



## **Bartlesville Public Schools**

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### **Phillips 66 Innovation Labs Fact Sheet**

**March 7, 2016**

#### **Background:**

In August 2014, Phillips 66 gave a \$1.7 million contribution to the Bartlesville Public School District to build Science, Technology, Engineering and Mathematics (STEM) labs at Bartlesville's three secondary schools.

The gift was part of the company's strategy to partner with local organizations at the grassroots level in communities where Phillips 66 employees live and work. Timing for building the labs coincided with the school district's reconfiguring of its secondary schools, thanks to the generosity of the community's support of a significant school bond issue. This gave school planners the opportunity to develop space beyond traditional classroom settings to enhance STEM education.

The new labs are designed to help boost Bartlesville's student participation and achievement in STEM-related curricula and job skills. The program also is expected to enhance Bartlesville's attractiveness as a great place to work and raise a family.

The Bartlesville High School and Madison Middle School labs were completed in late 2015 and the Central Middle School lab is scheduled to be complete in August 2016.

#### **Details:**

As of January 2016, nearly 800 middle and high school students are taking STEM courses in the Bartlesville Public School District. Classes include engineering, computer science, design and modeling, automation and robotics, and math application through "hands-on" learning experiences and research-based courses.

Each Phillips 66 Innovation Lab provides flexible space for IT, Fabrication, and Research functions. Beyond the traditional school day, the labs will be used for competitive project teams, distance learning, teacher training and curricular exhibits.

At these labs, students get to:

- learn engineering design through hands-on projects,
- explore conceptual ideas of computer science,
- conduct original scientific research typical of college-level courses through the use of a dedicated research lab,
- and analyze real-world problems through advanced math applications.

#### **Equipment:**

##### **High School**

- **IT Lab** contains 16 higher-end computers at four collaborative workstations with large wall monitors, eight desktops with two additional large, wall monitors, 17 laptops, 35 tablets, large touchscreen wall monitor and computer, and three instructor computers. Computers, laptops and tablets interface to the seven wall monitors and a high-end electronic marker board and document camera with mobile teaching station, plus a laser printer.

- **Presentations Room** contains mobile student desks and instructor stations, high-end electronic marker board, document camera, 30 high-end graphing calculators with WiFi networking, 40 sensors and probes with interfaces for the calculators and laptop computers, and color laser multifunction printer.
- **Projects Lab** contains 16 laptop computers, touchscreen wall monitor, 15 workstations and long countertop for research projects, mobile marker boards, wet lab area with sinks, fume hood, engineering equipment, refrigerator and walk-in freezer, side storage and project rooms, and a fabrication area with workbench and tool room with more than 275 hand and machine tools.

### Madison and Central Middle Schools

- **IT Labs**, two each, contain 30 student computers and an instructor computer at a mobile station, and electronic marker board.
- **Workroom** contains eight student workbenches with vices, demonstration bench, mobile instructor station with computer, document camera and ceiling projector.
- **Fabrication room** with workbench, table saw, miter saw and drill press.
- **Science projects lab** with seven work areas, sinks, fume hood, tool area, stockrooms, instructor-demonstration station with computer, document camera and ceiling projector.

### Square Footage:

<b>High School:</b>	Wet Lab	2,700 sf
	Presentation/Lecture Space	700 sf
	Innovation Lab	1,220 sf
	Support (Office, Storage, etc.)	925 sf
	<b>Total</b>	<b>5,545 sf</b>
<b>Madison:</b>	Computer Lab	1,110 sf
	Project Lab	1,130 sf
	Work Room	1,265 sf
	Fab Room	400 sf
	Tech Suite	1,024 sf
	Support (Office, Storage, etc.)	420 sf
	<b>Total</b>	<b>5,349 sf</b>
<b>Central:</b>	<u>Lower Level</u>	
	Wet Lab	1,300 sf
	IT Lab	790 sf
	Support (Storage)	490 sf
	<b>Total</b>	<b>2,580 sf</b>
	<u>Upper Level</u>	
	Gateway to Technology	1,530 sf
	Computer Lab	1,125 sf
	Work Room	900 sf
	Support (Office, Storage, etc.)	250 sf
	<b>Total</b>	<b>3,805 sf</b>
	<b>Total for Central</b>	<b>6,385 sf</b>