Education in Catawba County

Catawba County Board of Commissioners









November 7, 2016

1.



2.

OUR SCHOOLS & BENCHMARKS

3.









Proposed by CVCC President
Garrett Hinshaw and endorsed by all three school systems, the goal of K64 is to provide all students in Catawba County with equal opportunities to be college and career ready.

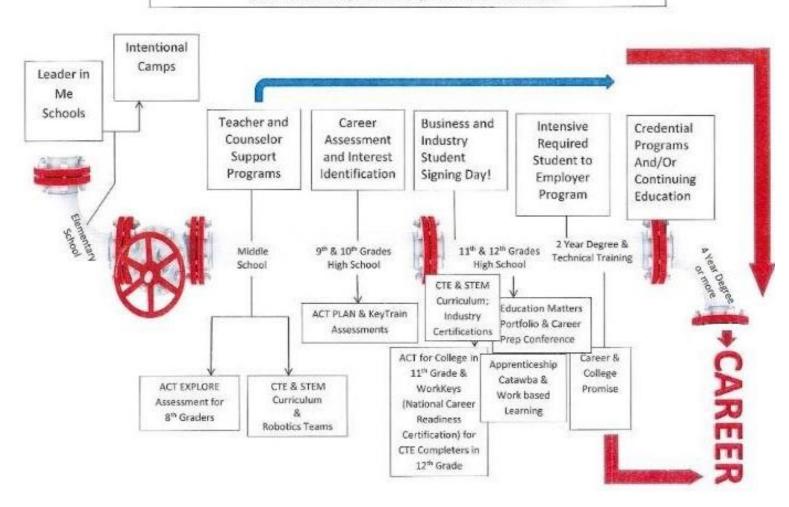
To do this, the initiative aims to create collaborative partnerships between all entities of public K-12 education and post-secondary education in Catawba County, private employers, and County government.



K64 PIPELINE

The Pipeline to a GREAT Future

An Intentional System for Superior Talent Production





K64 COMPONENTS

K64 may include primary program components such as:

- Leader in Me
- 2. I:I Technology
- 3. STEM Labs in all Schools
- 4. Project-Based Learning
- 5. Virtual Reality Integration
- 6. Career Cruising
- Talent Assessment,
 Development, and Engagement
- 8. Access to Credentialing and Higher Education

- Work Experience Integration
- Intensive Faculty, Staff, Employer, and Family Education and Training
- II. Program Alignment and Systematic Implementation and Evaluation
- 12. Instructional/Student Support



(BENCHMARK FACTORS

Overall Achievement

- > Catawba County's school systems are ranked roughly in the middle of statewide achievement indicators.
- > The selected peers are for the most part top 20 in math, science, and reading across EOC, EOG, ACT, and graduation rates.

Population

- > Catawba County's school systems total approximately 24,000 students, and individual districts range from 3,000 to 17,000 students.
- > The selected peers represent a range of district sizes, similar to the makeup of Catawba County's systems.

Income

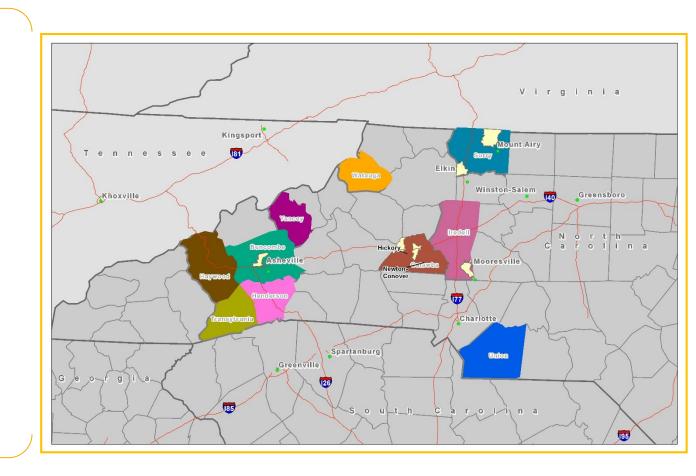
- > Catawba County's school systems have 20-30% poverty rate among students, but the County's overall population is in the top third statewide in wealth indicators.
- > Generally, selected peer districts are similar with regard to poverty rate and overall wealth indicators.

Geography

> Both Catawba County and selected peers are within 90 minutes of multiple metropolitan areas and major interstate / state roads.

(BENCHMARK DISTRICTS

- Asheville City
- Buncombe County
- Elkin City
- Haywood County
- Henderson County
- Iredell-Statesville
- Mooresville City
- Mount Airy City
- Surry County
- Transylvania County
- Union County
- Watauga County
- Yancey County



EDUCATION TOOLS







1:1 Technology

Learning Management System (LMS)

STE(A)M Lab

Career Development Software

Virtual Reality Integration



Iredell-Statesville

Mooresville City

Mount Airy City

Surry County

Transylvania

Union County

Watauga County

Yancey County

County

Grades 6 - 12

All Grades System-Wide

Grades 6 - 12

Grades 6 - 12

Grades 4 - 12

Grades 5 - 12

Grades 3 - 12, BYOD

RESOURCES AND TOOLS

Canvas

Blackboard

Schoology

Haiku

No LMS, uses Home

Base

Canvas

Canvas

TILOCCITCLE / LIVE I COLO						
School Districts	I:I Technology	LMS	STE(A)M Labs	Career Develop. Software	Virtual Reality	
Asheville City	Grades 6 – 12	Moodle/Google Apps	Makerspace Lab	No	No response	
Buncombe County	Grades 4 – 12	NCED Cloud	Innovation Zones	Yes, Career Cruising	No	
Elkin City	No	Canvas	Makerspace Lab	No	No	
Haywood County	No	Canvas		No		
Henderson County	Grades 9 – 12	Canvas	No	No	No	

Middle Schools

No, some Makerspace

All Schools

No lab, Science Institute

No labs, Magnet School

for Science & Tech

No labs

No Response

No

Yes - CTE

Yes

High Schools

Magnet High School

No

Maybe

No

Yes, Career Cruising before, Freeware now

Yes, Career Cruising

before, Next Tier now

Yes, free through CFNC

Yes, Career Cruising

No

Yes, Naviance

No

1:1 TECHNOLOGY

One-to-one technology is a program that provides all students in a classroom, school, or district with their own internet-connected mobile computing device.

Highlights from Peer Districts

Mooresville City

 System-wide technology access, with constant staff development

Henderson County

I:I initiative in progress,
 students will not take devices
 home

Yancey County

Bring Your Own Device(BYOD) Policy

Partners & Funding Sources

Partners

- School District FoundationFunding Sources
 - Local Funds
 - School District Foundation Grant
 - E-Rate
 - Race to the Top Grant
 - Voter-approved Supplemental
 Education Tax Levy
 - Article 40 & 42 Sales Tax
 - Appalachian Regional Commission
 Workforce Development Grant



1:1 TECHNOLOGY



Teach 🐪 Learn 🐪 Lead

Moving toward full 1:1 implementation; piecemeal devices as funding allows across district. Backbone infrastructure is not fully implemented, as there are not enough wireless drops to meet increased demand.



Four year I: I proposal recently presented to School Board that would add about 2,000 devices to the 3,000 current devices in schools, double technology staff, and provide teacher training. Backbone infrastructure issues have been resolved.



I:I implemented at Discovery High School. Newton-Conover High School is technology rich having more than 1000 devices. Bring Your Own Device initiatives are active at Discovery and Shuford Elementary. During the summer, NCCS redesigned their network infrastructure to accommodate a 1:1 environment.

LEARNING MANAGEMENT SYSTEM

A software application for the administration, documentation, tracking, reporting, and delivery of electronic educational technology, courses, or training programs.

Highlights from Peer Districts

Surry County

- Haiku, entered into system prior to Canvas' arrangement with the State
- Houses all course content
 Iredell-Statesville
 - Using Canvas, created online course work that saved district money by not using NCVPS material

- State and Local Funds
- Race to the Top Grant (2012)





LEARNING MANAGEMENT SYSTEM



Teach 👯 Learn 👯 Lead

Using Canvas, but decentralized utilization. Some high schools have created courses, and students in alternative settings (CREC) can participate in classroom settings at home schools.



Using Canvas and PowerSchool platforms, popular for classes in fifth grade and above. Using Ingenuity software to access NC Virtual Public School courses. HHS homework uploaded on Canvas.



Using Canvas system-wide which allows parents and students access to lessons, materials, and open source materials online from home. Microcredentialing staff in LMS course development.

Designated space / technology for applied curriculum based on the idea of educating students in five specific disciplines science, technology, engineering, arts, and mathematics.

Click here to watch a short video on STEM labs!

STE(A)M LAB

Highlights from Peer Districts

Mt. Airy City

- Labs/STEAM teacher at every school
- Business and Arts community support
- STEAM camps every summer

Buncombe County

Innovation zones

Elkin City

MakerSpaces

Partners & Funding Sources

Partners

- School District Foundation
- Wake Forest University

- Local Funds
- Project Lead the Way Grant
- Lowes Hometown Community
 Grant
- State CTE Funding
- Duke Energy Grant
- ZF-Community Outreach

STE(A)M LAB



Teach Mi Learn Mi Lead

Balls Creek Elementary has been a STEM lab pilot for the past 2 years. Focusing heavily on professional development for teachers regarding technology.



There is one STEM lab at Longview, with plans to implement an engineering-focused lab at HCAM. That program would include internships with local industries and would tap CVCC to help teach courses.



Newton-Conover Middle School is seeking to have its MakerSpace certified by the state. It includes 3D printers, laser engravers, veneer probe, green screens for digital news casting, and coding resources.

CAREER DEVELOPMENT SOFTWARE

Software that assists students in building a plan that connects their schoolwork to real life. Students take career assessments which are connected to vocation and education pathway information.

Highlights from Peer Districts

Surry County

 Uses Career Cruising software starting in middle school to design a fouryear high school plan.

Mooresville City

 Uses Next Tier to design a timeline aimed at junior and senior years

- State CTE Funding
- State and Local Funds





CAREER DEVELOPMENT SOFTWARE



Teach 🕅 Learn 🐧 Lead

Career development software is targeted for middle school. Entering high school students engage in work-based learning (job shadowing) as part of a career development plan.



Using an older freeware model of career development software.



Using Career Choices software, which was purchased by local business owner. Software promotes career exploration and planning. Starting in 9th grade, students complete 10-year plans (4 years of high school and 6 years post graduation).

VIRTUAL REALITY INTEGRATION

Technology which allows students to experience activities or scenarios without having to be physically present.

Highlights from Peer Districts

Mooresville City

- Virtual labs, trips, and dissections
- All grade levels exposed

Asheville City

Virtual field trips and employment exercises

Henderson County

Google Cardboard and teacher iPhones

Funding Sources

State and Local Funds





VIRTUAL REALITY INTEGRATION

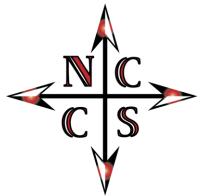


Piecemeal implementation; there are a limited number of virtual reality sets and accompanying phones which are used throughout the district.

Teach 🕅 Learn 🕅 Lead



Not used at this time.



Limited throughout the district. Discovery High School purchased headsets for students through a district Innovation Grant. Educational application is still being determined.





PROJECT-BASED LEARNING

WORK EXPERIENCE INTEGRATION

CREDENTIALING & HIGHER EDUCATION ACCESS

HEAL WORLD LEARNING

School Districts	Project Based Learning	Work Experience Integration
	ILAL WOILLD	

High Schools - SILSA

Yes - Not Formalized

All Grades via Makerspace

Pre-K and I in High School

Middle Schools

STEM-Focused Schools

All Grades

Grades K-8

Grades 6-8

Grades 4-5

Yes

Yes - Not Formalized

Asheville City

Elkin City

Buncombe County

Haywood County

Henderson County

Iredell-Statesville

Mooresville City

Mount Airy City

Surry County

Union County

Watauga County

Yancey County

Transylvania County

CTE

CTE

CTE

CTE

CTE

CTE

Yes

Yes

CTE

CTE

CTE

CTE

No Response

Credentialing & Higher Education Access

RACE Program

College to Career Promise

CTE & Community College

CTE & Community College

CTE & Community College

College to Career Promise

CTE & Community College

CTE & Community College

CTE & Community College

CTE & Community College

CTE & Community College

College to Career Promise

M.) PROJECT/PROBLEM BASED LEARNING

A teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging and complex question, problem, or challenge.

Highlights from Peer DistrictsElkin City

- MakerSpace access for K-12
- Based on the "4 C's":
 - > Critical Thinking
 - > Communication
 - > Creativity
 - > Collaboration

Henderson County

 Used in middle schools to solve real-world problems.
 ex. - Model UN on climate change

Partners & Funding Sources

Partners

- Community Colleges
- Universities

- Gates Foundation (SILSA)
- Math & Science Partnership
 Grant
- Local and State Funds



PROJECT-BASED LEARNING



Teach 🕅 Learn 🐧 Lead

Working toward broad implementation of PBL, currently taking a grassroots approach district-wide in which pockets of interested teachers attend focus groups to develop skills and ideas.



Used in IB program at Hickory High School and some CTE coursework. Sporadic usage in other schools.



Implemented at Discovery High School. Not based on STEM model of Project-Based Learning. However, uses projects as standard component of curriculum for grades 9-12, culminating in a year-long senior project.

WORK EXPERIENCE INTEGRATION

Programs and partnerships developed to ensure that all students have the opportunity to explore and evaluate their career interests during the continuum of their educational experience.

Highlights from Peer Districts

Mt. Airy City

Internships within CTE program and volunteer businesses

Surry County

 Paid internships for students

Partners & Funding Sources

Partners

- NASCAR
 - Local businesses

- State CTE Funds
- Local Funds
- Foundation Grants

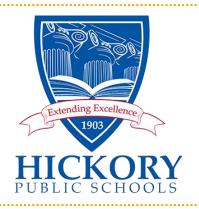


WORK EXPERIENCE INTEGRATION

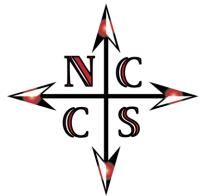


Teach Mi Learn Mi Lead

Largest work-based learning program in North Carolina. Annually placing approx. 700 students into 135 Catawba County businesses to complete jobs shadowing, internships, and apprenticeships.



Dedicated staff member at Hickory High School that focuses on internship opportunities for students



CTE instructor dedicated to coordinating internship and apprenticeship opportunities.

CREDENTIALING/HIGHER ED

Programs that allow students access to credentialing or higher education credits during their schooling, generally through partnerships with post-secondary institutions.

Highlights from Peer Districts

Surry County

Carpentry certification
 free for students
 All contacted school districts
 had programs for students to
 gain higher education credits (ex.
 College to Career Promise) and
 credentialing/certifications (ex.
 CTE coursework).

Partners & Funding Sources

Partners

- Community Colleges
- Habitat for Humanity

- State CTE Funds
- Local Funds
- Foundation Grants



CREDENTIALING/HIGHER ED



Teach 🕅 Learn 👯 Lead

Credentialing (e.g. CNA, Microsoft, ServSafe, welding, and soon to come fire safety) is available through CTE courses in high school. In some areas, credentialing is accepted in lieu of final exams.



Dual-enrollment program with Lenoir Rhyne, as well as credentialing tracks (for example CNA Pathway).



Credentialing (e.g. CNA, Microsoft, and ServSafe) is available through CTE courses in high school. District has worked with CVCC to create pathways—alignment of high school and community college classes—allowing credentialing in RN and Welding.





STUDENT
DEVELOPMENT &
ENGAGEMENT
(CHARACTER
EDUCATION)

BUSINESS ENGAGEMENT

STAFF DEVELOPMENT

PARENT ENGAGEMENT

CHANGING MINDSETS

		MINDOL	
School Districts	Student Development & Engagement	Business Engagement	Staff

I Elementary School

4 Elementary Schools

No

3 Elementary Schools

2 Elementary Schools

3 Elementary Schools, Some

Middle Schools

No

In Progress

In Progress

No

I Elementary School

2 Elementary Schools

Asheville City

Elkin City

Buncombe County

Haywood County

Henderson County

Iredell-Statesville

Mooresville City

Mount Airy City

Transylvania County

Surry County

Union County

Watauga County

Yancey County

Development

Parent U, CTE

Career Coordinators

Yes

Yes

CTE Career Coordinator

Yes

Some through STEM

Not yet

Yes

Yes

CTE

No Response

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Some through STEM

Yes

Yes

Yes

Parent Engagement

Parent U, District Parent **Engagement Coordinator**

PTO

PTO, LMS

PTA/PTO

PTO, career tours

PTO - Volunteerism

PTO, LMS, career tools

PTO, LMS, character ed

PTO

PTO

PTA/PTO

PTO

STUDENT DEVELOPMENT & ENGAGEMENT

Includes and complements a broad range of educational approaches such as character and whole child education, service learning, socialemotional learning, and civic education focused on improving soft skills and leadership skills. A popular example is *Leader in Me*.

Highlights from Peer Districts

Henderson County

Sugar Loaf (4 years) and
 Dana (8 years) elementary
 schools have achieved
 Leader in Me Lighthouse
 status

Haywood County

- Hazelwood Elementary
- Significant increase in student and parent engagement

- Community Sponsors
- PTA/PTO
- Chamber of Commerce
- School Foundations
- Title I funding



STUDENT DEVELOPMENT & ENGAGEMENT



Teach Mi Learn Mi Lead

Phased Leader in Me implementation with two in 3rd year, two in 2nd year, two in 1st year, and two on deck. Expensive on the front end, but significantly less expensive in subsequent years.



Currently promoting, but not requiring, character education in schools. Counselors are currently utilizing character education theme weeks, like Anti-Bullying. Would like to implement *Leader in Me* program.



Leader in Me program has been implemented at South Newton Elementary School at a cost of \$60,000 for the first year.

BUSINESS ENGAGEMENT

Highlights from Peer Districts

Mooresville City

 Provides opportunity for job shadowing and internships with local business leaders.

Buncombe County

 EdGE program helps students prepare for workplace through resume writing, interviews, etc.

Partners & Funding Sources

Partners

- Career Bridge Advisory
 Council
- Community college
- Local industry and businesses

- Career Bridge Advisory
 Council
- School Foundations



BUSINESS ENGAGEMENT



Teach Mi Learn Mi Lead

CTE instructor has fostered very strong relationship with local businesses, which has assisted in student placement for internships. District was instrumental in developing the Governor's Award winning program, Apprenticeship Catawba



Engaging businesses through the Superintendent's Advisory Council, inviting business leaders twice a year to talk about involvement. Businesses generally focus only on high school involvement.



Very strong component of the CTE program. Local businesses are interested in and readily accept interns. District works with Education Matters by participating in the annual Career Showcase at CVCC, which highlights career pathways from high school curriculum to employment with local businesses.

STAFF DEVELOPMENT

Highlights from Peer Districts

Henderson County

Training involved a "Crawl,
 Walk, Run" model for
 teacher development

Mooresville City

 Scheduled 10 half-days per year dedicated to teacher development, particularly digital conversion and integration in the "train the trainer" model

Partners & Funding Sources

Partners

- Friday Institute
- School of Government
- Community College
- Buck Institute
- Center for Creative Leadership
- Wake Forest University

- Golden Leaf Grant
- School Foundation



STAFF DEVELOPMENT



Teach 🐪 Learn 🐪 Lead

Uses 5 half-days for professional development, with school-specific Target Teams shaping the training. Emphasis on train-the-trainer model in middle and high schools. No district-wide training regimen. Teacher Externships are encouraged.



Ongoing development through Curriculum Conference and eLeader technology training (2x/month). Training is generally developed based on needs revealed from state-wide exams.



District-wide implementation of Instructional Core Framework through monthly PD; Professional Learning Communities conducted by Department leadership at each site; Tech Team sessions offered monthly; online learning opportunities utilizing Canvas. One district-wide Instructional Technology Facilitator and Instructional Coaches at Elementary Schools only.

PARENT ENGAGEMENT

Highlights from Peer Districts

Mooresville City

- I:I technology stimulates involvement
- Career Bridge Summit

Haywood County

Leader-in-Me

Asheville City

 Parent U community partnerships to deliver free programming for students and their families

Iredell-Statesville

Through PTO and booster organizations, documented 103,380 hours of volunteer service

Partners

– PTA/PTO



PARENT ENGAGEMENT



Teach 🕅 Learn 🐧 Lead

Implementing a centralized communication system (Blackboard Connect), which will make communication between district, staff, and parents more efficient.



Occurs through events at the schools, weekly phone calls, PTA interaction, and the school foundation. The district has started utilizing targeted home visits to connect with parents who are not engaged or whose children may need more support.



Back to School Bash; parent-centered communication system that allows them to choose from e-mail, calls and/or texts; parents involved in data-driven decision making through Systematic Support Visits (S3) at every school; STEM Community Nights connecting families with local industry



> MOVING FORWARD

Dr. Hinshaw's questions for BOC consideration before the K64 Presentation:

