Challenge Problem Classification Table

This guide classifies the PBL Challenges by type of Challenge (trouble shooting versus design problems), number of solutions (single versus multiple), and level of difficulty (basic versus advanced). Please note: The PBL Challenges are flexible by design. Educators may adjust any Challenge's level of difficulty by revealing or withholding technical information, content and concepts during implementation.

Level of Difficulty Key: * = Basic, ** = Advanced

Challenge Name	PBL Project	Challenge Type	Number of Solutions	Real World Application	Level of Difficulty
Cal Poly Pomona "Watt's my Light"	PHOTON PBL	Troubleshooting	Fewer Solutions	Light Measurement Technology	*
ILDA- "Blinded by the Light"	PHOTON PBL	Troubleshooting	Fewer Solutions	Laser Safety	*
Penn State Electro Optics Center "Hiking 911"	PHOTON PBL	Troubleshooting	More Solutions	Thermal Imaging	*
Photodigm, Drexel and SMU- "Shining Light on Infant Jaundice"	PHOTON PBL	Design	More Solutions	Home-based Phototherapy	*
UPenn McKay Orthopaedic Research Lab "Of Mice and Penn"	PHOTON PBL	Design	More Solutions	Non-Contact Precision Measurement	*
BU "DNA Microarray Fabrication"	PHOTON PBL	Troubleshooting	Fewer Solutions	Maskless Photolithography	**
IPG Photonics "High Power Laser Burn-In Test"	PHOTON PBL	Design	More Solutions	Burn in Testing of High Power Lasers	**
Photomachining, Inc. "Stripping with Light, fantastic!"	PHOTON PBL	Design	More Solutions	Laser Wire Stripping	**

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Cape Cod Cranberry Growers Association	STEM PBL	Design	More Solutions	Sustainable Agriculture	*
TTF Watershed Partnership	STEM PBL	Design	More Solutions	Storm Water Management	*
FloDesign	STEM PBL	Design	More Solutions	Electricity Generation in Wind Turbines	**
Johnson & Johnson	STEM PBL	Design	More Solutions	Development of Eczema Treatment	**
RSL Fiber Systems	STEM PBL	Design	More Solutions	Ergonomic and Efficient Submarine Lighting	**
SPG Solar/City of Tucson	STEM PBL	Design	More Solutions	Solar Power Installation	**

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IBM	AM PBL	Troubleshooting	Fewer Solutions	Microchip Manufacturing	*
CIRTEC Medical Systems	AM PBL	Design	More Solutions	Increasing Production of a Medical Device	**
FastCAP Systems	AM PBL	Troubleshooting	Fewer Solutions	Nanotechnology/ Thin Film Deposition	**
Hypertherm	AM PBL	Design	More Solutions	Advanced Quality Systems	**
Sound Manufacturing	AM PBL	Troubleshooting	More Solutions	Sheet Metal Fabrication	**

To View the Challenges Visit: http://www.pblprojects.org/challenges-nebhe/