FAYETTE COUNTY PUBLIC SCHOOLS

THE STEAM ACADEMY

DESIGNING A NEXT GENERATION SCHOOL IN CLOSE PARTERNSHIP WITH A UNIVERSITY

> "*This school will be a place that will stimulate creative thinking and problem solving ... where students will be actively involved in identifying, analyzing, and helping solve problems in their local and global communities.*"
>
> **MARY JOHN O'HAIR, UNIVERSITY OF KENTUCKY**

KEY FEATURES:

- ✓ **New School**
- ✓ **Station Rotation and À La Carte Blended Model**
- ✓ **Competency-Based Learning**
- ✓ **Dual Enrollment**
- ✓ **Higher Education Partnership**

AT A GLANCE:

Start Date: Fall 2013

Grades Served: 9-12

Location: Lexington, KY

Operator: Fayette County Public Schools

Operator Type: School District

Setting: Urban

Students at Start: 150

Students at Capacity: 600

MODEL TOOLBOX:

Learning Management System: iSchool (Moodle-based district system)

Assessment Tools and Approaches: CASEMATE

Digital Content Providers: Khan Academy, Discovery Learning, BAVEL Academy

Fayette County Public Schools and the University of Kentucky imagined a 21st-century school that is flexible and adaptable, technology rich, responsive to student and teacher needs, and recognizes and extends learning beyond the traditional school day and classroom.

The STEAM Academy, an urban public school which opened in fall 2013, incorporates mastery learning, personalized instruction, internships, and dual/college credit opportunities. The goal: to ensure that students graduate college and career ready, and experienced. Low-income, first-generation college, and traditionally underserved students have enrollment preference.

The STEAM Academy uses an innovative, hybrid instructional program based in student-paced, mastery- and problem-based experiential learning. Technology helps deliver content and real-time assessment to provide students with greater autonomy, helps instructors better diagnose and address each student's needs, and engages parents more effectively.
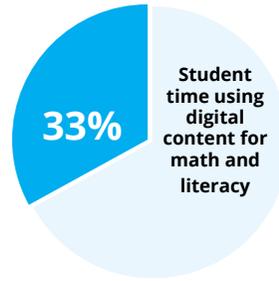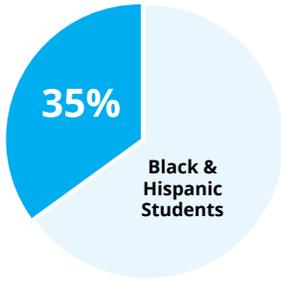
Student voice and student agency are central to the school model. Students take ownership of their learning by choosing their instructional delivery, schedule, and learning style and engaging in real-world problem-solving projects that interest them. At the classroom level students work to mastery with time as a variable. Some students may move thorough the coursework in two years and matriculate into classes at the University of Kentucky while others will need four years to be ready for college or career. Demonstration of mastery is determined by summative assessments and evidence collected in an e-portfolio.

Upon entering the school, students are assigned an adviser who remains with the student until graduation. Advisory groups meet bi-weekly throughout the year to provide guidance in college and career readiness skills, personal goal setting and monitoring, and problem identification and solution finding.

The district is taking advantage

"Student voice and student agency are central to the school model. Students take ownership of their learning by choosing their instructional delivery, schedule, and learning style and engaging in real-world problem-solving projects that interest them."

35%

Black & Hispanic Students

50%

Free & Reduced Lunch Students

33%

Student time using digital content for math and literacy

BLENDED SUBJECTS:
Math, Literacy

of an environment ripe for innovation. Innovation waivers provide unprecedented flexibility in seat time, enabling a true competency-based approach. The University of Kentucky P20 Innovation Lab (part of CCSSO's Partnership for Next Generation Learning) is helping create the innovative infrastructure and instructional model. In addition, teachers work with Innovation Lab faculty members and other UK faculty who provide training across a range of instructional innovations including project-based learning, performance assessment, and technology integration.

Preparation of these teachers also includes a mentoring component with master teachers, teacher leaders, and content specialists within Fayette County Schools. Ultimately, the STEAM Academy serves as an incubator—where pre-service and master teachers gain experience in a mastery-based blended learning environment, and a lab where UK faculty can research and pilot new innovations.

A DAY IN THE LIFE

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:00 a.m.	Daily Kick Off: Initially, this time will be used for daily advisory meetings, but as the year progresses it will also be used for remediation, group project work time, acceleration, time to work on online classes, etc. This student will also be enrolled in music - online course from the University of Kentucky.				
9:00 a.m.	English 101 at University of Kentucky (UK)	Work time at STEAM with faculty assistance as needed	English 101 at University of Kentucky (UK)	Dual Credit Calculus 1 (taught at STEAM)	English 101 at University of Kentucky (UK)
9:30 a.m.					
10:00 a.m.	History 101 at UK		History 101 at UK		History 101 at UK
10:30 a.m.					
11:00 a.m.	Dual Credit Calculus 1 (taught at STEAM)	Dual Credit Calculus 1 (taught at STEAM)	Dual Credit Calculus 1 (taught at STEAM)	Dual Credit Calculus 1 (taught at STEAM)	Dual Credit Calculus 1 (taught at STEAM)
11:30 a.m.					
12:00 p.m.	Lunch and Work Time	Lunch and internship	Lunch and Work Time	Lunch and internship	Lunch and Work Time
12:30 p.m.					
1:00 p.m.	CS 115 Introduction to Computer Programming at UK	EBCE (Student leaves the Academy for internship experiences)	CS 115 Introduction to Computer Programming at UK	EBCE (Student leaves the Academy for internship experiences)	CS 115 Introduction to Computer Programming at UK
1:30 p.m.					
2:00 p.m.	EBCE (Student leaves the Academy for internship experiences)		EBCE (Student leaves the Academy for internship experiences)		EBCE (Student leaves the Academy for internship experiences)
2:30 p.m.					
3:00 p.m.	The "typical" school day will end at 3:00 p.m., however, extended classes could be offered to afford students more flexibility if needed during the day. Faculty and other support staff will serve as afterhours mentors to assist with tutoring and other needs. The building will remain open to students to allow them to work on other projects, online courses, and to see assistance as needed.				
After Hours					

The basic structure of the student schedule mirrors the majority of undergraduate courses at the University of Kentucky (UK), following a MWF or TR pattern. The schedule will be semester-based; those not ready to move to a new course at the start of a new semester will continue in the same course until they master the standards.

The schedule will include transition time for students coming to and from the UK campus or internship locations.

NEXT GENERATION LEARNING CHALLENGES

nextgenlearning.org