



Making Magic in Middle School to Implement BRIDGE

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GMSA Presentation 2010

Strategic Goals

For the GaDOE and the State Board of Education



How many of you ...

- have 8th graders understanding and selecting their high school program of study before June 1?
- have 6th graders taking classes to help them select a potential career?
- Make AYP every year?



How many of you ...

- have advisor/advisee weekly sessions at your middle school?
- have 8th graders prepared to smoothly transition to high school and ready for HS courses?
- have disengaged students in your school?



- Georgia has how many Program Concentrations?
- Why do we need to understand Career Pathways?
- When should students learn about Georgia's POS?
- How can you use your iPhone, cell phone to make life easier?
- What new technology/device do you need created to make your life more productive, efficient?

We need our teachers, students to be

- **Innovative, Creative, Able to Design**
- **Students need to obtain, evaluate and use information/data easily**
- **Students need to be taught interactively and challenged to think**

Dr. Eric Topol video on www.ted.com

CTAE continues to focus on...

- Performance-based assessment
- Project-based instruction
- Continuum of assessments
- Integration of standards
- Differentiation of tasks
- Relevant and Relationship filled activities

State Legislation

- BRIDGE bill mandates 8th grade students select/create a Program of Study/Ind. Grad. Plan for grades 9 to graduation.
- (c) Beginning with the 2010-2011 school year, students in the sixth, seventh, and eighth grades shall be provided counseling, advisement, career awareness, career interest inventories, and information to assist them in evaluating their academic skills and career interests.

BRIDGE and Advisement

- Before the end of the second semester of the eighth grade, students **shall** develop an individual graduation plan in consultation with their parents, guardians, or individuals appointed by the parents or guardians to serve as their designee. High school students **shall** be provided guidance, advisement, and counseling annually that will enable them to successfully complete their individual graduation plans, preparing them for a seamless transition to postsecondary study, further training, or employment.

BRIDGE and Advisement

- An individual graduation plan shall:
 - 1) Include rigorous academic core subjects and focused course work in mathematics and science or in humanities, fine arts, and foreign language or sequenced career pathway course work;
 - 2) Incorporate provisions of a student's Individualized Education Program (IEP), where applicable;
 - 3) Align educational and broad career goals and a student's course of study;

BRIDGE and Advisement

- 4) Be based on the student's selected academic and career focus area as approved by the student's parent or guardian;
- 5) Include experience based, career oriented learning experiences which may include, internships, apprenticeships, mentoring, co-op education, and service learning;
- 6) Include opportunities for postsecondary studies through articulation, dual enrollment, and joint enrollment;

BRIDGE and Advisement

- 7) Be flexible to allow change in the course of study but be sufficiently structured to meet graduation requirements and qualify the student for admission to postsecondary education; and
- 8) Be approved by the student and the student's parent or guardian with guidance from the student's school counselor or teacher adviser.

**Are you Ready to
IMPLEMENT
the BRIDGE Law
in Fall 2010?**

One Option

- Capstone built to meet portions of the BRIDGE Law
- Integrated Instructional Unit/Framework with ELA and CTAE
- Performance activities that build relevance through CTSOs
- Students in charge to find career talents and make choices
- Starts process to build high school Individual Graduation Plan and seamless Program of Study
- Students see where academics and CTAE courses build “Why I need to learn and do this for my future!”

Capstone Project added to 8th grade

- Goal to create project-based culminating activity that integrates education and career planning and developmentally appropriate technical skills with academic standards for all 8th grade students.

Capstone Components

- Help 8th grade students prepare for transition to high school by identifying their chosen career interests
- Students integrate career interests assessments from GAcollege411 into research and technical writing
- Project builds collaboration with ELA and CTAE teacher/CTSO advisor and counselor/Teacher As Advisor

Capstone Components

- Integrates academic and career-technical courses for 8th grade students to research
- Then will present information on their career interest area(s) to middle and high school counselors, and their parents during a student-led conference
- Conference held in January/ February as students schedule and continue to transition to 9th grade and high school
- Project will maximize MS Career Exploration and academic experiences related to their career interest area

How do we Implement?

- Project introduced in 8th grade ELA class in fall when students begin preparation for Writing Test
- Will review research and report, and technical writing skills found in ELA Unit Framework “Take This Job and Love It”
- Students use GAcollege411 career interests inventory results to support chosen area, to research and write technical report
- Students complete ELA portion of project using rubrics, etc.
- Work with CTAE teacher, counselor, advisor to complete performance, demonstration portions of project for SLC, CTSO

Capstone Implementation

- Project integrates academic and CTAE curriculum standards, interactive technology, CTSO leadership opportunities, career-related education
- Student prepares reports for ELA grades, is able to complete projects for CTAE teacher to grade, and can enter project/demonstration into CTSO state leadership conference event
- Student in charge of independent portion of project with advisement given during Teachers As Advisor period

Capstone Committee Meeting

- Once completed, students present in January/February to MS & HS counselors, advisors and parents about their choices
- Spend at least one hour in 9 years to discuss career
- Student able to present, demonstrate talents
- HS Program of Study discussed during meeting



Capstone and MS CTSOs

- Students able to take Capstone project and enter in one of many new CTSO leadership events
- Demonstration
- Oral Report
- Poster Presentation
- Skill Performance
- Web Site Display
- Career Skill Assessment
- Group or Team Skill Competition



ELA Framework Update

- ELA units for grades 6-8 were updated in Spring 2010 by teams of teachers from across the state
- Teachers learned about CTAE, integration options, and developed ways to collaborate with CTAE courses
- Goal is to have Frameworks ready for teachers to implement by summer 2011

Capstone Example

- 8th grade student logs in to GAcollege411 account that was established by them in 6th grade
- Student selects 1 of 6 career interest inventories to complete
- Student saves results to electronic career portfolio and has conversation with adult to understand scores, career options
- Student researches using GAcollege411 and related career web sites for information about their chosen career field
- Student completes ELA assignments

Capstone Example

- Student works with CTAE teacher to understand more about career and selects performance-based activity for project
- Student completes ELA/independent project rubrics for grades
- Student prepares to present for ELA teacher, CTAE teacher, CTSO leadership event, and Student-Led Conference
- Student able to lead conference explaining what program concentration, career pathway, and career upon graduation
- ex. Student chooses Healthcare Science as Concentration

Agriculture

Georgia Program Concentrations

Architecture, Construction, Communications & Transportation

Healthcare Science

Healthcare Science Pathways

- Biotechnology Research & Development
- Diagnostic Services
- Health Informatics
- Therapeutic Services-Emergency Services
- Therapeutic Services-Medical Services
- Therapeutic Services-Nursing
- Personal Care Services-Cosmetology
- Physical Medicine

Agriculture Pathways

- Agribusiness Management
- Agriscience
- Agricultural Mechanics
- Animal Science
- Forestry/Natural Resources
- Plant Science/Horticulture
- Veterinary Science

Architecture, Construction, Communication, Transportation Pathways

- Aircraft Support
- Broadcast/Video Production
- Construction
- [Heating, Ventilation, Air Conditioning, & Refrigeration]
- Architectural Drawing & Design
- Flight Operations
- Graphic Communications
- Graphic Design
- Metals
- Collision Repair
- Transportation Logistical Operations (Ground/Marine)
- Transportation Logistical Support (Ground/Marine)

Arts & Humanities

Arts & Humanities Pathways

- Journalism
- Foreign Language
- Performing Arts
- Visual Arts

Georgia's Industry Sectors

- Advanced Communications**
- Advanced Manufacturing**
- Aerospace**
- Bio Science**
- Energy**
- Logistics**

Engineering & Technology

Engineering & Technology Pathways

- Electronics
- Energy Systems
- Engineering
- Engineering Graphics & Design
- Manufacturing

Family & Consumer Sciences

Family Consumer Science Pathways

- Consumer Services
- Interior Design
- Nutrition & Food Science

Culinary Arts

Culinary Arts Pathways

- Culinary Arts

Business & Computer Science Pathways

- Administrative/ Information Support
- Computer Networking
- Computer Systems and Support
- Computing
- Financial Management-Accounting
- Financial Management-Services
- Interactive Media
- Small Business Development

Marketing Sales & Services Pathways

- Fashion Marketing
- Marketing Communications & Promotion
- Marketing & Management
- Sports & Entertainment Marketing
- Travel Marketing & Lodging Management

Education

Education Pathways

- Early Childhood Education
- Teaching As A Profession

Govt. & Public Safety Pathways

- Homeland Security & Emergency Services
- Law & Justice
- JROTC –Air Force, Army, Marine Corps, Navy

Government & Public Safety

Business & Computer Science

Marketing Sales & Services



Healthcare Science

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graph LR; A[Healthcare Science] --- B[Nursing]; A --- C[Emergency Services]; A --- D[Medical Services]; A --- E[Health Informatics]; A --- F[Biotechnical Research & Development]; A --- G[Diagnostic Services]
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Nursing

Emergency Services

Medical Services

Health Informatics

**Biotechnical Research &
Development**

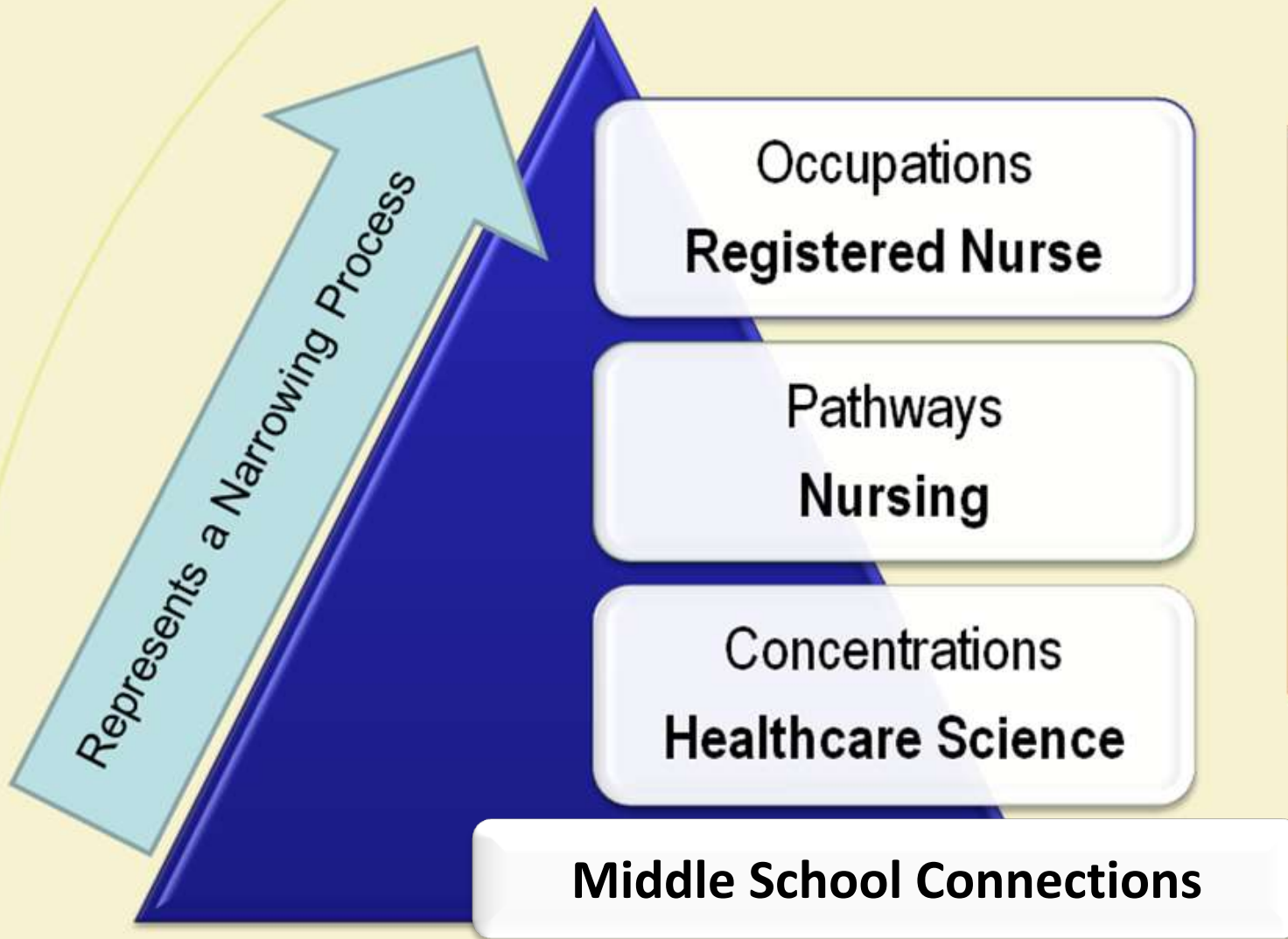
Diagnostic Services

Nursing Pathway

**25.52100
Introduction to
Health Science**

**25.52200
Application to
Therapeutic Services**

**25.56100 Nursing
Essentials**



This graphic model represents the Peach State Pathways concept whereby students begin to define and redefine career-related choices and selections from a broad PROGRAM CONCENTRATION to a PATHWAY to a more SPECIFIC OCCUPATION

Peach State Pathways: Program of Study



Student Name _____

Date _____

Student Signature _____

Parent/Guardian Signature _____

Advisor/Counselor Signature _____

This plan of study should serve as a guide, along with other career planning materials, as you continue your education. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals. All plans will meet minimum high school graduation requirements as well as minimum college entrance requirements.

Applicants to Board of Regents institutions should be advised that meeting minimum requirements will not guarantee admission at any institution. Institutions may set additional and/or higher requirements.

Course/Grade	Secondary Engineering & Technology: Energy Systems				Entrance or Exit Point	TCSG DeKalb Technical College		Entrance or Exit Point	USG B.S. in Electrical Eng. Tech. Southern Poly State U.	
	Ninth	Tenth	Eleventh	Twelfth		Certificate	Associates		13 th and 14 th	15 th and 16 th
English	9 th grade Lit/Composition	10 th grade Lit/Composition	American Lit/Composition	AP World Lit/Composition	Entrance or Exit Point	First Quarter -Composition & Rhetoric -Intro to Microcomputers -Sustainable Concepts I	First Quarter -Indust. Safety Procedures -Direct Current Circuits I -Soldering Technology -Direct Current Circuits II -College Algebra -Intro to Microcomputers	Entrance or Exit Point	-Composition I -Literature Course -Public Speaking	-Composition II -Humanities/Fine Arts Courses
Mathematics	Mathematics I	Mathematics II	Mathematics III	AP Calculus		Second Quarter -Technical Communication or Public Speaking -Sustainable Concepts II	Second Quarter -Alternating Current I -Alternating Current II -Composition & Rhetoric I -Precalculus		Pre-Calculus	Calculus I
Science	Biology	Physical Science	Chemistry	Environmental Science		Third Quarter -Sustainable Energy Production Technology -Sustainable Building Technologies -Communications for Sustainable Building Environments	Third Quarter -Solid State Devices II -Linear Integrated Circuits -Introduction to Humanities -Solid State Devices I		-See Advisor before selecting Science courses	Science, Technology and Society
Social Studies		World History	US History	Government (½ unit) Economics (½ unit)			Fourth Quarter -Digital Electronics I -Digital Electronics II -Microprocessor Fundamentals -Technical Communication		-American Context -World History	-Behavioral Science -Cultures & Societies
Required Electives	Foundations of Engineering and Technology	Energy and Power Technology	Appropriate and Alternative Energy Technologies	Health & Personal Fitness (can be taken in grades 9-12)					-Survey of Engineering Graphics -Technical Writing -Calculus II	-Principles of Chemistry I -Ordinary Differential Equations
Selective Electives	Foundations of Electronics	Entrepreneurship or Modern Language	CADD Solid Modeling or Modern Language	Energy Systems Internship or Work-Based Learning					-Orientation -Fundamentals -Circuits I -Digital I -Circuits II -Electronics I -Digital II -Electronics II	-Digital III -Data Communications -Test Engineering -High Frequency Systems -Survey of Electric Machines -Intro to Control Systems -Signals and Systems Analysis -EET Electives
	Modern Language/Latin 2 units required for admissions to Georgia University System Colleges/Universities For a listing of Modern Language/Latin courses offered at your high school, please contact your advisor, counselor, or curriculum handbook.		Other Electives For a listing of other elective courses offered at your high school, please check with your advisor, counselor, or curriculum handbook.							

In a POS, students have many options to ENTER and EXIT from their academic studies or the workforce. When a student graduates from high school, they are eligible to choose one of many ENTRANCE POINT options: 1. Enroll in either a 2 or 4 year post-secondary program; 2. Enroll in an apprenticeship program or the military; or 3. Enter the workforce using technical skills learned. When a student finishes a 2- or 4-year degree program, they may choose to EXIT and 1. Enroll in an apprenticeship program or the military; 2. Enroll in a professional university degree program; or 3. Enter the workforce using technical skills learned. **Jobs available after High School:** Assemblers and Fabricators, Machine Operators, Servicer and Tenders, Computer-Controlled Machine Tool Operator (\$22,000 to \$36,000 a year). **Jobs available after Technical College:** Electronics Engineering Technician, Environmental Engineering Technician, Nuclear Technicians (\$34,000 to \$63,000) **Jobs available after University degree:** Electrical Engineer, Mechanical Engineer, Chemical Engineer (\$69,000 to \$100,000).

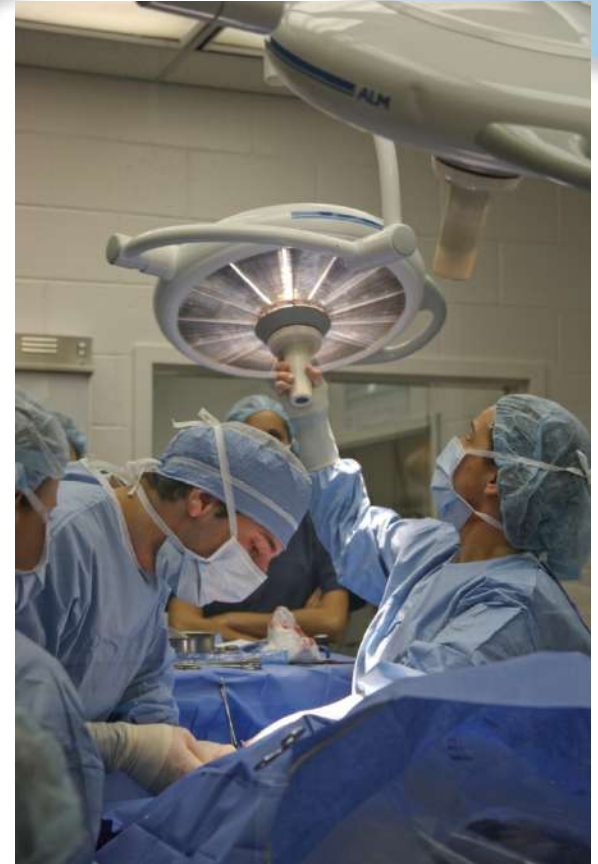
The following link will list Board of Regents institutions offering degrees in **Energy Systems**. In the first box titled "Major," type "Electrical Engineering," "Renewable Resources," or "Environmental Engineering." Then click the button at the bottom "View Matching Campuses" for a list. It will not be necessary to fill in all the other boxes. Further research will be required for specific programs of study that align with the pathway. www.gacollege411.org/Select/MatchAsst/default.asp

Second Option for BRIDGE

- Middle school Career, Technical and Agricultural Education courses
- Each course has GPS and aligned academic standards
- Writing, Reading, Entrepreneurship, soft skills included in each course

Middle School CTAE course numbers

- GPS for grades 6-8 implement Fall 2009
- Agriculture
 - 6th: 02.01200, 7th: 02.01300, 8th: 02.01400
- Business and Computer Science
 - 6th: 07.08300, 7th: 07.08400, 8th: 07.08500
- Career Development
 - 6th: 32.02100, 7th: 32.02200, 8th: 32.02300
- Engineering & Technology
 - 6th: 21.02100, 7th: 21.02200, 8th: 21.02300
- Family and Consumer Science
 - 6th: 20.01100, 7th: 20.01200, 8th: 20.01300
- Healthcare Science
 - 6th: 25.02100, 7th: 25.02200, 8th: 25.02300



GPS for grades 6-8 implement Fall 2010

- Architecture, Construction, Communications & Transportation
 - Architecture and Construction
 - *6th*: 46.02100, *7th*: 46.02200, *8th*: 46.02300
 - Communications
 - *6th*: 48.03100, *7th*: 48.03200, *8th*: 48.03300
 - Transportation
 - *6th*: 47.08100, *7th*: 47.08200, *8th*: 47.08300
- Public Safety and Government
 - *6th*: 43.04100, *7th*: 43.04200, *8th*: 43.04300
- Marketing, Sales & Services
 - *6th*: 06.04100, *7th*: 06.04200, *8th*: 06.04300

Middle School CTAE Courses

- Each middle school CTAE course in grades 6, 7, and 8 provide at least one performance standard to address Career Development and Leadership Skill
- These standards do meet the Career Development points of the BRIDGE legislation
- Integrating industry as guest speakers, simulation events, and on-line interest inventory research in all CTAE courses will also meet BRIDGE legislation

Does Career Development 6th grade GPS meet BRIDGE legislation?

- Student will ...
 - Understand personal nature of work and relates to individuals as part of society (MSCA 6-1)
 - Understand how to build, maintain positive self-concept, self-esteem (MSCA 6-2)
 - Describe, develop and evaluate positive interpersonal skills affect ability to work successfully (MSCA 6-3)
- *Important standards to Career Development and meets the soft skills of work readiness*

Does Career Development 6th grade GPS meet BRIDGE legislation?

- Student will ...
 - Illustrate effective personal management skills (MSCA 6-4)
 - Participate in career-related assessments (MSCA 6-5)
 - Utilize planning process to assist in achievement of personal, social, financial, educational, career goals (MSCA 6-6)
 - Analyze relationships between societal issues, career options and opportunities (MSCA 6-7)
- *YES, meets BRIDGE legislation*

Does Career Development 7th grade GPS meet BRIDGE legislation?

- Students will ...
 - Identify, evaluate work ethics, behavior characteristics needed for success in career, life (MSCD 7-1)
- *Important standards to Career Development and meets the soft skills of work readiness*

Does Career Development 7th grade GPS meet BRIDGE legislation?

- Students will ...
 - Investigate GA's Career Program Concentrations that align with their personal assessments, identify possible career pathways (MSCD 7-2)
 - understand the importance of attaining educational achievement and performance levels needed to reach personal and career goals (MSCD 7-3)
 - recognize the impact of societal issues on their ability to function effectively in a diverse and changing world (MSCD 7-4)
- *YES, meets BRIDGE legislation*

Does Career Development 8th grade GPS meet BRIDGE legislation?

- Students will ...
 - develop and demonstrate positive interpersonal skills (MSCM 8-1)
 - examine and demonstrate an understanding of employability skills to enhance career success (MSCM 8-3)
- *Important standards to Career Development and meets the soft skills of work readiness*

Does Career Development 8th grade GPS meet BRIDGE legislation?

- Students will ...
 - develop management skills that lead to academic and career success (MSCM 8-2)
 - personalize a self-selected Pathway that meets educational and career goals (MSCM 8-4)
- *YES, meets BRIDGE legislation*

Agriculture

Georgia Program Concentrations

Architecture, Construction, Communications & Transportation

Healthcare Science

Healthcare Science

Healthcare Science Grade 6
Healthcare Science Grade 7
Healthcare Science Grade 8

Agriculture

Agriculture Education Grade 6
Agriculture Education Grade 7
Agriculture Education Grade 8

Architecture, Construction, Communication, Transportation

Architecture and Construction Grade 6
Architecture and Construction Grade 7
Architecture and Construction Grade 8
Communications Grade 6
Communications Grade 7
Communications Grade 8
Transportation Grade 6
Transportation Grade 7
Transportation Grade 8

Arts & Humanities

Journalism
Foreign Language
Performing Arts
Visual Arts



Middle School Students

**Career Development
Teachers As Advisors
Sound Transition Process
Select Career Pathway
Graduate Prepared for
Work, School and Success**



Career Development

Career Awareness Grade 6
Career Discovery Grade 7
Career Management Grade 8

Family Consumer Science

Family and Consumer Science Grade 6
Family and Consumer Science Grade 7
Family and Consumer Science Grade 8

Govt. & Public Safety

Public Safety and Government Grade 6
Public Safety and Government Grade 7
Public Safety and Government Grade 8

Business & Computer Science

Business and Computer Science Grade 6
Business and Computer Science Grade 7
Business and Computer Science Grade 8

Engineering & Technology

Exploring Engineering and Technology Grade 6
Invention and Innovation Grade 7
Technological Systems Grade 8

Marketing Sales & Services

Marketing Sales & Services Grade 6
Marketing Sales & Services Grade 7
Marketing Sales & Services Grade 8

Arts & Humanities

Family & Consumer Sciences

Culinary Arts Education

Engineering & Technology

Government & Public Safety

Business & Computer Science

Marketing Sales & Services

- If we can hook students in middle school to stay in school, learn a trade skill while mastering core academic skills in CTAE, and connect to a Career Pathway helping students' graduate by completing their 8th Grade Capstone project, then
 - AYP results will improve for schools
 - Attendance indicators could improve
 - Graduation indicators HAVE improved
 - Amount of skilled workers, apprenticeships, 2- and 4-year college enrollees could increase
 - Economic gains made around state resulting from middle school academic and CTAE instructional units

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