INSTRUCTIONAL EQUIPMENT REQUEST	Internal Use
AUG 3 0 2018 2018-2019	IE #: <u>Fall-44</u> Total \$:
Requester Name: Carol Edson Division Nam	ne: STEM
SUMMARY INFORMATIO	N
Title of Item: LED lighting for Geology MIneral Display cases	
Equipment Location Building: L1800 Room	: L1824
Location Comments: Geology has twelve display cases that showcase a complete set of sedimentary and metamorphic rocks. They also hold dinosaur skull SECTION 1: EQUIPMENT DESCRIPTION	
The equipment is: A Replacement An Upgrade	w Equipment/Technology
Describe the specific equipment requested and how it will be used to a technology to LPC from what is currently in place: The current lighting system in the display cases is tiny flashlight-ty of each case. They do not illuminate the case contents, they merel upgrading to a set of LED strip lights running perpendicular to the other set.	pe bulbs in a line along the front ly light up the glass doors. By
easily see all the way to the back of the cases, where many of the value of these special collections, and engage both students and v	
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SECTION 1: EQUIPMENT DESCRIPTION (contd)

If applicable, describe the legal requirement, mandate, or safety concern for purchase of this equipment, making specific reference to the legal requirement or regulation:

Miguel Angel, CLPCCD electrician, and I worked together to determine what the best approach would be, how the existing infrastructure could be used, and what would be required.

SECTION 2: LPC MISSION STATEMENT AND LPC PLANNING PRIORITIES

LPC MISSION STATEMENT:

LPC is an inclusive learningcentered institution providing educational opportunities and support for completion of students' transfer, degree, basic skills, career-technical, and retraining goals.

LPC PLANNING PRIORITIES:

- ✤ Accreditation: Establish regular and ongoing processes to implement best practices to meet ACCJC standards.
 - Curriculum: Provide necessary institutional support for curriculum development and maintenance.
- * Tutoring Services: Expand tutoring services to meet demand and support student success in Basic Skills, CTE, and Transfer courses.
- Professional Development: Coordinate available resources to address current and future professional development needs of faculty, classified professionals, and administrators in support of educational master plan goals.

Specify how the equipment supports LPC's Mission Statement and Planning Priorities:

It does not matter how beautiful or compelling a mineral sample is- if the student is unable to see it clearly. Cavelike display cases are ironic...and we are excited about this opportunity to move our lighting into the 21st century, while making the student learning experience more complete. Many of our students are anxious when taking a transferable college science course, especially the lab portion. By having an additional way to share these collections, with the samples and models all easily visible, students will not have to ask permission to bring specimens out of the display cases just to see them properly. It will mean that the money invested in the collections will be better utilized as well, since the gloomy cases are not particularly inviting. Exploration is what lab science requires, and this set of twelve large display cases will be far better utilized with excellent modern lighting.

SECTION 3: EDUCATIONAL ITEMS – PROGRAM REVIEW

Specify the educational programs this equipment supports:

These display cases are used by Geology and Oceanography. Some of the collections featured are fossils used in Historical Geology as well as models, rocks, and minerals. Geography students also enjoy viewing the samples.

If this equipment is included in your Program Review, please include the exact wording. If equipment is not included, explain why:

We have plans to update the lighting in the 12 display cases in L1824 that will better showcase the wonderful rock, mineral, fossil, and model collections. The current lighting will be replaced with LED strip lighting. This will be more energy efficient, as well as creating far superior visibility. An IER is being submitted September, 2018.

From the Fall 2018 Program Review

SECTION 4: TEACHING AND LEARNING

Describe in detail the impact this equipment will have on <u>teaching</u>:

RIght now, to use the materials in the display cases, we have to pull them out where students can actually see them- in the ambient room lighting. With the new LED strip lighting, the contents of the display cases can be enjoyed any time, without having to unlock the cases, take things out, and then ensure that they are put back. Students will be free to view the materials any time they visit L1824, as will visitors and staff.

Describe in detail the impact this equipment will have on <u>learning</u>:

We own some incredible models, including dinosaur skulls, and crystalline mineral structures. Having these look inviting and available will facilitate student interaction and exploration. The LED strip lighting will mean our investment in these fine materials will be more effectively used FOR learning.

Each academic year, this equipment will impact: $10^{-10} \#$ of classes/sections $260^{-10} \#$ of students

SECTION 5: OUTCOMES (SLOs)

Using your documented SLOs, specify how the equipment will enable student learning outcomes to be achieved.

Upon completion of Geology 1 laboratory, students will be able to evaluate and differentiate mineral samples

Upon completion of Geology 1 laboratory, students will be able to evaluate and differentiate rock samples

Upon completion of Geology 3 laboratory, students will be able to evaluate and/or interpret geologic diagrams encapsulating geologic histories

(sequences of events).

Upon completion of Geology 3 laboratory, students will be able to identify and differentiate fossil samples.

The new LED lighting will foster better visibility and accessibility for all students studying Geology or Oceanography. Learning rocks and minerals is vital for all Geology students, especially those taking the lab.

What are the consequences related to learning outcomes if request is not funded?

IN essence we are wasting the materials that are in the display cases to the degree that they are not easily seen. Unless the lab tech has time to get out these items, monitor their use, and return them to the cases, these exceptional samples go largely unused. LED lighting will make them clearly available, visible and inviting. WIthout the LED lighting, they will remain in...the dark.

SECTION 6: TOTAL COST OF OWNERSHIP (FINANCIAL & SUSTAINABILITY)

What is the potential life span of the requested equipment?

20-30 years.

If new storage is needed what are the storage requirements, location requirements, and costs associated with the new equipment: (NOTE: Specific storage costs should be detailed in the "*Part A: Initial Start-up Costs*" section below.)

n/a

If this equipment replaces old equipment but the old equipment will not be retired, are there on-going storage requirements, location requirements, and costs associated with the old equipment? If so, provide details.

n/a

What will be required to maintain the equipment, such as regular servicing or upkeep? (Specific on-going costs should be detailed in the "*Part B: On-Going Annual Operating Costs*" sections below as applicable.)

n/a

Explain how this equipment meets or exceeds basic sustainability efforts and/or provides renewable resources to the college:

THese LEDs are far more energy efficient than the existing small bulbs- which burn dull, but hot. LEDs burn bright, but cool.

PLATT

Information Submitted:

Quote #26859

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Quote Details:								
Quoted By: Chris Avelar		Branch: Livermore						
Quote Name: Nora Undercab		Quote Date 10/19/201	: 7 9:28:22 A	М				
Billing Address: Chabot Las Positas Comm Coll 7600 Dublin Blvd Dublin, CA 94568	leg #147890	Shipping Ao 3000 Camp Livermore,	us Hill Dr					
Job Account:		Shipping M Hold For Pi	ethod: ckup					
		FOB:						
Special Conditions:	al Conditions:		jes:		\$1,261.64 \$116.70 \$0.00 \$0.00 \$1,378.34			
		Total:						
Type ltem #	Description	Uom	Qty	Price Per	Total			
	NULB-836LED927A	EA	12	\$67.85714	\$814.29			
	NAL-880	EA	24	\$2.14286	\$51.43			
	NAL-806W	EA	13	\$3.21429	\$41.79			
	NAL-810/12W	EA	7	\$5.71429	\$40.00			
	NATL-5100HW	EA	2	\$157.07143	\$314.14			
		Sub Total: Tax: S/H: Other Charg	les:		\$1,261.64 \$116.70 \$0.00 \$0.00			
		Total:			\$1,378.34			

Prices are subject to change without notice. Prices quoted, unless otherwise specifically noted on this quotation, are subject to availabilty and must be accepted and released for immediate shipment within 48 hours. Full phone support 7 days/week 4am - 8pm PT, 5am - 9pm MT Platt Electric Supply standard terms and conditions apply <http://www.platt.com/service/terms.html>

SECTION 6: TOTAL COST OF OWNERSHIP (contd)

Part A: Initial Start-up Costs

Item	Cost	Comments
Equipment or Materials		see attached quote
Taxes (9.5%)	~	
Shipping or Delivery Charge		
Installation Costs *		0
Miscellaneous Costs:		
Facilities Modifications		
Operator Training		
Maintenance & Repair Training		All
Storage		\mathcal{O}
Other:		
Vendor Discount		
Grand Total:		

*For items requiring installation, requesters are required to check with District Purchasing (Victoria Lamica) regarding District policies.

Part B: On-Going Annual Operating Costs

Item	Cost	Comments
Annual Service or Maintenance		
Estimated Parts Replacement Per Year		
Outside Standardization or Calibration Costs		
Storage Costs		
New Supply Costs		
Miscellaneous Costs:		
Maintenance & Repair Labor		
Other:		
Annual Operating Costs:		

Indicate the source of funding for on-going annual operating costs:

SECTION 6: TOTAL COST OF OWNERSHIP (contd)
Part C: Incremental Labor Costs
OPERATOR:
Indicate the key operator:Anyone can flip the light switch.
Is this in their current scope of duties?
Indicate cost to train key operator (include in Initial Start-up Costs above):
Indicate amount of time per month key operator will use equipment:
MAINTENANCE & REPAIRS:
Indicate the person performing maintenance and repairs: Miguel Angel
Is this in their current scope of duties?
Indicate cost to train for maintenance and repairs:
Indicate amount of time per month maintenance will be required:

APPROVALS

Funded requesters will be expected to respond to a brief RAC feedback survey by a requested deadline. Requests for computer-related equipment and printers must be reviewed by the LPC IT Department.

Signatures: Requester

Date

Date

8-30-18 Date 9124/18 Date

Vice President

Dean/Manager

IT Department (if required)

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and Service Requisition #R		For inventory purposes ເກີດັບຜູດ room # where RETURN COPY of REQUISITION TO: L1824	UNIT QTY UNIT PRICE EXTENDED COST	12 ea \$ 67.86 \$ 814.29	24 ea \$ 2.14 \$ 51.43	13 ea \$ 3.21 \$ 41.79	7 ea \$ 5.71 \$ 40.00	2 ea \$157.07 \$ 314.14	۰ ۰	ч Ф	۰ ۰	۰ ۳	· ·	۲ ا	۰ ب	۰ ب	ч Ф	Subtotal \$ 1,261.64	Tax \$ 0.0925 \$ 116.70	Shipping (if available):	TOTAL COST \$ 1,378.34	pusiness Onlice	Dean/ VP/ President
quipment, Apparatus	'n.	NAME OF STAFF MEMBER DATE WRITTEN DATE REQUIRED DIVISION/ DEPARTMENT For inventory purposes include room # where Carol Edson 9/21/2018 12/31/2018 STEM equipment will reside: L1824	DESCRIPTION (PRODUCT, TYPE, SIZE, COLOR, STOCK NUMBER)	NULB-836LED927A	NAL - 880	NAL-806W	NAL-810/12W	NATL-5100HW			RECEIVED	V 6 dis	- -	Deliver To: Las Positas College	3000 Campus Hill Drive	Livermore, CA 94551	ROOM 1824	Comments:			Original invoices and receipts must be attached for payment. Include current taxes unless incorporated in price.	FUND ORG ACCT	APPROVALS Marvisor/ Coordinator/ Director

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