4.2.3 Ballistic Device Build Ballistic Device (VEX)	Complete in Engineering Notebook	x	DAY 10	PDF Scan & CQ
	1:00 PM - 2:00 PM	4.2	Build Ballistic Device (VEX)				
	2:00 PM - 5:00 PM	4.2	Construct Range Chart [XLS] Test and Collect Ballistic Data				
	Homework		Review Teacher Notes 4.1, 4.2				
DAY 10	8:00 AM - 10:00 AM	4.1 4.1.1 4.2	Probability [PPT], Statistics [PPT] Activity 4.1.1 Statistical Data [DOC] Activity 4.1.2 Candy Statistics [DOC] Project 4.2.1 Self-Propelled Vehicle	 Complete in Course Binder (pages) Complete in Engineering Notebook Complete in Engineering Notebook	 x	 DAY 10	 PDF Scan & CQ
	10:00 AM - 11:30 AM		Finish and hand in all work Complete Online Evaluations Complete Portfolio Checklist Course Debrief - Question and Answer Course Conclusion Checklist				
	Graduation		Attend graduation/closing ceremonies.				

PTE POE training costs breakdown

Room and board: $327
Trip down and back from PCS: 476 miles at $0.50 per mile: $238
Trip to and from OIT: 4.3 miles at $0.50 miles, assuming 2x per day for 12 days: $51.60
Food: $20 per day for 13 days: $260

Total estimated cost: $876.60