

STEM Collaborative Network Update for 2012-2013

28 Schools Total

Elementary Schools	Middle Schools	High Schools
<ul style="list-style-type: none"> • Brentwood School of Engineering Magnet Elementary • Brooks Museums Magnet Elementary • Combs Leadership Magnet Elementary • Conn Active Learning and Technology Magnet Elementary • Walnut Creek Elementary • Hilburn Drive Academy • York Elementary • Aversboro Elementary • Lincoln Heights Elementary • Weatherstone Elementary • Hodge Rd Elementary • Kingswood Elementary • Root Elementary 	<ul style="list-style-type: none"> • Centennial Campus University Connections & Leadership Magnet Middle • Hilburn Drive Academy • Carroll Middle • East Wake Middle School • East Cary Middle • North Garner Middle 	<ul style="list-style-type: none"> • East Wake School of Engineering Systems • East Wake School of Integrated Technology • East Wake School of Health Sciences • NCSU STEM Early College High • Southeast Raleigh Center for Leadership & Technology Magnet High • Wake Early College of Health and Science High • Knightdale High • Middle Creek High School • Athens Drive High School • Enloe Magnet High School

Wake County Public School System STEM Collaborative Network Strategic Plan

The STEM Advisory Board, which is composed of school and district-based leadership, business partners, community partners, and college partners, collaborated to develop a Strategic Plan that includes a definition of STEM education, mission, vision, and priorities to guide the network. The Strategic Plan is aligned with the NC STEM Attributes rubric. The three priorities are:

- Priority 1: Integrate STEM throughout the standards.
- Priority 2: Increase Network schools' STEM achievement.
- Priority 3: Collaborate with business and community partners to connect STEM's relevance to workforce demands and to jointly seek STEM resources.

STEM Collaborative Network Accomplishment Highlights (2012-2013)

Note: Priorities for action for the 12-13 school year were based on the Recommendations and Actions Steps in the Data and Accountability report on the STEM Collaborative Network report for the 11-12 school year.

Digital Communication processes were established for intra-Network communication as well as a STEM blog <http://blogs.wcpss.net/stem/> to highlight the work of STEM schools throughout the school year

STEM Schools assessed their STEM implementation using the NC STEM Attributes Rubric and included STEM goals in their **School Improvement Plans** based on their results on the rubric and their priorities in the district STEM Strategic Plan.

The district developed a partnership with MISO (Maximizing the Impact of STEM Outreach) at NC State University to utilize their **MISO survey** for grades 5, 8, and 11. The survey measures students' attitudes about STEM careers and STEM subjects. Students in these grades took the survey in 12-13 to establish a baseline of data for measuring the future impact of STEM programs.

Wake Ed Partnership collaborated with WCPSS STEM and Global Network schools to host a **World Café** event for school leaders to dialogue with business and community leaders about potential partnerships.

Professional development opportunities were provided in the form of conferences, workshops, and network meetings. Approximately 40 school leaders including teacher leaders attended three different conferences. Teams from every STEM elementary and secondary school (approximately 155 teachers) attended an Integrated STEM Workshop the district hosted. STEM Coordinators attended an Instructional Technology workshop focused on STEM integration. STEM Coordinators met monthly and STEM Principals joined them quarterly throughout the year for professional development and networking opportunities.

A process and template was established for developing **Project Based Learning units** that integrate STEM content K-12. Teachers began developing PBL units for CMAPP to align with the standards.

WCPSS has been collaborating with **Biogen Idec** in Research Triangle Park to make preparations for our secondary STEM school students to begin taking field trips to their Community Lab. WCPSS teachers have worked at Biogen Idec to help develop labs that are aligned with the curriculum. Field trips to the Community Lab will begin Fall, 2013. Future plans include camps for students as well as professional development for teachers.

STEM Status Summary:

Data & Accountability will be releasing a comprehensive report on the district’s STEM status this summer. The report will describe the substantial progress made to solidify WCPSS STEM implementation during the 2012-13 school year, including finalization of the STEM network’s strategic plan and schools’ progress towards individual goals. Since the initiative is still relatively new, it is not yet possible to quantify academic outcomes. Nevertheless, large amounts of baseline data have been collected to support future analyses. Much of this data comes from the newly-forged partnership between WCPSS and the NCSU MISO (Maximizing the Impact of STEM Outreach) project; selected grade levels were surveyed in all WCPSS STEM schools. Generally speaking, the data show that our students’ interest in STEM careers declines as they age. A sample of this data is reported in the table below:

STEM Subject Area Attitudes	Positive Agreement	
	Elementary	Secondary
I am good at math.	72%	59%
I expect to use science when I finish school.	39%	43%
In the future, I can do harder science work.	67%	49%
21st Century Learning Skills	Elementary	Secondary
I can make my own goals for learning.	63%	54%
I can use time wisely when working on my own.	80%	75%
I can work well with other students, even if they are different from me.	71%	81%
Interest in STEM Careers	Elementary	Secondary
Engineering	62%	50%
Computer Science	57%	38%
Mathematics	51%	32%

Impact Data

E. Cary Middle was underenrolled. In 2011-2012, they enrolled 260 6th graders. In 2012-2013, they enrolled 330 6th graders with request for transfers to the school for grades 7 and 8.

Need to add Hilburn enrollment data.