DATE: March 23, 2023
TOPIC: District 6th Grade Lab STEM Proposal
PREPARED BY: Jordan Stephen

Recommended for:

☒ Action

☒ Discussion

☒ Information

Purpose:
The Board of Education approves all contracts and expenditures greater than $10,000.

Background:
Over the last number of weeks the administrative team has been gathering information for proposals for the replacement of equipment within specific STEM labs at Lincoln Hall. The STEM labs for grades 6, 7 and 8 all use equipment in different ways as each grade level concentrates on different topics in conjunction with the Project Lead the Way (PLTW) Curriculum. After a discussion with the 6th grade teacher, and reviewing curricular needs, we have determined that the best solution would be to invest in a new MacOS environment for the 6th Grade STEM Lab.

Many of the projects and activities that are offered in the 6th grade PLTW classes have been completed with student iPads, but can more efficiently be accomplished using a MacOS computer. The teacher can take advantage of larger screens and for viewing data and using built in USB connections to test coding and programming. In addition, the teacher can utilize the same equipment from that lab for the broadcasting duties for the Lincoln Hall TV station.

Currently, the computers that are in the lab are older Intel MacOS base machines that were introduced in October of 2015 and have been modified so that they will run Microsoft Windows. Windows is no longer needed for the 6th grade STEM curriculum and with recent changes in technology, the Mac architecture will no longer run windows in the same fashion.

Attached to this informational packet are some specs on the new devices and items that are being proposed for the 6th Grade STEM Lab.

6th Grade Stem Lab:
The Administrative team is recommending the following technology refresh at Lincoln Hall.

- The District will bulk purchase 30 MacMini M2 based computers to build and deploy up to 26 workstations in the 6th grade STEM Lab. These can be added or removed depending on enrollment and teacher needs.
- The District will use the remaining 4 MacMini M2 as a reserve stock in case of replacement, or enrollment changes.
- The District will purchase 25 large 27" monitors to be used with the iMac Mini M2 computers
- The District will purchase 25 wired keyboards and mice to be packaged with the workstations.
- All computers being removed from Lincoln Hall will be recycled over the summer.

Fiscal Impact:

Per Unit Cost:

Item	SD74 Bundle Price
Mac Mini- M2-8-core CPU and 10-core GPU, 256GB SSD Edu	$479.00
ViewSonic VA2715-2K-MHD - LED monitor - 27"	$179.00 *
Logitech MK120 USB Wired Keyboard/Mouse Set	$17.95 *
Mac Mini VESA Mount	$10.00 *
Total Mac Mini M2 Workstation Cost	**$685.95 ***

*This estimate could change slightly due to the consistent fluctuation in price and availability of the VESA mounts, keyboard, and monitors required.
Prices shown based upon current published price.

Total Lab Costs:

Item	SD74 Bundle Price
Mac Mini- M2-8-core CPU and 10-core GPU, 256GB SSD Edu	$14,370.00
ViewSonic VA2715-2K-MHD - LED monitor - 27"	$4,679.74 *
Logitech MK120 USB Wired Keyboard/Mouse Set	$466.70 *
Mac Mini VESA Mount	$260.00 *
Total Mac Mini M2 STEM Lab Replacement Cost	**$19,776.44 ***

Considerations:
Based upon past practice, the team researched how new all-in-one iMac designs would work out in that space.
- The new iMacs, though new to the market, currently are being shipped with the Older M1 Processor Chip sets that debuted in 2020.
- The all-in-one iMac comes standard with a 24 inch monitor which would be smaller than what is being proposed.
- The all-in-one iMac comes standard with wireless keyboards and mice which would cause logistics issues in a computer lab setting.
- The current all-in-one iMac has an EDU starting price of $1249.00 each, which would cost the district a minimum of $32,474.00 for the lab replacement.
- During the last refresh of the STEM lab computers, the district would have spent a minimum of $50,000 on the 27" iMac all-in-one computers systems.

Recommendation:

It is the Administrative recommendation that the Finance Committee concurs to recommend to the Board of Education to continue with the replacement of the 6th grade STEM lab computers in an amount not to exceed $22,000.