





Link Your Future to CTAE! www.gadoe.org/ci_cta.aspx

Dear Georgia Student,

By picking up and reading this edition of *Career Concentrations*, you are taking charge of your future.

You've decided that you want information and insight that will help you make smart decisions about your education and career options. You are showing that you are determined to focus on your goals and follow the right path to achieve them.

As you think about the future, I encourage you to dream big. Think about what you love to do with your time and then work with your parents, advisors, teachers, and counselors to find possible professions that match your goals and talents.

As you look toward the future, consider the Career, Technical and Agricultural Education (CTAE) options featured in this booklet. Look at the eight Program Concentrations (see

"Contents") on the following pages and pick out the one that best matches your interests and abilities. Look at the pathways available within that concentration; then document your choices by creating a Peach State Pathway Career Plan (see page 6). This plan will help you navigate through high school, college, or other postsecondary education options or careerrelated training. Make sure to update your plan each year as you learn more about the pathway and about yourself.

My philosophy of education is summed up by the new three Rs of learning: rigor, relevance, and relationships. Georgia owes it to you to provide an education that is academically rigorous and challenging, yet relevant to the real world. And we must foster supportive relationships between you and the adults in your life—your parents/guardians, teachers, counselors, coaches, and mentors. As State Superintendent of Schools, I pledge that Georgia schools will follow these three Rs to give you the best possible preparation for the future.

Your future is what you make it. Go ahead. Dream big and get started on your future today.

Sincerely,

Kathy Cox Kathy Cox

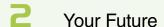
State Superintendent of Schools

Georgia Career, Technical and Agricultural Education **Georgia Department of Education**

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It's in Your Hands

here will you go after high school? What are your plans? College? A job? Military service? Apprenticeship? Not sure? Life after high school graduation may seem a long way off, but it's a good idea to start planning your future right about the time you complete the eighth grade. You will have a lot to think about, but the good news is that you'll have lots of help. For starters, you will have had a chance to look at careers that interest you starting in middle school. In addition, your parents or guardians, school counselors, advisors, and teachers are all members of your future-planning team. They will help you make good choices and create a plan that will help you succeed. We at the Georgia Department of Education want you to think of us as your team's number one

> Start Planning Earlier

We recommend that you start planning as you enter middle school. But you don't have to wait. If you want to, you can begin a little sooner. You'll get a head start on the planning process. Best of all, you'll have more time to think about and explore options—even if you change your mind later about what you want to do. Visit these websites to learn more about occupations and their average salaries:

HARGE!

Georgia Labor Market Explorer http://explorer.dol.state.ga.us

Occupational Outlook Handbook www.bls.gov./oco

Occupational Supply Demand System http://occsupplydemand.net

Career Voyages

(for new and emerging careers) www.careervoyages.org

GACollege 411
www.gacollege411.org

resource. We have the tools, course recommendations, and plans you and your team need to help you figure out

- What you want to do after graduation
- → How to get there from here
- What you need to do to be successful in your chosen career and in life

Our program, Career, Technical, and Agricultural Education (CTAE) offers career-related educational areas — called *Program Concentrations* and related *Pathways*. The Program Concentrations and Pathways listed in this booklet give you some insights into the possible occupations in each program. Each occupational listing includes

- → Occupational titles
- Educational requirements for each occupation
- The average annual salary you can expect to earn in each occupation

Each concentration also includes a true story about Georgia educators and students enrolled in CTAE courses. We hope you will be inspired by these stories. Someday your story may appear in an update of this booklet.

Why Take CTAE Courses?

CTAE courses will get you on the fast track to your future. Whatever your plans may be after high school, CTAE courses and career pathways will give you a head start in many technical and professional careers. When you include these courses as part of your regular high school schedule you will

 Attend project-based classes that give you hands-on experience in your chosen field



- Learn whether you like doing the work in your chosen field
- Discover any gaps you might need to fill in your course work to meet job skill or graduation requirements
- → Challenge yourself and gain skills that you can use wherever life takes you
- ◆ See how to take what you are learning and apply it in the working world

As you complete the steps in working toward your goals, you will find that you are no longer wondering what you will do after graduation. You will know what you want to do and where you are going, and you'll have a plan that will take you there.

This booklet is your introduction to CTAE Career Concentrations and Pathways and to the Peach State Pathways: Education and Career Planning Tool. It includes a short, personal career survey for each Career Concentration, helpful resources, and tools to help you and your family as you make important decisions about your future. Are you ready to start planning for your future success? Read on to learn more about your Education and Career Planning Tool.

Peach State Pathways: Education and Career Planning Tool

e created the Peach State Pathways: Education and Career Planning Tool to help you and your future-planning team get organized and make the best decisions. This tool will help you choose

- ★ Academic and elective courses you should take (in grades 9-12) to reach your goals
- Out-of-class learning opportunities you can participate in to help you succeed, such as
 - Career and Technical Student Organizations (CTSOs)
 - Work-based opportunities through Career Related Education

If you need a college degree for your chosen pathway, the Peach State Pathways: Education and Career Planning Tool will also help ensure that you meet both the entrance and academic requirements of the college you choose. The Education and Career Planning Tool is available online at www.gadoe.org/ci_cta.aspx. You and your future-planning team will complete the tool together. Your plan will be kept on file in your school records or in a teacher advisement folder so you can refer to it as you progress through high school and make any changes if necessary. We have included more details about the Education and Career Planning Tool, as well a sample plan on page 6. Review this sample plan to get an idea of how it relates to courses you'll take in grades 9–12, courses you may take after high school, and your career planning process.

Before you get started using this tool, you'll need to do a little preparation. We have included a Career Planning Checklist in this booklet for you to photocopy. You and your parents or guardian as well as your school advisors can use this checklist to stay on track as you work on the following three steps.

Step One: Make Some Lists

Dream Your Potential

You probably have your own ideas or dreams about your future career. You may have taken some career assessments or tests at school. These assessments show you careers in which you'd do well. (If you haven't taken any career assessment tests,



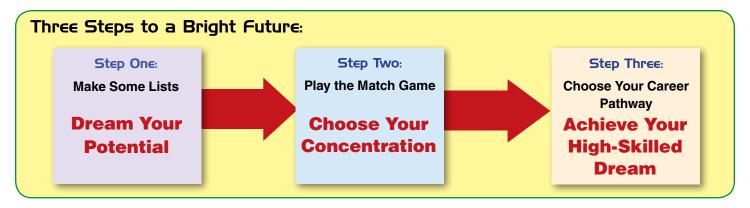
check with your school counselor or advisor to learn more about them.) You also know – from your report cards and comments from your teachers – the subjects in which you do best. Grab a pencil or sit down at your computer and start making some lists. You should include:

- → Your dream jobs
- The results of any career assessment tests you have taken, for example GACollege 411, called Career Keys, or Georgia Career Information System (GCIS)
- → Subjects you enjoy and do well in

These lists will give you a general idea about the types of careers that might interest you. Share your lists with your parents or guardians. They can help you focus and zero in on the best choices for you.



http://www.gacareercounselor.org



Step Two: Play the Match Game

Choose Your Concentration

Now you can start matching what you'd like to do with careers that are available. Start with the Career Concentrations listed in this booklet. Use the following resources to learn more about potential careers:

- → Your school counselor or advisor
- → Your local library
- ★ The Internet
 - Georgia Labor Market Explorer http://explorer.dol.state.ga.us
 - Occupational Outlook Handbook www.bls.gov./oco
 - Occupational Supply Demand System www.occsupplydemand.org
 - GAcollege 411 www.gacollege411.org

Many of these resources will describe the job duties, the level of education you need, and the salary you can expect to earn in each career. The Occupational Outlook Handbook will also tell you whether your career choice is in an area that is growing, leveling out, or declining. The Occupational Supply Demand System points you to high-wage, high-skill, and high-demand jobs in Georgia. You should consider nontraditional fields as well. For example, if you are a girl, think about a career as an engineer; if you are a boy, consider

YOUR TURN-TAKE CHARGE!

Job Shadowing

Have you ever wondered what it's really like to work in a certain field? You may be able to take part in a job shadowing program offered through your school. You might also be able to talk to

professionals in your chosen field. If so, make a list of questions to ask. What do they like best about their work? What challenges do they face? What advice can they give you about getting into their field? If your school does not offer job shadowing, you can get assistance from your local Chamber of Commerce or from a service group such as Kiwanis or Rotary Club.

nursing. Employees in these fields are in high demand, so be sure to consider all your options. As you start to gather information, store it all in a file. This file will help you keep track of details that are important to you.

Step Three: Choose Your Career Pathway Achieve Your High-Skilled Dream

Now it's time to get all your future-planning team members in one spot so you can create your Career Concentration Plan. Ask your counselor or teacher/advisor to set up a meeting with you and your parents or guardians. Use this checklist to help team members know what to bring to the meeting.

Planning Checklist

School Counselor or Teacher/Advisor Should Bring

- Your career assessment results
- Your state test results
- Your grade reports (academic and elective classes)

You and Your Parents or Guardians Should Bring

- The results of your Match Game in Step 2
- Your top career choices from the lists you made in Step 3
- Any questions you or they might have
- Materials to take notes

This meeting should enable you to choose the CTAE Career Concentration program that will work for you. At this point, you will have made many choices about your future and might be feeling a little overwhelmed. Have you made the best choices? Can you make changes? It's natural to change your mind as you grow and learn more about your chosen career field and about yourself. So you'll want to review your plans each spring with your future-planning team and make any necessary changes.

Program Concentrations

In this section you will find the Program Concentrations for the following fields:

- → Agriculture
- Architecture, Construction, Communications, & Transportation
- → Business & Computer Science
- ★ Engineering & Technology
- → Family & Consumer Sciences
- Culinary Arts
- + Education
- ◆ Government & Public Safety
- Health Care Science
- → Marketing, Sales, & Services

Within each Program
Concentration you will find one
to ten *career pathways* for you
to choose. Each career pathway
has three to four classes you
must take to complete the
requirements for your chosen



Program Concentration. As you progress, you may decide that you'd like to take a different pathway within your concentration. You'll need to meet with your counselor or teacher/advisor to change a pathway.

Industry Certification

Industry certification is a mark of excellence for CTAE Career Concentrations. The following groups work together to create the requirements for industry certification:



These groups review courses and programs on a regular basis to make sure they meet the highest standards.

What Does Industry Certification Mean For You?

When you take industry-certified courses, you learn using the latest equipment and technology. That means you'll have the skills and knowledge you need to be ready to work in the high-demand, high-wage, high-skill jobs available in Georgia. And that means you'll have greater career opportunities.

Georgia Work Ready



Georgia Work Ready is a partnership between the state of Georgia and the Georgia Chamber of Commerce. The partnership works to improve job training for Georgia's workforce through a number of plans.

What Does Georgia Work Ready Mean For You?

When you receive a work ready certificate, potential employers know that you have the education, skills, and training they are looking for. The certificate demonstrates that you have learned good work habits. To learn more about Georgia Work Ready, visit **www.gaworkready.org**.





Peach State Pathways:

our Peach State Pathways: Education and Career Planning Tool includes the steps you need to take to reach your goals while you're still in high school and to build a successful life and career after graduation. Here's what you need to know about the planning tool:

- Courses listed in the plan are only recommendations. Your completed plan will match your *specific* education and career goals.
- → Your plan will help ensure that you take the right courses in high school.
- → Your plan will help you make sure that you meet the requirements for high school graduation. If your career choice

requires college, your plan will help ensure that you meet college entrance requirements.

The Peach State Pathways tool is based on the following guiding principles:

→ You should enter high school with a career goal in mind so you can start to plan your working life after graduation.



Sample Pathway

Here is a sample pathway based on the requirements for the Health Care/Nursing Concentration.

Peach State Pathways: Education and Career Planning Tool Health Care Science



	I. English Language Arts (4 units)	II. Mathematics (4 units)	III. Science (4 units)	IV. Social Studies (3 units)	V. Required Electives (3 units) and Other Electives (4 units) CTAE and/or Modern Language/Latin and/or Fine Arts	VI. Health & Physica (1 unit)
and Career Plan e enrolling 2008-2009	English 9 English 10 English 11 English 12	Math 1 Math 2 Math 3 Math 4 OR Accelerated Math 1 Accelerated Math 2 Accelerated Math 3	Biology Physical Science OR Physics Chemistry OR Environmental Science OR Earth Systems OR an AP/IB course	Am Gov/Civics (1/2 unit) World History US History Economics (1/2 unit)	Career Pathway Sequence of Courses: 25.52100 Introduction to Health Science 25.52200 Application to Therapeutic Services 25.56100 Nursing Essentials CAREER PATHWAY RELATED COURSES: 25.59100 Application of Medical Terminology in Healthcare Science 20.41610 Nutrition and Wellness	Health Physical Education
Education and Care	AP Lit and Comp AP Lang and Comp IB English SL (Am Lit) IB English HL (World Lit)	AP Statistics Calculus AP Calculus AB AP Calculus BC IB Math Methods IB Math Studies SL IB Math SL IB Math BL	AP/IB course AP Biology AP Physics AP Chemistry IB Biology SL IB Biology HL IB Biochemistry IB Chemistry SL/HL	AP World History AP US History AP Government AP Microeconomics AP Macroeconomics IB Economics SL IB History of the Americas (SL)	Modern Language/Latin 2 units required for admission to Georgia University System Colleges/Universities For a listing of Modern Language/Latin courses offered at your high school, please check with your advisor, counselor, or curriculum handbook.	
English Con Literary Type	Sample Additional English Courses: Literary Types/Composition Oral/Written Communication	Sample Additional Math Courses: TBA	Sample Additional Science Courses: Microbiology Human Anatomy & Physiology Environmental Science AP Environmental Science Aviation Meteorology Astrophysics	Sample Additional Social Studies Courses: Current Issues The Humanities Technology and Society Psychology Sociology AP Macroeconomics AP Microeconomics	Fine Arts Visual Arts Performing Arts Dramatic Arts For a listing of Fine Arts courses offered at your high school, please check with your advisor, counselor or curriculum handbook. VII. Other Electives	Sample Additional Hea PE courses: Team Sports Rec Games Aerobics
			, carophysics	7.1 Microsociionico	For a listing of other elective courses offered at your high school, please check with your advisor, counselor, or curriculum handbook.	
Career-Related Education Activities Career Awareness Career Exploration Instructional Related Connecting Work-Based Learning Employability Skill Dev. Cooperative Education Internship Youth Apprenticeship Clinicals		4-Year Universities/College 2-Year Colleges Technical Colleges State Registered Apprentic Special Purpose Schools On-the-Job Training Military	es	Possible postsecondary credit opportunities r * "Advanced Placement * "Articulated Credit (Technical Colleges) * "Dual Ernollment/ACCEL (Degree Programs) * "Dual Ernollment/PE (Certificate and Diplomas) Joint Enrollment (postsecondary credit only) * Postsecondary credit opportunities allow high school students to ear credit simultaneously while in high school. Check with your counselor Career Partnership program manager for more information regarding is such as Early College which serves both middle and high school students.	n both college and high s /advisor and Education ar hese opportunities and ot	

A Closer Look

- Your education doesn't end with high school.
 Learning is a lifelong process.
- Your plan should allow you to pursue education after high school at any level if you choose. That education might take place in special training schools, at your employer's place of business, or at a college or university.

Our goal is for you to be a success whether you choose to go into the workforce, enlist in the military, go to a technical college, or enter a college or university.



Applying Your Planning Skills

The Peach State Pathway Education and Career Planning tool requires a lot of thinking and planning on your part. But once you have completed your plan, you will have developed skills that you can use again and again to help you make decisions later in life. You may want an advanced degree, you may want a promotion at work, you may even want to change

careers at some point. No matter where life takes you, you will have solid experience in

- Assessing your skills
- Choosing and focusing on goals
- ★ Exploring your options
- Seeking advice from those you trust
- Reviewing and revising your plans as needed

Go to GACollege411 at www.GACollege411.org for more information about your education and career planning, including valuable financial information (grants and scholarships including HOPE Program, loans. AND FAFSA and CSS forms)

Current GEORGIA Graduation Rule for student entering the 9th grade in fall of 2008-2009 Areas of Study:	Credits	Postsecondary Programs of Study Technical College	Postsecondary Programs of Study University of Georgia System
I. English/Language Arts	4	The following links will list Department of Technical and Adult Education institutions offering programs in	The following link will list Board of Regents institutions offering degrees in Therapeutic
II. Math	4	Therapeutic Services-Nursing. Each technical college varies in the specific degrees (AAS) and diplomas offered. Search	Services. In the first box titled "Major," type "Nursing, "Pre-Dentistry," or "Physical Therapy."
III. *Science	the drop-down boxes for specific programs OR schools in the following areas: tudies 3 • Dental Assisting • Medical Assisting • Medical Assisting • Occupational Therapy Assistant	the drop-down boxes for specific programs OR schools in	Then click the button at the bottom "View Matching Campuses" for a list. It will not be
IV. Social Studies		Dental Assisting	necessary to fill in all the other boxes. Further research will be required for specific programs o
V. **Career, Technical, and Agricultural Education (CTAE) and/or Modern Language/Latin, and/or Fine Arts		study that align with the pathway. http://www.gacollege411.org/Select/ MatchAsst/default.asp	
VI. Health & Physical Education	1	Respiratory Therapy Surgical Technologist	
VII. Electives (4 units)	4	Associate Degree and Diploma Programs Certificate Programs (short training programs from one to	
TOTAL UNITS	23	four quarters in preparation for employment)	
*4th Science may be used to meet both the required scienc required elective in CTAE sequence of courses (V)	e and		
**Student must complete 3 units in a pathway to complete CTAE pathway and take end of pathway assessment. Student must corr 2 years of the same Modern Language/Latin for admission to Ger Board of Regents colleges/universities.			

The sample THERAPEUTIC SERVICES-NURSING PATHWAY occupations listed below meet two out of three of GDOE definitions for highdemand, high-wage and high-skilled. www.occsupplydemand.org

Occupation Specialties	Level of Education Needed	Average Salary	Annual Average Openings in Georgia
Registered Nurse	Associate Degree Bachelor Degree	\$53, 893	3,340
Health Educator	Master Degree	\$53,290	90
Medical and Health Services Manager	Bachelor Degree + Work Experience	\$74,486	330
Occupational Therapist	Master Degree	\$58,427	100

NURSING PATHWAY

An estimated 3.6 million new health care wage and salary jobs will be created by 2014, more than in any other industry. Registered nurses make up the largest health care occupation with 2.4 million jobs. Students interested in pursuing a nursing career will have excellent job opportunities; employment of RNs is projected to increase more than 27% by 2014, creating the second largest number of new jobs among all occupations.

Three out of five RN jobs are in hospitals, but rapid job growth is expected in hospital outpatient facilities, such as same-day surgery, rehabilitation, and chemotherapy. Growth is also expected in nursing care facilities and in home health care. RNs with a bachelor degree will have better job prospects than those with either an associate degree or a diploma.

Those considering a nursing career should have a strong desire to help others, a genuine concern for the welfare of patients and clients, and an ability to deal with people of diverse backgrounds in stressful situations. If you take the sequenced healthcare courses recommended in this education and career plan, you can receive the American Heart Association Basic Life Support Certification, American Red Cross CPR and First Aid Certification, Georgia Medical Care Foundation Certification for Nursing Assistant, and the National Health Care Foundation Skills Standards Certification upon graduation from high school. There are many and varied areas of nursing, including Licensed Practical/Vocational Nurse (LPN/LVN) and Registered Nurse (RN). Most nursing programs require education beyond high school, including diploma programs, associate degree programs, and bachelor degree programs and beyond.

Once you complete all your education and training, you will need to be licensed as an Advanced Practice Nurse, a Registered Nurse (RN), or a Licensed Practical/Vocational Nurse (LPN/LVN). As in many other professions, nurses must be licensed in the state where they work. You must take the NCLEX-RN® or NCLEX-PN® license examination to become a licensed nurse. For more information about nurse licensure and public protection, consult the National Council of State Boards of Nursing.

For more information, visit these websites: American Nurses Association — **www.nursingworld.org** American Association of Colleges of Nursing

www.aacn.nche.edu www.GAcollege411.org www.dol.state.ga.us www.discovernursing.com

Grow Your Career

griculture careers continue to grow, and you will find more opportunities than ever before. If you are interested in animal science or in medicine, law, business, engineering, forestry, marketing, food production, fishing, or even art, you can link your interests to a career in agriculture. The possibilities are endless. If you choose a career in agriculture, you will be part of Georgia's number one industry. Georgia agriculture generates more than \$25 billion annually to the state's economy. All careers in agriculture are part of the Governor's Strategic Industries to help grow Georgia. Here is a sample of careers available in agriculture:

- Agriculture engineering
- Agribusiness management
- Agriscience
- Biotechnology
- Turf management
- Landscaping
- Environmental science
- Food science
- Forestry
- Wildlife management

Program Components: What's Included?

In the Agriculture concentration you will build solid writing, comprehension, calculation, problem-solving, and technical skills. You will take relevant math and science courses that include advanced algebra, chemistry, calculus, geometry, trigonometry, and physics concepts.

Developing your high school plan of study to include agriculture will prepare you for many options after graduation. The Agriculture

career pathways are designed to provide technical agricultural skills and leadership training, along with rigorous academic standards to tie the concepts you learn to relevant actions. Completing courses in an Agriculture career pathway will give you the fundamentals to be prepared to go directly to work or into college.



- Agribusiness
- Plant science/horticulture
- Forestry/natural resource
- Animal or veterinary science
- Agriculture mechanics



The courses you will complete in your career pathway include three important parts:

- → Classroom and laboratory instruction
- Supervised Agricultural Experience Program (SAEP)
- → Future Farmers of America (FFA) leadership

You will apply what you learn in the classroom and in the lab to a real-world situation through your SAEP project, which will give you practical and valuable job skills. Because leadership is also an important skill for professionals, you will develop communication skills and learn about agricultural leadership at the local, regional, state, and national levels through Georgia FFA.

Agriculture in Middle School

You can start exploring careers in agriculture in the sixth grade. You can join FFA and you will learn the basic agriculture history of

Personal Career Survey: Is Agriculture Right for You?

Consider these statements. If you answer Yes to four or more, Agriculture might be a good match for your interests.

	Agriculture Statements	Yes	No
1.	I enjoy learning about nature, animals, and plants.		
2.	I enjoy working with plants and helping them grow.		
3.	I like working with and helping animals.		
4.	I'd like a career where I could be outdoors some or most of the time.		
5.	I enjoy going to parks, forests, or being around lakes.		
6.	I would like to help farmers plant improved crops.		
7.	I enjoy being a leader and helping other people.		
8.	I want to start my own agriculture business.		
9.	I like to solve problems and would like to make agriculture better.		
10.	I like to work with my hands and design new tools.		

Georgia and our nation. You will also have a chance to see what careers in this field might be like. You can continue in FFA throughout middle school and high school. In the seventh grade you will start developing leadership skills through FFA, learn basic agriculture foundation skills, and start building mastery elements related to realworld and academic concepts. In eighth grade you will also have a chance to master pre-pathway units to help you make good choices about your high school career pathway.

Academic relevance and connections in math, science, reading, writing, and social studies will help you build greater understanding of the standards you will learn. By completing all three courses in Agriculture while you are in middle school, you will be advanced and prepared for your high school career pathway(s) of choice.

Resources:

- → Visit www.gaaged.org for more information about Agricultural Education, careers, and the Georgia FFA.
- Check out the Occupational Supply Demand System (www.occsupplydemand.org) for high-wage, highdemand, high-skill jobs in Georgia.

Opportunities in Agriculture

The sample occupations in this table meet at least two out of three Georgia Department of Education definitions for high-demand, high-wage, high-skill jobs.

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Occupation Specialties	Level of Education Needed	Average Salary	Annual Average Openings in Georgia
Postsecondary biological science teacher	Doctoral degree	\$78,043	70
Environmental engineer	Bachelor's degree	\$65,749	50
Environmental compliance inspector	Long-term on- the-job training	\$51,667	150
Aquaculture manager	Bachelor's degree	\$56,285	180
Forest and conservation technician	Associate's degree	\$37,565	210
Zoologist and wildlife biologist	Bachelor's degree	\$49,858	20
Manager of landscaping/ lawn service/groundskeeping workers	Work experience	\$36,483	210
Pesticide handler, sprayer, and applicator	Moderate-term on-the-job training	\$29,640	30
Soil and plant scientist	Bachelor's degree	\$56,077	10
Landscape architect	Bachelor's degree	\$73,195	50

TAKING IT TO THE NEXT LEVEL

Discovering the Many Sides of Agriculture

Franklin County Schools, Carnesville, GA-

What is the best water temperature for growing tilapia? How does land use affect crops? How much profit can you gain from raising swine? What will you say in a public speaking competition? The dedicated teachers in the Agriculture Program at Franklin County Schools help their students discover the answers to these questions and more.

Middle school students get a first look at this program with instructor Anna Wilkinson, who started teaching in 2008. "I came up through the Ag program myself, so I know the positive impact it has on a student's life," she says. She loves to watch her students open up as they discover their abilities through hands-on projects and competitions. "They apply math and science almost without knowing they are doing it as part of a fun and interesting project. And this program shows them that they can choose from more than 300 agriculture-related careers."

Students can continue in the Agriculture Program in high school, with instructors Owen Thomason, Gary Minyard, and Cale Watkins, who together

have some 67 years of teaching expertise. Thomason points to strong community support and involvement with FFA as key elements in the program's success. "Our students can take part in career develop-

ment events and contests. They can win prizes and recognition for their efforts.

Basically, they learn everything they need to be successful math and science, business skills, leadership—no matter what path they take after high school."

"We have some great facilities here," says Watkins. We've got about 11 acres that students help maintain. They can learn landscaping and plant science in our greenhouses. They can raise and manage livestock in our holding pens and weaning facilities. They can even raise fish in our aquaculture lab – we can house about 20,000 fish – and have had great success with raising and selling tilapia."

Minyard points to the amount of time teachers, employers, and parents spend helping students become successful. "We teach in 90-minute blocks, and students participate in a Supervised Agriculture Above: Students at the Franklin

County Agriculture Center

Left: Anna Wilkinson teaching students how to feed cattle

Experience Program (SAEP) that might be a schoolbased project or a part-time job. They can get very creative. One of my students started her own show pig operation and built it from the ground up. It's wonderful to see these young people develop and grow."

All the instructors agree that the hands-on, practical experience—in combination with focused classroom work—can turn their students into the innovators, entrepreneurs, and good citizens of tomorrow. C

Build Your Future: Draw on Your Skills

ou will find many careers essential to propelling Georgia's economy and growth in the Architecture, Construction, Communications, & Transportation concentration. Workers who have mastered technical skills in architectural design and construction are in high demand. Opportunities in communications careers continue to grow with careers in telecommunications, broadcasting, and high-speed network connectivity. Transportation by air, water, rail, and highways links Georgians to one another and Georgia to the world. Workers who can help maintain and improve these important networks will find many opportunities. Here is a sample of careers available in architecture, construction, communications, and transportation:

- ★ Architect/designer
- Construction trade worker (plumbing, carpentry, masonry, sheet metal, electrical wiring)
- → Flight mechanic
- + Engineering drafter

- Graphic designer (print publications)
- → Telecommunications specialist
- → Graphic artist/advertising
- → Web designer



Program Components: What's Included?

The Architecture, Construction, Communication, & Transportation concentration enables you to build solid writing, comprehension, calculation, problem-solving, and technical skills. You will take relevant math and science courses that include skills based on advanced algebra, chemistry, calculus, geometry, trigonometry, physics, and architectural and design concepts.

ACCT Personal Career Survey #1: Is a Career in Architecture or Construction Right for You?

Consider these statements. If you answer Yes to four or more, a career in architecture or construction might be a good match for your interests.

	Architecture and Construction Statements	Yes	No
1.	I enjoy math and science.		
2.	I like learning to use tools and enjoy technical sketching and drawing.		
3.	I am good at analyzing and solving problems.		
4.	I like to work with my hands and build things.		
5.	I would like to take a person's concept and create the blueprints for a building.		۵
6.	I can work with others on a team and solve problems.		
7.	I would like to work on construction sites as a plumber, welder, electrician, painter, carpenter, or plumber, or in another construction-related trade.		
8.	I would like to work in commercial construction on large buildings, bridges, or highways.		
9.	I would like to work in residential construction and perhaps go into custom home building.		۵
10.	I would like to own a construction or architectural design business.		

CAREER FILE

Here are the career pathways available in Architecture, Construction, Communications, and Transportation:

- ◆ Construction
- → Metals
- ★ Architectural Drawing and Design
- → Graphic Communications
- Graphic Design
- → Broadcast/Video Production
- → Aircraft Support
- → Flight Operations
- Transportation Logistical Operations (Ground/Marine)
- Transportation Logistical Support (Ground/Marine)

The Architecture, Construction, Communications, & Transportation concentration gives you the technical skills and leadership training required for professionals in these fields. In architecture and construction, you'll learn the history of structures and architectural design as well as the practical skills involved in the construction trade. In communications, you'll focus on audio, video, and broadcast communications. Transportation courses cover maintenance and support in ground, marine, and air transport.



Depending on your career pathway, you may be able to start working in your chosen field immediately after high school graduation. You may also choose to continue your education at the college level or combine work and study. The courses you complete in your career pathway include three important training components:

- Classroom and laboratory work
- ★ Career Related Education experience
- → Membership in SkillsUSA Georgia

You can apply what you learn in the classroom and lab to a real-world situation through work-based opportunities. These on-the-job experiences will give you practical and valuable job skills. Through participation in SkillsUSA, you will learn leadership, master essential technical skills, participate in competitions to hone your problem-solving skills, and gain practical experience in community building projects.



Opportunities in Architecture, Construction, Communications, and Transportation

The sample occupations in the table meet at least two out of three of Georgia Department of Education definitions for high-demand, high-wage, high-skill jobs.

			Annual Avarage
Occupation Specialties	Level of Education Needed	Average Salary	Annual Average Openings in Georgia
Mechanical drafter	Postsecondary vocational training	\$42,141	40
Architectural and civil drafter	Postsecondary vocational training	\$42,078	80
Surveying and mapping technician	Moderate-term on-the-job training	\$29,099	110
Surveyor	Bachelor's degree	\$42,349	110
Architect	Bachelor's degree	\$71,989	100
Construction Manager	Bachelor's degree	\$75,171	510
Construction/building inspector	Long-term on-the- job training	\$41,725	130
Electrician	Long-term on-the- job training	\$39,458	780
Plumber and pipefitter	Long-term on-the- job training	\$37,981	560
Sheet metal worker	Long-term on-the- job training	\$35,318	260
Aircraft structure, surfaces, rigging, and systems assembler	Long-term on-the- job training	\$35,298	40
Aircraft mechanic	Postsecondary vocational award	\$53,190	240
Avionics technician	Postsecondary vocational training	\$46,322	30
Aerospace engineer	Bachelor's degree	\$89,610	90
Commercial pilot	Postsecondary vocational training	\$71,418	30
Automotive service technician/ mechanic	Postsecondary vocational award	\$34,549	1,000
Bus and truck mechanic/diesel engine specialist	Postsecondary vocational award	\$36,504	380
Vocational teacher, postsecondary school	Bachelor's degree or higher + work experience	\$44,637	250

continued

Opportunities in Architecture, Construction, Communications, and Transportation, continued

Occupation	Level of Education Needed	Average Salary	Annual Average Openings in Georgia
Electrical and electronics repairer, commercial and industrial equipment	Postsecondary vocational award	\$47,611	130
Automotive service technician/ mechanic	Postsecondary vocational award	\$34,549	1000
Vocational teacher, secondary school	Bachelor's degree or higher + work experience	\$53,133	120
Vocational teacher, postsecondary school	Bachelor's degree or higher + work experience	\$44,637	250
Automotive body and related repairer	Long-term on-the- job training	\$43,659	170



Architecture, Construction, Communications, & Transportation in Middle School

You can explore careers in architecture, construction, communications, and transportation (ACCT) starting in sixth grade. You will learn basic ACCT concepts and have an opportunity to experience what it might be like to work in these areas. In the seventh grade you will start developing leadership skills. You will also build foundation skills and mastery elements that will help you explore the many careers available in ACCT. In the eighth grade you will continue in leadership and skill

ACCT Personal Career Survey #2: Is a Career in Communications Right for You?

Consider these statements. If you answer Yes to four or more, a career in communications might be a good match for your interests.

	Communications Statements	Yes	No
1.	I enjoy writing and creative courses.		
2.	I enjoy working with people on communication projects.	٥	
3.	I want to master how to perform audio and sound board operations.	۵	
4.	I want to learn everything about lighting for video.	٥	٥
5.	I enjoy learning how to create a broadcast.		
6.	I would like a job in video production.		
7.	I want to learn more about print technologies.		
8.	I want to work in the telecommunications industry to make improvements to our communication systems.	٥	
9.	I would like to own a graphic design business.		
10.	I would like to own a publications business.		

ACCT Personal Career Survey #3: Is a Career in Transportation Right for You?

Consider these statements. If you answer Yes to four or more, a career in transportation might be a good match for your interests.

	Transportation Statements	Yes	No
1.	I enjoy math and science.		
2.	I want to design new kinds of transportation systems.		
3.	I'm good at analyzing and solving problems.		
4.	I like to work with my mind and my hands.		
5.	I want a career where I can work with other people using transportation technical skills.		
6.	I would like to improve rail transportation methods.		
7.	I want to improve the movement of ships and boats.		
8.	I want to work in the aerospace industry.		
9.	I want to be a flight mechanic or flight engineer.		
10.	I want to make an impact in a field related to transportation.	٥	0

development. You will also have a chance to master prepathway units to help you make good choices about your high school career pathway.



Academic relevance and connections in math, science, reading, writing, and social studies will help you build greater understanding of the standards you will learn. By completing all three courses in ACCT while you are in middle school, you will be advanced and prepared for your high school career pathway(s) of choice.

Resources

- Visit www.skillsusageorgia.org for more information about SkillsUSA Georgia.
- Check out the Occupational Supply Demand System (www.occsupplydemand.org) for high-wage, highdemand, high-skill jobs in Georgia.

TAKING IT TO THE NEXT LEVEL

Connecting Classroom Work to the Community

Columbus High School, Columbus, GA-

Cheryl Rees is still on "cloud nine" as a result of her selection as the National SkillsUSA Advisor of the Year for 2008. The Columbus High School instructor won at the regional level and moved on to the national competition in Kansas City, Missouri. "There were five of us," she recalled. "We were interviewed by business and industry leaders as well as by state directors of SkillsUSA." Rees was a bit nervous but well prepared. Her enthusiasm and passion for career and technical education impressed the judges, and she received a "huge trophy" to take home.



High expectations result in high caliber students in Cheryl Rees' courses.

Rees views winning recognition as a teacher with a sense of irony. "When I graduated from college, the last thing I wanted to be was a teacher," she said. "But here I am, 18 years as a graphics instructor, and still loving every minute." She said she learns as much from her students as they learn from her. She loves seeing them blossom as they tackle the challenges of her course and take on leadership roles through SkillsUSA. "I've seen students who are always the ones to hang back and let others talk suddenly turn into spokespersons,"

she said. "And that's a direct result of becoming involved with SkillsUSA and having the chance to run for office and do some public speaking."

Former students play an important role in her life and her course. A former student nominated her for Advisor of the Year, and another former student recently called on her current students for help. "My former student works at a local library. She had people coming in who were retired or laid off from low-tech jobs and who needed to learn



Cheryl Rees receives National SkillsUSA Advisor of the Year Award from SkillsUSA Executive Director Tim Lawrence.

basic computer skills," said Rees. Her students brainstormed a solution and created a computer skills program called "Clicking into the Future." The students designed a program logo, handouts, and tutorial materials for a basic computer course with help from yet another former student who owns his own graphics firm. The students also taught the course, which was an instant hit. Rees said, "We were invited back to do more. Seeing them take hold of the project and do such a good job was very satisfying to me. They are truly amazing."

Find Your Spot in Business and Computer Science

he term "business" covers a wide variety of business types: manufacturing, retail, and finance. All businesses, regardless of type, require administrative, finance, and support personnel to keep operations running smoothly. You'll find many opportunities in this field, especially if you have good computer skills. Demand is high for employees who can write new software code or provide technical support for computer software, hardware, and systems. You can take the skills you learn in this program and channel them into a career in personnel or business management, or accounting. You can even create your own company. Here is a sample of careers in Business and Computer Science:

- Business owner
- Chief executive officer (CEO)
- Financial planner
- Accountant
- Computer programmer

Program Components: What's Included?

In the Business and Computer Science Program you will build solid writing, comprehension, calculation, problem-solving, and technical skills. You will take relevant math and science courses, including advanced algebra, chemistry, calculus, geometry, trigonometry, and design.

Here are the career pathways available Business and Computer Science:

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



On the business side of this concentration, you will learn how to create and apply a successful business plan and how to manage people, products, and budgets. In computer science, you'll work with the latest technologies through an innovative program developed in partnership with Georgia Tech. Students can also take an AP class in business and computer science.

Depending on your career pathway, you may start working in your chosen field immediately after high school graduation. You may also choose to continue your education by earning certification, an associate's degree at a Technical College System of Georgia college, or a bachelor's degree from a university. The courses you complete in your career pathway include three important training components:

- Classroom and laboratory work
- Career Related Education experience
- Membership in Future Business Leaders of America (FBLA)

Personal Career Survey: Is Business and Computer Science Right for You?

Consider these statements. If you answer Yes to four or more, a career in business or computer science might be a good match for your interests.

	Business/Computer Science Statements	Yes	No
1.	I enjoy math and thinking logically.		
2.	I have built and operated my own summer lemonade stand.		
3.	I want to run a company with many people reporting to me.		
4.	I like to manage money and help other people manage their money.		
5.	I want to understand stocks, bonds, and other types of investments.		
6.	I would like to create or improve computer programs.		
7.	I want to build computers and learn how to set up networks.		
8.	I want to manage or be in charge of people, supplies, and payroll.		
9.	I want to be the boss and own my own company.		
10.	I want to learn how to connect computers across a network.		

Through FBLA you can learn about career options all across the state in business and computing. By participating in local, state, and national FBLA competitions, you will develop interview and leadership skills. Job shadowing, mentoring, and guest speaker events will give you a close-up view of what it's like to work in a business or computer sciences career.

Business and Computer Science in Middle School

You can start exploring careers in Business and Computer Science in middle school and join Future Business Leaders of America (FBLA). You will learn about business and computer careers, keyboarding techniques, and basic computer applications. In the seventh grade you can further develop your leadership abilities, and you will learn more computer application skills, keyboarding, and concepts. In the eighth grade you will also have a chance to master pre-pathway units to help you make good choices about your high school career pathway.

Academic relevance and connections will help you build greater understanding of the standards. Middle school Business and Computer Science courses will prepare you for your high school career pathway(s) of choice.

Resources:

 Visit www.georgiafbla.org for more information about Georgia FBLA.

Opportunities in Business and Computer Science

The sample occupations in this table meet at least two out of three Georgia
Department of Education definitions for high-demand, high-wage, high-skill jobs.

Level of Education Needed	Average Salary	Annual Average Openings in Georgia
Bachelor's degree	\$76,898	60
Bachelor's degree + work experience	\$155,168	150
Bachelor's degree	\$50,877	440
Bachelor's degree	\$54,330	1,090
Moderate-term on-the-job training	\$29,619	1,490
Bachelor's degree	\$80,787	210
Bachelor's degree + work experience	\$101,400	530
Bachelor's degree	\$73,674	330
Bachelor's degree	\$77,022	730
Bachelor's degree	\$44,034	160
Associate's degree	\$55,640	80
Bachelor's degree	\$44,554	40
	Bachelor's degree Bachelor's degree + work experience Bachelor's degree Bachelor's degree Moderate-term on-the-job training Bachelor's degree Bachelor's degree + work experience Bachelor's degree Bachelor's degree Bachelor's degree Bachelor's degree Bachelor's degree Associate's degree	Bachelor's degree

 Check out the Occupational Supply Demand System (www.occsupplydemand.org) for high-wage, high-demand, high-skill jobs in Georgia.

TAKING IT TO THE NEXT LEVEL

Developing Tomorrow's Business Leaders

Swainsboro High School, Swainsboro, GA—Instructor Cherie Hooks couldn't be prouder of her students. This small school (900 students) boasts a membership of 238 in Future Business Leaders of America (FBLA). Hooks, who is one of the school's FBLA advisers, is especially pleased to report that Swainsboro High has been named Georgia FBLA Chapter of the Year for the past five years.

Students in her Accounting Pathway are strongly encouraged to aim for careers in the accounting and finance industries after completing college. "Many of my students are college prep," said Hooks, "but we also try to give them practical work experience related to their fields of study." Through the school's Work-based Learning Program, students can spend part of their school day in paid jobs at local banks and businesses. "My students see that there's a

reason for what we teach them and how it applies to work." she said.

Hooks is a strong promoter of FBLA, encouraging students to join and cheering them on as they enter competitions at the regional, state, and national levels. It's not unusual to send as many as 30 students to state competitions. "We get great community support to help pay for our trips," Hooks said.

This year, two of her student teams placed first and second in business reports and presentations at the national competition. Becky Golden and Marielle Williams won first place for the local Chapter Annual Business Report event. With help from fellow student and chapter president Rachel McNeely, they used a desktop publishing program to create a 30-page report detailing their chapter's productivity and community service programs. Williams and her twin sister Julianne took second place with a multimedia presentation on how to conduct business internationally. "They chose Taiwan



Cherie Hooks and National FBLA winners from Swainsboro High School.

as their example country and researched Taiwanese business etiquette and practices," Hooks said.

Hooks, who has been teaching for fifteen years, never tires of the excitement she sees in her students. "They change and grow confident right before my eyes," she said. "And that makes the challenges of my job so worthwhile."

Ride Technology to the Top

echnology affects almost everything we do, and the demand for workers with technical and engineering skills is high. The "Race to Space" started a strong growth in science, technical, and engineering fields of study. A similar demand exists today for highly skilled engineers, technicians, and scientists. Career pathways in Engineering & Technology give you the opportunity to become highly skilled in manufacturing, electronics, engineering, graphics and design, and energy systems. You can find a technology- or engineering-related career in medicine, aerospace, construction, biomedicine, or environmental science. Engineering & Technology combines hands-on projects with a rigorous curriculum to prepare you for the most challenging post-high school engineering and technology programs. Here is a sample of careers in Engineering and Technology:

- Environmental, civil, mechanical, or electronics technician
- → Statistician
- Biomedical, chemical, industrial, or chemical engineer
- Scientist or researcher

Program Components: What's Included?

The Engineering and Technology concentration enables you to build solid writing, comprehension, calculation, problem-solving, and technical skills. You will take relevant math and science courses such as advanced algebra, chemistry, calculus, geometry, trigonometry, physics, and engineering and design concepts.

CAREER FILE

Here are the career pathways available in Engineering and Technology:

- → Engineering
- → Engineering Graphics and Design
- ◆ Energy Systems
- → Manufacturing
- ★ Electronics
- Science, Technology, Engineering, and Mathematics (STEM)



Depending on your career pathway, you may be able to start working in your chosen field immediately after high school graduation. You may also choose to continue your education at the college level or combine work and study. The courses you complete in your career pathway include three important training components:

- + Classroom and laboratory work
- ★ Career Related Education experience
- Membership in the Georgia Technology Student Association (GA TSA)

In the classroom you will learn about the past, present, and future of technological advances and how they affect our world. In the lab you will work in teams to design and build a working machine such as a hovercraft or a robot.

Through GA TSA you will participate in projects that build leadership skills and activities that will enhance your work and safety skills. You'll also have an opportunity to participate in competitions to further develop and demonstrate your skills. Competitions include

Personal Career Survey: Is Engineering and Technology Right for You?

Consider these statements. If you answer Yes to four or more, a career in engineering and technology might be a good match for your interests.

	Engineering and Technology Statements		No
1.	I enjoy math, science, and learning about technology.		
2.	I like to figure out how machines work.		
3.	I enjoy building working models.		
4.	I enjoy solving problems.		
5.	I want to be an engineer in aerospace, industry, or medicine.		
6.	I would like to design and build machines.		
7.	I like to write plans showing how to build machines.		
8.	I enjoy challenging projects that test my technical skills.		
9.	I like to conduct research and discover new ideas.		
10.	I want to find a medical cure or discover a new source of energy.		

agriculture and biotechnology design, animatronics, computer-aided design and publishing, dragster design, flight endurance, medical technology, radio-controlled transport, technology challenge, and transportation modeling.

Engineering and Technology in Middle School

You can begin exploring careers in Engineering & Technology in the sixth grade, where you will learn about the Universal Systems Model as well as basic engineering functions and concepts. You can join the Georgia Technology Student Association (GA TSA) and continue throughout middle school and high school. In the seventh grade, you will learn more about engineering innovations and inventions, work on toys, and develop inquiry skills. In the eighth grade you will also have a chance to master pre-pathway units to help you make good choices about your high school career pathway.

Academic relevance and connections will help you build greater understanding of the standards. Middle school Engineering & Technology courses will prepare you for your high school career pathways of choice.

Resources:

- ★ Visit www.gatsa.org for more information about Georgia TSA.
- Check out the Occupational Supply Demand System
 (www.occsupplydemand.org) for high-wage, high-demand,

Opportunities in Engineering and Technology

The sample occupations in this table meet at least two out of three Georgia Department of Education definitions for high-demand, high-wage, high-skill jobs.

Occupation Specialties	Level of Education Needed	Average Salary	Annual Average Openings in Georgia
Electronics Engineer	Bachelor's degree	\$73,778	120
Electrical and electronics drafter	Postsecondary vocational training	\$52,021	30
Electrical and electronics engineering technician	Associate's degree	\$49,691	170
Environmental engineering technician	Associate's degree	\$34,112	40
Electrical engineer	Bachelor's degree	\$75,547	110
Civil engineer	Bachelor's degree	\$69,846	200
Civil engineering technician	Associate's degree	\$37,586	100
Industrial engineering technician	Bachelor's degree	\$49,546	60
Logistician	Bachelor's degree	\$58,822	70
Industrial production manager	Bachelor's degree	\$78,874	160
Team assembler	Moderate-term- on-the-job training	\$24,371	1,800

high-skill jobs in Georgia and **www.careervoyages.org** for new and emerging occupations.

TAKING IT TO THE NEXT LEVEL

Guiding Students to Success

Riverdale High School Technology Center, Riverdale, GA—In his 28 years at Riverdale High School Technology Center, Steve Price has put his students first. "The classes are theirs," he said. "I consider myself their guide and encourage them to take charge of their education. It's my philosophy as an educator to make myself less necessary to the students' success." It's a model that works well for his students. At the Riverdale campus, in a space dominated by a wall of trophies won by members of the Technology Student Association (TSA), classmates work in teams on a wide variety of projects. The school's TSA chapter is one of the top in the nation—over its ten-year history, students have received more than 135 trophies.

"They learn from one another, and that's exciting to see," Price said. "Often I learn from them!" He recalled a project in which first-year students manufactured custom-designed clipboards for sale to other Clayton County schools. Afterward, they did a cost analysis and found a way to cut costs by about

half while maintaining quality. "They showed initiative and good business sense, and those are skills employers want," said Price.

Students get a comprehensive introduction to basic engineering and technology skills and careers in their first year. This approach gives them a springboard from which they can branch out to other areas. They can move on into engineering concepts and applications, research and development, project management, and communication technology. They learn that in the working world a single answer to a problem is not always possible or even a good idea. "We want them to develop thinking and problem-solving skills—to look at different viewpoints and come up with alternate solutions," said Price. "These are the skills that will serve them best in a constantly changing world."

His students see how everything they learn in math, science, language arts, and social stud-



ies relates to the careers they are working toward. They produce technical presentations about their career interests and debate the effect of engineering and technology on people's lives. They work with software for virtual modeling, rapid prototyping, and computer-aided design. "We give them everything they need to learn how to live, succeed, and excel in a technical world," said Price.

Promoting Nutrition, Wellness, and Responsible Citizenship

re you looking for a career that helps people live healthier lives or helps them make the most of what they earn and own? Maybe you'd like to design rooms in people's homes or design clothing or accessories. If so, one of the many career pathways in Family and Consumer Sciences (FCS) is for you. The FCS Pathways are ideal for students who want to work with people and help them lead better lives. In FCS you'll learn about good lifelong nutrition and how to manage your income. You will also learn how to be a responsible citizen and work toward success in your career and in your family life. Your career and educational opportunities in FCS are endless. You will develop a solid foundation for success with relevant course work, community projects, student organization membership, and many career-related opportunities. Here are sample careers in Family and Consumer Sciences:

- Interior or fashion designer
- Food scientist or food science technologist
- → Dietician/nutritionist

Interior Design

- ◆ Social worker
- → Community planner



chemistry, calculus, geometry, and trigonometry. You will focus on developing the skills necessary to become a responsible citizen and leader in your family, community, and at work. Your course work will emphasize conflict resolution, problem solving, and leadership.

Depending on your career pathway, you may be able to start working in your chosen field immediately after high school graduation. You may also choose to continue your education at the college level or combine work and study. The courses you complete in your career pathway include three important training components:

- → Classroom and laboratory work
- Career Related Education opportunities
- Membership in Family, Career and Community Leaders of America (FCCLA)

Personal Career Survey: Is Family and Consumer Sciences Right for You?

Consider these statements. If you answer Yes to four or more, a career in family and consumer sciences might be a good match for your interests.

	Family & Consumer Sciences Statements	Yes	No
1.	I enjoy helping people.		
2.	I am interested in a career that focuses on good nutrition and healthy lifestyles.		
3.	I want to learn how to help my community grow responsibly.		
4.	I enjoy learning more about what I must eat to be healthy.		
5.	I want to learn how to make food safer and healthier.		
6.	I want to work for an agency that deals with nutrition and health around the world.		
7.	I would like to work in social services.		
8.	I want to become an interior designer or own my own design shop.		
9.	I want to learn how to help people understand and use community services.		
10.	I want to work in the fashion and design industry.		

Program Components: What's Included?

The FCS Program enables you to build solid writing, comprehension, calculation, problem-solving, and technical skills. You will take relevant math and science courses that include skills based on advanced algebra,





Family and Consumer Sciences in Middle School

You can start exploring careers in Family and Consumer Sciences in the sixth grade. You will take part in activities that will help you develop self-awareness, leadership, and personal goals related to family, home, career, and community. You will have an opportunity to learn about career possibilities that match your interests, and you can join FCCLA. You can continue in FCCLA throughout middle school and high school. In sev-



enth grade you can develop leadership abilities and continue to skills related to family, home, career, and community. In the eighth grade you will also have a chance to master pre-pathway units to help you make good choices about your high school career pathway.

Academic relevance and connections in math, science, reading, writing, and social studies will help you build greater understanding of the standards you will learn. By completing all three Family and Consumer Sciences courses while you are in middle school, you will be advanced and prepared for your high school career pathway(s) of choice.

Opportunities in Famliy and Consumer Sciences

The sample occupations in this table meet at least two out of three Georgia Department of Education definitions for high-demand, high-wage, high-skill jobs.

Occupation Specialties	Level of Education Needed	Average Salary	Annual Average Openings in Georgia
Food scientist and technologist	Bachelor's degree	\$55,689	10
Health educator	Master's degree	\$53,290	90
Dietician/nutritionist	Bachelor's degree	\$42,619	80
Food service manager	Work experience	\$43,384	400
Chef and head cook	Work experience	\$31,304	110

Resources:

- Visit www.gafccla.com for more information about FCCLA.
- Check out the Occupational Supply Demand System (www.occsupplydemand.org) for high-wage, highdemand, high-skill jobs in Georgia.

TAKING IT TO THE NEXT LEVEL

Building a Healthier Population

Blekley County High School, Cochran, GA—How do you teach nutrition and portion control to teens who love hamburgers, fries, and sodas? It's not always easy, acknowledged instructor Alice Mullis. "When we took the sugary sodas out of the school vending machines, the students were not very happy. But many of my students see the effects of poor eating habits in their families, and that helps them focus on activities like learning to read and apply nutritional labeling."

Her classes in food science, nutrition, and wellness are quite lively. "Students may be preparing nutritious snacks, performing computer research, or conducting food science experiments in different parts of the room all at the same time," she said. Math and science play an important role. Students might, for example, cook meat in stages and take swabs to test for how much bacteria grows at different internal temperatures to understand the need for proper food handling and safety. The rigorous curriculum keeps Mullis busy, but she continues to find new ways to engage her students. Soon she will

add exercise classes using the Wii-Fitness computer program as part of the curriculum.

Many of her students also work at part-time jobs in community restaurants and school and college cafeterias. "We prepare them for careers in food service and hospitality. Some might become dietitians or food scientists," said Mullis. In her small rural community, finding career-related jobs for students is challenging. That is why participating in Family, Career and Community Leaders of America (FCCLA) is so important. "Students get motivated when they participate in events such as the Georgia National

Fair and FCCLA competitions such as the Knowledge Bowl or Chili Bowl Cook-off. Our chapter had five state officers as well as youth leadership board members, and we've participated in Star and Gold Star events regionally and nationally. These events provide a valuable learning experience, whether students win a top place or not," she said.



Above: Alice Mullis brings many practical learning opportunities into her FCS classes for students.

Mullis, who has been teaching for 27 years, points to the disturbing trend of obesity, high cholesterol, and diabetes appearing in schoolage children. She is hopeful that programs like hers will help students develop healthy habits they can pass on to their children to reverse that trend.

Feed Your Community and the World

ou can become the next great chef to cook in the finest hotel, restaurant, or food service establishment in Georgia if you choose Culinary Arts, one of the newest Program Concentrations. You will learn about food preparation and presentation, spices and flavorings, proper temperatures and food storage—everything you need for a career in culinary arts. In class, you will prepare soups, snacks, salads, entrees, side dishes, and desserts. After graduation, you can find jobs in restaurants, gourmet grocery stores, hotels and spas, schools and religious organizations, and military and government facilities. Here are sample careers in Culinary Arts:

- ★ Executive chef
- → Baker
- Sous chef

◆ Food preparation worker

- ◆ Cook
- Program Components: What's Included?

The Culinary Arts Program enables you to build solid writing, comprehension, calculation, problem-solving, and technical skills. You will take relevant math and science courses that include skills based on advanced algebra, chemistry, calculus, geometry, and trigonometry. Course work includes food safety and food preparation techniques, nutrition, and presentation. You will also learn proper

Depending on your career pathway, you may be able to start working in your chosen field immediately after graduation. You may also choose to continue your education at the college level or combine work and study. The courses you complete in your career pathway include three important training components:

food storage and transport techniques.





- + Classroom and laboratory work
- ★ Career Related Education experiences
- Membership in Family, Career and Community Leaders of America (FCCLA)

In the classroom and lab, you will work on projects that meet industry-validated standards. Through FCCLA you will develop strong leadership and work skills that will help you to succeed no matter where life takes you.

Personal Career Survey: Is Culinary Arts Right for You?

Consider these statements. If you answer Yes to four or more, a career in culinary arts might be a good match for your interests.

	Culinary Arts Statements	Yes	No
1.	l enjoy cooking.		
2.	I would like to someday own my own restaurant.		
3.	I want to be a chef in the hotel and resort industry.		
4.	I want to develop a cooking show that teaches better nutrition.		
5.	I enjoy baking cakes, cookies, and other foods.		
6.	I would like to someday open my own pastry shop.		
7.	I could create a Web-based recipe file for busy professionals.		
8.	I would like to create menus and nutrition guides for restaurants or a food preparation company.		
9.	I would like to teach culinary arts.		
10.	I want to create a new restaurant and serve new types of food that customers will enjoy.	٥	

Culinary Arts in Middle School

You can start exploring careers in Culinary Arts through the Family and Consumer Sciences program in the sixth grade. You will participate in many activities related to food, nutrition, and cooking. You will also learn about careers that might interest you. You can join FCCLA and start to learn leadership skills, and you can continue in FCCLA throughout middle school and high school. In the



seventh grade you can continue to develop your leadership abilities and learn more culinary arts skills. In eighth grade you will also have a chance to master pre-pathway units to help you make good choices about your high school career pathway.

Academic relevance and connections in math, science, reading, writing, and social studies will help you build greater understanding of the standards you will learn. By completing all three Culinary Arts courses while you are in middle school, you will be advanced and prepared for your high school career pathway(s) of choice.

Opportunities in Culinary Arts

The sample occupations in this table meet at least two out of three Georgia Department of Education definitions for high-demand, high-wage, high-skill jobs.

Occupation Specialties	Level of Education Needed	Average Salary	Annual Average Openings in Georgia
Chef and head cook	Work experience	\$31,304	110
Food service manager	Work experience	\$43,384	400
General/operations manager	Bachelor's degree + work experience	\$87,152	3,050
Manager of food preparation and serving workers	Work experience	\$27,477	1,000

Resources:

- Visit www.gafccla.com for more information on FCCLA.
- Check out the Occupational Supply Demand System (www.occsupplydemand.org) for high-wage, highdemand, high-skill jobs in Georgia

TAKING IT TO THE NEXT LEVEL

Dodging Tornadoes and Feeding a Crowd

South Forsyth High School, Cummings,

GA—Catering a wedding reception while dodging twin tornadoes. Cooking lunch and demonstrating food preparation techniques for Whole Foods customers. Serving meals to 700 people at the bottom of a quarry for a benefit concert. It's all in a day's work—that's schoolwork—for instructor Dawn Martin's students. "We encounter some interesting



The practical knowledge students master in Dawn Martin's Culinary Arts classes is invaluable.

challenges," she said, but the students take it all in stride and manage to have a lot of fun while learning about serious topics like food safety and nutrition.

Students in Martin's class at South Forsyth High School in Cumming, GA, learn the basics of culinary science such as knife skills, safe food temperatures, and making sauces and soups. They also learn the business side of cooking: creating menus and recipes, preparing budgets and buying supplies, and calculating portions to feed a crowd. "My students get a healthy dose of science, math, even technical writing," said Martin. Her classroom, designed to look like a modern bistro, includes a well-equipped kitchen and space that does double duty as a serving area and meeting room. "We invite chefs in for demonstrations and have been fortunate to have two master chefs talk to students about careers in the food and hospitality business." Martin is especially grateful for the help of chef volunteer Malcolm Orser, who helps her guide the students as they chop, mix, stir, and create.

Martin noted that her students' projects often involve students enrolled in other Pathways at the school. "When we catered the Concert in the Quarry,



Students in Dawn Martin's Culinary Arts classes prepare for their future by mastering chef skills today.

we involved marketing students to promote the event and got the marching band involved as well," she said. With hospitality ranked as the second largest industry in Georgia, Martin can promise her students a wealth of opportunities. "One of my former students is now an executive chef, several are enrolled in Auburn University's Hospitality and Food Science program, and several have gone on to various culinary schools."

And that twin tornado wedding reception? She and her students had to dodge into the basement a couple times, but everything turned out just fine. ••

Help Others Realize Their Dreams

ecoming a teacher is a special opportunity. Teachers provide services that range from providing help with babies in a daycare center to teaching students in elementary, middle, and high schools. Teachers must have a strong understanding of many content areas. They must be able to communicate, inspire confidence, and motivate learners to do their best. Teachers are also lifelong learners—they continue to take courses to keep up with change and provide the best experience for their students. If you enjoy learning and helping others learn and succeed, the Education career pathways may be ideal for you. Qualified teachers and teaching assistants are in demand in many parts of the country. In addition to teaching positions in elementary, middle, and high schools, you will also find opportunities in technical colleges, universities, and adult education centers. Here are sample careers in Education:

- ★ Early childhood teacher
- Middle or high school teacher
- ◆ Teaching assistant
- ◆ Special education teacher
- Principal or education administrator
- → Professor
- Educational researcher



school teaching, allow you to complete internships and learn best practices from professional teachers. You will learn about educational issues in today's classrooms as well as how to construct a teaching plan, create an effective classroom, and motivate students.

Depending on your selected career pathway and certification requirements for your chosen career, you may be able to start working immediately after graduation. You may also choose to continue your education at the college level or combine work and study. The courses you complete in your career pathway include three important training components:

- Classroom and laboratory
- ◆ Career Related Education opportunities
- Membership in Family, Career and Community Leaders of America (FCCLA) or Future Educators of America (FEA)

Program Components: What's Included?

The Education Program enables you to build solid writing, comprehension, calculation, problem-solving, and technical skills. You will take relevant math and science courses that include skills based on advanced algebra, chemistry, calculus, geometry, trigonometry, and physics.

Some courses focus on early childhood development and best practices for reading, teaching, and helping young children play and learn together. Other courses, which will prepare you for elementary to high

CAREER FILE Here are the career pathways available in Education: + Early Childhood Education + Teaching as a Profession

Personal Career Survey: Is Education Right for You?

Consider these statements. If you answer Yes to four or more, a career in education might be a good match for your interests.

	Education Sciences Statements	Yes	No
1.	I enjoy school and learning.		
2.	I like explaining how things work to other people.		
3.	I enjoy helping my classmates learn.		
4.	I enjoy writing and gathering data for a report.		
5.	I could teach technical skills to other people in a career and technical class.		
6.	I enjoy tutoring my classmates.		
7.	I would like to teach prekindergarten, elementary, middle, or high school students.		
8.	I want to help students with special needs learn.		
9.	I would like to become a school principal.		
10.	I would like to teach college courses and conduct educational research.		

In the classroom and lab you will work on projects related to education and early childhood development. Through FCCLA you will develop strong leadership, life, and work skills.

Education in Middle School

In the sixth grade you will be able to start exploring careers in Education through the Family and Consumer Sciences program. You will participate in activities that will help you learn self-awareness and leadership. You will learn how to develop skills to help you build career goals related to areas that interest you, and you can join FC-CLA. You can continue in FCCLA throughout middle school and high



school. In the seventh grade you can continue to develop leadership abilities and learn more skills to achieve your personal goals. In the eighth grade you will have a chance to master pre-pathway units to help you make good choices about your high school career pathway.

Academic relevance and connections in math, science, reading, writing, and social studies will help you build greater understanding of the standards you will learn. By completing all three courses in Education while you are in middle school, you will be advanced and prepared for your high school career pathway(s) of choice.

Opportunities in Education

The sample occupations in this table meet at least two out of three Georgia Department of Education definitions for high-demand, high-wage, high-skill jobs.

Occupation Specialties	Level of Education Needed	Average Salary	Annual Average Openings in Georgia
Elementary school teacher	Bachelor's degree	\$46,888	2,590
Preschool teacher	Postsecondary vocational training	\$24,419	500
Kindergarten teacher	Bachelor's degree	\$45,969	330
Special education teacher— preschool, kindergarten, elementary	Bachelor's degree	\$46,358	450
Postsecondary education administrator	Bachelor's degree + work experience	\$81,328	160
Secondary school teacher	Bachelor's degree	\$49,956	1,360
Postsecondary vocational education teacher	Bachelor's degree + work experience	\$45,386	370
Middle school special education teacher	Bachelor's degree	\$46,891	230

Resources:

- ★ Visit www.gafccla.com for more information on FCCLA.
- Check out the Occupational Supply Demand System (www.occsupplydemand.org) for high-wage, highdemand, high-skill jobs in Georgia

TAKING IT TO THE NEXT LEVEL

Helping Teen Parents Stay in School

Alonzo A. Crim Open Campus High School, Atlanta, GA—Margaret Manns-Jones, who teaches early childhood at Alonzo A. Crim Open Campus High School under principal Dr. Angelisa Cummings in Atlanta, GA, is a busy educator and a happy one. From the time she was a student teacher, she has cherished a single ambition—to help every child she teaches. And she's doing just that through her Education Program and Family-Ties Day Center, which provides hot meals and care for children of teen parents. The center also helps students with referrals to housing and other agencies.

Manns-Jones encourages her students to reach beyond the high school diploma and think about the world and their place in it. She regularly invites speakers into the classroom to give her students insights into practical life skills such as health and nutrition and budgeting time and money. She models the behavior she wants her students to follow by taking an extra step or two to help others.

That quality is clear in the operation of the Day Center, which allows teen parents to stay in school. "We accept babies at three months, but if I see that we can help a student meet his or her goals, I'll accept a younger child," she said. This year, Jones and fellow instructors Kathy Kemp and Patricia Williams applied for and received a \$100,000 grant from AARP to help defray the operating costs of the center, which she runs with the help of three assistants and students from her education classes. "The teen parents assist, of course, but many other students volunteer as well," said Jones. She loves to see the babies and their young parents grow. "I have been blessed to witness so many success stories." She watches with pride as teens, some of whom are homeless when they come to the school, overcome their challenges and succeed.



Margaret Manns-Jones helps teen parents and their children get on track through her early childhood program.

Jones encourages involvement in Family, Career and Community Leaders of America (FCCLA). Through this club students perform community service and become responsible citizens. "My students actually accomplish more than FCCLA requires," said Jones. And that's not surprising with this busy, happy educator as a role model.

Keep Georgia—and the Nation—Safe and Secure

overnment provides unique services and activities that help all Georgians on a daily basis. If you choose a career in government and public safety, you will have the satisfaction of helping others in a field where skilled professionals are always in demand. Career opportunities in this field are plentiful. You may find a career in writing legislation, working on disaster preparedness, working on city planning, or providing state and national security. Many of the occupations in these fields are highly challenging, and some involve an element of risk. Your course work will include an emphasis on safety. You can enter this field from high school, through a technical college, or through military service. Sample careers for Government and Public Safety include

- + Criminal investigator
- Federal agent or private investigator
- Emergency management specialist
- → Paralegal
- → Judge

- → Georgia Emergency Management Association officer
- + Hazardous materials removal specialist



Program Components: What's Included?

The Government and Public Safety Program enables you to build solid writing, comprehension, calculation, problem-solving, and technical skills. You will take relevant math and science courses that include skills based on advanced algebra, chemistry, calculus, geometry, trigonometry, and physics.

In the Government and Public Safety program, you will study basic concepts of law and learn how federal, state, and local law enforcement, prosecution, and adjudication agencies function. Course work includes classifications and elements of crime, the major criminal and traffic laws of Georgia, crime prevention and detection strategies, and investigative and criminological theory.

Personal Career Survey: Is Government and Public Safety Right for You?

Consider these statements. If you answer Yes to four or more, a career in government and public safety might be a good match for your interests.

	Government and Public Safety Statements	Yes	No
1.	I enjoy government and civics courses.		
2.	I enjoy helping people.		
3.	I enjoy learning about laws and why we have laws.		
4.	I want to protect my community and my country.		
5.	I want a career in law enforcement with a federal agency like the FBI or Homeland Security or a state agency like the Georgia Office of Homeland Security or the Georgia Emergency Management Agency.		
6.	I enjoy working on a team and preparing ways to react quickly when accidents happen.		
7.	I want to study military science and develop strong leadership and communication skills.		
8.	I would like to become a lawyer or a judge.		
9.	I'd like a career with a private security firm or as a private investigator.		
10.	I would like to build a career in the military.		

CAREER FILE

Here are the career pathways available in Government and Public Safety:

- Homeland Security and Emergency Services
- ★ Law and Justice
- ★ Air Force Junior Reserve Officers Training Corps
- → Army Junior Reserve Officers Training Corps
- Marines Junior Reserve Officers Training Corps
- Navy Junior Reserve Officers Training Corps

Depending on your selected career pathway, you may be able to start working in your chosen field immediately after graduation. You may also choose to continue your education at the college level or combine work and study. The courses you complete in your career pathway include three important training components:

- → Classroom and laboratory work
- ★ Career Related Education opportunities
- → Membership in the Junior Reserve Officers Training Corps (JROTC)—Optional Program

Lab work provides an opportunity for you to participate in simulated disaster preparedness events, to job shadow with law enforcement agencies, to study justice issues, and to take part in military training. Through JROTC you will build teamwork and leadership skills and enhance your physical and mental fitness. JROTC courses are often taught by retired military personnel and offered under the college preparatory or dual enrollment options.

Government and Public Safety in Middle School

You can start exploring careers in Government and Public Safety in the sixth grade. You will take part in activities to learn self-awareness and leadership and you will develop skills related to careers in government and public safety. You can also join SkillsUSA and start developing leadership abilities. You can continue in SkillsUSA throughout middle school and high school. In seventh grade you can further your leadership abilities and master more skills to achieve your personal goals. In the eighth grade you will have a chance to master pre-pathway units to help you make good choices about your high school career pathway.

Opportunities in Government and Public Safety

The sample occupations in this table meet at least two out of three Georgia Department of Education definitions for high-demand, high-wage, high-skill jobs.

Occupation Specialties	Level of Education Needed	Average Salary	Annual Average Openings in Georgia
Emergency Management Specialist	Work experience in a related occupation	\$41,621	20
Immigration & Customs Inspectors	Work experience in a related occupation	\$48,755	140
Health Educator	Master's degree	\$53, 290	90
Police & Sheriff's Patrol Officer	Long-term on-the- job training	\$35,402	910

Academic relevance and connections in math, science, reading, writing, and social studies will help you build greater understanding of the standards you will learn. By completing all three Government and Public Safety courses while you are in middle school, you will be advanced and prepared for your high school career pathway(s) of choice.

Resources:

- → Visit www.gadoe.org/ci_cta.aspx and choose JROTC from the Programs section to learn more about JROTC.
- Check out the Occupational Supply Demand System (www.occsupplydemand.org) for high-wage, highdemand, high-skill jobs in Georgia

TAKING IT TO THE NEXT LEVEL

Recognizing an Outstanding Student

Centennial High School, Roswell, GA—At Centennial High School in Roswell, GA, students in the Law and Justice Pathway learn the skills required for a career in law enforcement. Instructor Thomas Washburn, a former law enforcement officer, points to the many opportunities available to his students. He is proud of them, noting that twenty-five former students have enrolled in law school, nine have careers in state or local law enforcement, and three have federal careers. He is especially proud of student Holly Groover, who received a national gold medal in Criminal Justice this year at the SkillsUSA competition in Kansas City.

"Holly really excelled" said Washburn. "She is probably a better law enforcement officer at 18 than many seasoned professionals." Groover has won

respect from teachers and peers for her enthusiasm, hard work, and community service. She demonstrated leadership skills when she coordinated volunteers from SkillsUSA to work with North Fulton Charities, an agency that runs thrift stores and drives for food, toys, and school supplies. She also applied her course work in a successful internship with the Roswell Police Department. At school, she served as a SkillsUSA officer for two years and was president of her chapter in her senior year. She participated in a three-member team that won the state prize in a mock crime scene event sponsored by the Georgia Bureau of Investigation. "The students collected forensic evidence, evaluated it, wrote reports – everything an actual crime scene team would do," said Washburn. She also competed as an individual in Criminal Justice, demonstrating her abilities in constitutional law, search and arrest procedures, and interview and

interrogation techniques. She won the state prize and took a first at the national level—the first Fulton County student to do so. Through dual enrollment, Groover

to do ough roll
Tom Washburn looks for finger-prints along with National SkillsUSA award winner Holly Groover.

received a Specialist in Criminal Justice certificate from Lanier Technical College.

Washburn facilitated the start of the Career Tech Program at Centennial High School, which was immediately popular with students and is now a model for other schools that want to offer this pathway.

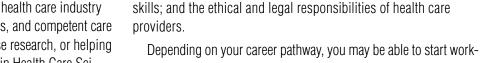


Career Concentrations

Choose a High Demand Career

ealth care and medical careers in Georgia are in emergency mode. The demand for health care professionals is high. People are living longer, and the population is on the rise, creating many more career opportunities in this field. An estimated 3.6 million new health care wage and salary jobs will be created by 2014 in the United States. Health care today is increasingly based on a team-focused approach to deliver the best care to patients. Students interested in a career in the health care industry need quick reactions, decision-making abilities, and competent care skills. If you are interested in medicine, disease research, or helping people recover from illness or injury, a career in Health Care Science may be ideal for you. Sample careers in Health Care Science:

- → Registered nurse or physician assistant
- → Family doctor
- ★ Emergency medical service technician
- → Physical therapist
- → Biotechnology researcher



ing in your chosen field immediately after high school graduation. You may also choose to continue your education at the college level or combine work and study. You will study and gain experience from three related components while in high school:

- + Classroom and laboratory work
- Career Related Education opportunities
- Membership in Georgia Health Occupations Students of America (HOSA)

Program Components: What's Included?

In the Health Care Science Program you will build your math, science, language, and communication skills. You will focus on developing the problemsolving and decision-making skills required for health care occupations. Courses include basic concepts of health, wellness, and preventative care; life support

CAREER FILE Here are the career pathways available in Health Care Science: Therapeutic Services —

- Emergency ServicesTherapeutic Services Medical
- Services

 Therapeutic Services Nursing
- ★ Health Informatics
- Biotechnology Research and Development
- → Diagnostic Services

Personal Career Survey: Is Health Care Science Right for You?

Consider these statements. If you answer Yes to four or more, a career in health care science might be a good match for your interests.

	Health Care Science Statements	Yes	No
1.	I enjoy math, science, and reading.		
2.	I want to help people when they don't feel well.		
3.	I am interested in medicine and curing people.		
4.	I would like to become a registered nurse, doctor, or surgeon.		
5.	I would like to be a medical crime scene investigator, helping to solve crimes from a medical and scientific perspective.	٥	
6.	I would like to be a dentist or dental hygienist.		
7.	I want a career in medical biotechnology, where I could develop new medicines or health care methods.		
8.	I would like to work in an emergency room or operate an ambulance.		
9.	I would like to combine medical concerns with technology to improve health care services.	۵	
10.	I would like to be a medical lab technician.		

Work-based experiences include working in a variety of health care settings, including hospitals, nursing homes, ready-care centers, physicians' offices, and physical therapy and rehabilitation centers.

Through HOSA you'll develop leadership skills, participate in competitive events, and have access to scholarships. HOSA is a national student organization dedicated to promoting career opportunities in the health care industry and enhancing delivery of quality health care to all people. As a high school student, you will have the opportunity to build your skills in HOSA's leadership development, motivation, and recognition programs.

Health Care Science in Middle School

You will be able to start exploring careers in Health Care Science in the sixth grade. You will take part in a variety of activities to learn self-awareness and leadership. You can join HOSA and can participate in HOSA throughout middle school and high school. In seventh grade you will continue to develop leadership skills and you will learn more skills related to your personal goals. In eighth grade you will have a chance to master pre-pathway units to help you make good choices about your high school career pathway.

Academic relevance and connections in math, science, reading, writing, and social studies will help you build greater understanding of the standards you will learn. By completing all three courses in Health Care Science while you are in middle school, you will be advanced and prepared for your high school career pathway(s) of choice.

Opportunities in Health Care Science

The sample occupations in this table meet at least two out of three Georgia Department of Education definitions for high-demand, high-wage, high-skill jobs.

Occupation Specialties	Level of Education Needed	Average Salary	Annual Average Openings in Georgia
Medical transcriptionist	Postsecondary vocational training	\$30,514	130
Medical and health services manager	Bachelor's degree + work experience	\$73,486	330
EMT/Paramedic	Postsecondary vocational training	\$29,328	290
Registered nurse	Associate's degree	\$54,787	3,340
Pediatrician	First professional degree	\$139,298	70
Dental hygienist	Associate's degree	\$55,390	280
Physical therapist	Master's degree	\$65,042	120
Medical and clinical laboratory technician	Associate's degree	\$30,846	250
Medical and health services manager	Bachelor's degree + work experience	\$74,486	330

Resources:

- Visit www.georgiahosa.org for more information about Georgia HOSA.
- Check out the Occupational Supply Demand System (www.occsupplydemand.org) for high-wage, highdemand, high-skill jobs in Georgia

TAKING IT TO THE NEXT LEVEL

Developing Tomorrow's Health Care Professionals

Oconee County High School, Watkinsville,

GA—Most of instructor Gina Wilkes' students aspire to careers as doctors or nurses. "The biggest demand is for nurses," she said, "but I want my students to know about other opportunities. Students who have compassionate hearts but don't meet the requirements to become a doctor or nurse can excel as a physician assistant or home health aide." Her Oconee County High School (OCHS) students get a thorough introduction to health care science and technology in their first semester. They focus on infection control and medical terminology and get insights into medical careers from guest speakers such as paramedics and physicians. Anatomy and common diseases are the focus of the second semester. In their third semester students may select

an Emergency Medicine Pathway or a Therapeutic Nursing Pathway, or they may complete both if they choose. Her nursing students are dual enrolled and graduate with a high school diploma and a Certified Nursing Assistant certificate.



Wilkes, a registered nurse who works part time at St. Mary's Hospital, coached three students who spent their summer training for a competition sponsored by Health Occupation Students of America (HOSA). All were state champions and represented Georgia at the Dallas, Texas, national conference. Coulter Hill, a 2007 graduate, competed in sports

medicine, demonstrating his ability to assess injuries and give first aid. Dylan Carter and Whitney Rice, who will be juniors in 2008, competed in the Community Emergency Response Team event and brought home a bronze medal. They showcased their triage skills in a mock disaster—evaluating victims, providing first aid, and alerting paramedics to critical cases. Carter wants to join the military and pursue a career as a physician. Rice is interested in veterinary science but may eventually choose nursing.

Wilkes is understandably proud of another OCHS student, her daughter Whitney, who served as a Georgia HOSA vice president in 2008, the first OCHS student to hold a state office. "This educational program gives students the opportunity to see where they'll excel," said Wilkes. "And, through HOSA, they get that important connection between what they do and how it affects their community."

Play an Important Role in Any Business

f you like the idea of working with people, marketing products and resources, conducting market research, or creating effective communications, Marketing, Sales, and Service may be the program for you. The need for companies to market their products is greater than ever before—every business must inform customers about its products and services, increase business opportunities with steady sales, and offer services to build consumer satisfaction and loyalty. Here are sample careers in Marketing, Sales, and Services:

- ★ Advertising sales
- → Public relations specialist
- Community association manager
- Technical sales representative (technical, scientific, or electrical products)
- → Real estate broker
- → Marketing manager
- Customer service supervisor



business basics, product and service planning, marketing information management, purchasing and pricing, selling and promotion, risk management, financing, and distribution. In addition, the program covers international marketing, management, and entrepreneurship to better prepare you to work in the global marketplace.

Depending on your career pathway, you may be able to start working in your chosen field immediately after high school graduation. You may also choose to continue your education at the college level or combine work and study. The courses you complete in your career pathway include three important training components:

- → Classroom and laboratory work
- ★ Career Related Education opportunities
- Membership in DECA (a national association of marketing students)

Program Components: What's Included?

The Marketing, Sales, and Services Program enables you to build solid writing, comprehension, calculation, problem-solving, and technical skills. You will take relevant math and science courses that include skills based on advanced algebra, chemistry, calculus, geometry, and trigonometry.

In the Marketing, Sales, and Services Program you will focus on the key elements of marketing. Courses include basic concepts in economics, human relations,

Personal Career Survey: Is Marketing, Sales, and Services Right for You?

Consider these statements. If you answer Yes to four or more, a career in marketing, sales, and services might be a good match for your interests.

	Marketing, Sales, and Services Statements		No
1.	I enjoy math and language arts courses.		
2.	I enjoy writing and being creative.		
3.	I would like to help a company market its products and services.		
4.	I want to be in charge of the communication and advertising messages for a company.		٥
5.	I would like to help market for a company in the fashion, sports, entertainment, or travel industry.		
6.	I want a career in real estate sales and service.		
7.	I would like to sell pharmaceuticals to hospitals or doctors, or sell cosmetics to a department store.		
8.	I want to manage a company's advertising plan and services to customers.		٥
9.	I want to own and run a fashion-related company.		
10.	I want to create a travel and lodging company in a great location so people can visit and vacation.	٥	

CAREER FILI

Here are the career pathways available in Health Care Science:

- Marketing and Management
- + Fashion Marketing
- Marketing Communications and Promotion
- Travel Marketing and Lodging Management
- Sports and Entertainment Marketing

Through in-school lab work and outside work-based learning experiences, you'll be given the opportunity to put classroom theories into practice. Through DECA you can participate in regional, state and international competitions. These competitions give you a chance to polish your skills and earn recognition. You can also network with business people who may be prospective employers. Everything you do in this program will enable you to learn a lot, make new friends, and discover your potential.

Marketing, Sales and Services in Middle School

You can start exploring careers in Marketing, Sales, and Services in the sixth grade. You will take part in a variety of activities that will help you become aware of how marketing affects our lives. You will learn what careers in this field are like. You can join DECA and start developing leadership abilities. You can continue in DECA throughout middle school and high school. In the seventh grade you will further develop leadership abilities and learn more skills to achieve your personal goals. In the eighth grade you will master pre-pathway units that will help you make good choices about your high school career pathway.

Academic relevance and connections in math, science, reading, writing, and social studies will help you build greater understanding of the standards you will learn. By completing all three courses in Marketing, Sales, and Services while you are in middle school, you will be advanced and prepared for your high school career pathway(s) of choice.

Opportunities in Marketing, Sales, and Services

The sample occupations in this table meet at least two out of three Georgia Department of Education definitions for high-demand, high-wage, high-skill jobs.

Occupation Specialties	Level of Education Needed	Average Salary	Annual Average Openings in Georgia
Interior designer	Associate's degree	\$47,320	100
Wholesale and retail buyer	Work experience	\$61,568	140
Purchasing manager	Bachelor's degree + work experience	\$80,642	90
Marketing manager	Bachelor's degree + work experience	\$94,307	310
Public relations specialist	Bachelor's degree	\$48,672	120
Travel agent	Postsecondary vocational training	\$29,682	120
Advertising and promotions manager	Bachelor's degree + work experience	\$76,898	60
Chief executive	Bachelor's degree + work experience	\$155,168	850
Marketing research analyst	Bachelor's degree	\$61,464	210
Marketing manager	Bachelor's degree + work experience	\$94,307	310
Personal financial advisor	Bachelor's degree	\$75,754	470

Resources:

- → Visit www.deca.org for more information about DECA.
- (www.occsupplydemand.org) for high-wage, highdemand, high-skill jobs in Georgia

TAKING IT TO THE NEXT LEVEL

Making the Connection to Customers

Columbia High School, Decatur County,

GA-Yvetta Churchill came to the Marketing Program at Columbia High School in DeKalb County after years in the corporate world, so she has a wealth of business experience to share with her students. "My students really get the connection between the course and real life," she said. "Marketing is present in purchasing decisions they make every day and even in their attitudes about music and movies." She guides her students with a blend of classroom instruction and hands-on projects. Classroom activities are designed to take what students learn in math, science, language arts, and social studies and relate it to the Marketing Program. "I invite guest speakers to show students the direct application of marketing theory to a realworld job." she explained. Through her contacts

in the corporate world, she takes students on field trips to see marketing professionals in action. "We visit the Coca-Cola Company for a marketing tour every year. My students learn how the company segments markets to target specific groups." Her students also develop a business and marketing plan for an existing business. "We've worked with Plato's Closet, a store that recycles hip teen clothing using a business model similar to a thrift shop. Experiences like these give students a solid foundation in everything that's involved in a successful business and marketing plan."

Churchill is proud of her students' accomplishments and loves her job. "I was downsized from the Coca-Cola Company and took a career interest test that showed a strong interest in teaching. I always said I wanted to teach when I grew up," she said. "I guess I've finally grown up!" She is especially proud of student Raleigh Fletcher, who has become a star in the

Marketing Program.
Boys generally aren't as eager as girls to join DECA (the student organization for Marketing Education students), according to Churchill. They shy away from such organizations, favoring sports instead.
But Fletcher jumped



Yvetta Churchill infuses realworld experiences into her Marketing classes.

right in. Last year he took his project in Marketing Management to the national competition; though he did not place in the top ten, he plans to try again next year, when he'll also run for DECA president at his school. "He has really surprised me with his enthusiasm and dedication," Churchill said. "It's experiences like this that make my job so satisfying."

The 4II on College

f you want to continue your education at a two- or four-year college, it's a good idea to do some thinking and planning now. The Georgia Student Finance Commission has created a tool you can use to make that planning process fairly easy. Visit GAcollege411 (www.gacollege411.org) to set up a free, secure, and private account. You can use your account to

- ★ Learn about careers that match your interests and personality (Career Keys)
- Keep a record of your high school grades, honors, test scores, and activities
- Compare your high school course work with the admissions requirements of Georgia's colleges and universities
- Apply to Georgia colleges
- → Submit financial aid applications

Assistance for Families

A special section on the Web site is designed for families. Information provided here includes

- → Tips on saving for college
- ★ Advice on helping students plan for the future
- ★ An overview of tax benefits affecting tuition payments

Students and families may also want to research scholarship and tuition financial aid sites on the Internet, such as **www.fastweb.org**. School counselors and teacher/advisors are also a good resource for this information.



Additional Education and Training Resources

Career Related Education

Career Related Education (CRE) is structured, age-appropriate experiences that prepare students for the school-to-career transition. CRE experiences begin with career awareness and exploration in middle school and culminate with work-based learning during the eleventh and twelfth grades. Work-based learning provides students the opportunity to be enrolled in an internship, cooperative education, or youth apprenticeship

To learn more about the CRE program, visit the Career Related Education link at www.gadoe.org/ci_cta.aspx.



Technical College System of Georgia

The Technical College System of Georgia (formerly known as the Department of Technical and Adult Education) is made up of technical colleges and satellite campuses across the state, as well as a virtual technical college. You can get information on scholarships, training and education resources, and more by visiting www.tcsg.edu.

Dual Enrollment and Articulation

The Dual Enrollment Program is a partnership between the Georgia Department of Education and the Technical College System of Georgia. This program allows you to earn college credit while still in high school. The Georgia Department of Education also has articulation agreements with state colleges and universities. These agreements help to ensure that you will take the courses required for college credit.

Join a Georgia Career and Technical Student Organization

More than 120,000 Georgia students in middle schools, high schools, colleges, and universities participate in career and technical student organizations (CTSOs). These groups expand your opportunities to develop leadership and work skills in your field of interest. Many offer scholarships and competitions that give you opportunities to test your abilities and earn recognition for your efforts. The following are brief descriptions of CTSOs and their Web addresses.

Career and Technical Instruction (CTI)

www.georgiacti.org

The Career and Technical Instruction (CTI) program



is designed to support students with disabilities who are enrolled in Career, Technical, and Agricultural Education (CTAE) courses. The program offers a leadership conference and a recognition program for students who show the greatest improvement in career and work adjustment skills.

DECA

www.deca.org

DECA is an international association of high school and



college marketing students who study marketing, management, and entrepreneurship in business, finance, hospitality, and Marketing, Sales, and Services. Members participate in competitive events to hone their marketing and business skills and earn recognition with the opportunity to compete locally, regionally, statewide, and internationally.

Family, Career and Community Leaders of America (FCCLA)

www.gafccla.com

FCCLA offers more than
19,000 Georgia members the
opportunity to expand their leadership potential
and develop skills for life (planning, goal setting,
problem solving, decision making, and interpersonal communication) necessary in the home
and workplace. FCCLA helps young men and
women become leaders and addresses important personal, family, work, and societal issues
through family and consumer science education.

Future Business Leaders of America (FBLA)

www.georgiafbla.org

An organization for business students in middle



and high school, FBLA gives students opportunities to develop leadership and career skills while preparing for careers in business and business-related fields. Through its various projects and competitive events program, FBLA provides leadership development training for its members to become successful leaders in schools, communities, and future careers.

Georgia Career Student Association (GCSA)

www.georgiacsa.net

The purpose of GCSA is to produce well-



rounded individuals who are confident of their abilities and ready to take on the challenges of the working world. The program includes coordinated career academic education and a project success program through which students can sharpen their leadership and employment skills.

Georgia FFA Association

www.aged.ces.uga.edu/georgiaffa

Georgia FFA ranks in the top five for membership in the nation.

Members develop their potential for premier leadership, personal growth, and career success through agriculture education. Today's FFA encompasses more than 300 careers in everything from agriscience to biotechnology to turf grass management.

Georgia Health Occupations Students of America (HOSA)

www.georgiahosa.org

HOSA's mission is to enhance the delivery of compassionate, quality health care by providing opportunities for knowledge, skill, and leadership development of all Health Care Science students. Members attend leadership conferences featuring competition in nearly 50 health-care-related skills.

Georgia Technology Student Association (GA TSA)

www.gatsa.org

Georgia Technology Student Association (GA TSA) provides



technology students with opportunities to excel and advance by encouraging them to become critical thinkers, problem solvers, and technologically literate leaders. Members participate in co-curricular activities with the Engineering and Technology program to develop communication, leadership, and competitive skills.

SkillsUSA Georgia

www.skillsusageorgia.org

SkillsUSA Georgia members participate in local, state, and



national activities sponsored by Architecture, Construction, Communication, and Transportation, and Health Care Science courses and programs. Members develop leadership and workplace skills and earn recognition through activities, conferences, and competitions. More than 6,000 SkillsUSA Georgia members compete in some 70 contests offered at the regional and state level and culminating in the SkillsUSA Championships.

Your Education and Career Planning Checklist

You and your parents or guardians can use this checklist to help keep everyone on track as you work on your education and career pathway. Make a photocopy of these pages, enter the dates by which you need to complete each area, and check each one off as you complete it.

Complete by	Action Steps	Don∈
	Read the introductory part of this booklet, review the career concentration area that int down any questions you have.	erests you, and write
	Ask your parents or guardians to read this booklet and note any questions they may ha	ave.
	Identify the members of your future-planning team. Parents/guardians:	
	Name: Telephone:	
	Name: Telephone:	
	Counselor:	
	Telephone: Email address:	
	Teacher/Advisor:	
	Telephone: Email address:	
	Other Team Member:	
	Telephone: Email address:	
	Create your list of dream jobs. 1 2 3	
	Write down the results of any career assessments you have taken. Career Assessment Taken Results	
		2 S
	Write down the courses in which you get the best grades.	

Complete by	Action Steps	Don∈	
	Write down the courses you most enjoy.		
	Play the Match Game to see what careers match your interests and skills.		
	With the help of your school counselor or teacher/advisor, set up a planning meeting to choose your career pathway.		
	School counselor, teacher, or advisor You and your parents or guardians should bring:		
	Your career assessment results The results of your Match Game		
	Your state test result Materials to take notes		
	Your grade reports (academic and elective classes) Any questions you or they might have as a result of reading this booklet or from any research you may have done.		
	Which career pathway did you choose to complete in high school?		
	Choose a career and technical student organization that matches your career pathway.		
	Set up a schedule to revisit your plans and revise them if necessary:		
	Date:		
	Date:		
	Your turn: Add any other items to this list that you think will help you in your education and career planning. For example, you could make a note of career fairs or career days you plan to attend. You might list Internet sites of career areas in which you are interested, or list colleges you want to visit or learn more about.		



Non-discrimination Statement

Federal law prohibits discrimination on the basis of race, color, or national origin (Title VI of the Civil Rights Act of 1964); sex (Title IX of the Educational Amendments of 1972 and the Carl D. Perkins Vocational and Applied Technology Education Act of 1990); or disability (Section 504 of the Rehabilitation Act of 1973 and The Americans with Disabilities Act of 1990) in educational programs or activities receiving federal financial assistance.

Employees, students, and the general public are hereby notified that the Georgia Department of Education does not discriminate in any educational programs or activities or in employment policies.

The following individuals have been designated as the employees responsible for coordinating the department's effort to implement this nondiscriminatory policy.

Perkins Act—Vocational Equity Coordinator (404) 657-8304

Title VI—Jennifer Hackemeyer, Legal Services (404) 656-4689

Title IX—Jennifer Hackemeyer, Legal Services (404) 656-4689

Section 504 and ADA—Jennifer Hackemeyer, Legal Services (404) 656-4689

Inquiries concerning the application of the Perkins Act, Title VI, Title IX, or Section 504 and ADA to the policies and practices of the department may be addressed to the Georgia Department of Education, Twin Towers East, Atlanta 30334, (404) 656-2800; to the Regional Office for Civil Rights, Atlanta 30323; or to the Director, Office for Civil Rights, Education Department, Washington, D.C. 20201.