



AGRICULTURAL FOOD AND NATURAL RESOURCES

TexasAchieve career cluster for Agricultural Food and Natural Resources involves investigation into the basic raw materials used for food, shelter and comfort and discovering how these products are made the best available for consumer's use.

In *Horticulture*, I have learned how important plants are for the production of food and for the environment. I now know how to grow and take care of plants.

Earnest Robinson, RHS Graduate

WHERE CAN I GO WITH AGRICULTURAL FOOD & NATURAL RESOURCES?

HS Diploma/ On-the-Job Training	Farm Worker, Plant Nursery employee, Florist/Gardener and Groundskeeper, Farm Equipment Mechanic, Farm Manager, Fisher/Hunter/Trapper, Lumber Production Worker, Greenhouse keeper
Jr/Technical/ Community College or Apprenticeship	Arborist, Floral Designer, Interior Plantscaper, Irrigation Technician, Landscape Contractor, Pest Management Technician, Forestry Worker, Farmer, Hazardous Material Specialist, Poultry Hatchery Supervisor, Agriculture Consumer Specialist
Bachelor's or Master's Degree, Doctorate	Botanical Gardens Manager, Botanist, Agricultural Engineer, Turf Manager, Forester and Conservation Scientist, Ranch Manager, Horticulturist, Nursery Orchard Manager, Plant Breeder, Biomedical Engineer, Agricultural Scientist, Cooperative Extension Service, Fish and Game Warden, Landscape Architect, See Specialist, Hazardous Material Coordinator, Aquaculturalist, Agriscience Teacher, Plant Geneticist

HOW CAN I GAIN EXPERIENCE?

School Activities

4-H Club, Floral Design Competition, Horticulture Competition, School Clubs and Organizations

Community Activities

Part-time Employment, Community Garden Volunteer, Botanic Garden Volunteer, City Beautification Contests, Officer for Community Clubs and Organizations

College Majors

Agricultural Production, Aquaculture, Crop Production, Dairy Husbandry and Production, Sustainable Agriculture, Viticulture and Enology, Agricultural and Food Products Processing, Agricultural Business, Agricultural Business Technology, Agricultural Communications, Agricultural Economics, Agricultural Equipment Technology, Agricultural Mechanization, Agricultural Supplies, Agriculture Education Services, Agriculture, Farm and Ranch Management, Food Science, Food Technology and Processing, Soil Chemistry and Physics, Soil Science, Sustainable Agriculture



HORTICULTURE: Raised Platform Beds

Interlink targeted occupations for high demand employment opportunities for 2009-2014

BISD Related High School Courses

- Practicum in Agriculture
- Agriculture Mechanics and Metal Technologies
- Advanced Animal Science
- Advanced Plant & Soil Science
- Principles and Elements of Floral Design
- Horticulture Science I-II
- Landscape Design and Turf Grass Management
- Wildlife, Fisheries and Ecology Management
- Food Science
- Aquatic Science
- Environment Science

8th Graders:

You recently took the EXPLORE test which categorized your likes and dislikes. Using the EXPLORE chart people suited to the Ag & Resources field enjoy working with

THINGS

SAMPLE 4 YEAR PLAN FOR AGRICULTURAL FOOD & NATURAL RESOURCES

This Agricultural Food and Natural Resources focused graduation plan is reflective of SBOE requirements. The first four columns represent the Texas 4x4 plan of required core subjects. *Courses may be completed at any level.

Science	1	2	3	4	5	6	7
Freshman	English I or Pre-AP English I	Algebra I or Pre-AP Geometry	Biology or Pre-AP Biology	World Geography or Pre-AP World Geography	*Other Language I	Principles & Elements of Floral Design (<i>Fine Arts credit</i>)	*P.E. or substitute (<i>if needed</i>)
Sophomore	English II or Pre-AP English II	Geometry or Pre-AP Algebra II	Chemistry or Pre-AP Chemistry	World History or Pre-AP World History	*Other Language II	*Professional Communications and Health	Wildlife, Fisheries & Ecology Mgmt
Junior	English III or AP English	Pre-AP Algebra II or Precalculus	Physics, Pre-AP Physics or Principles of Technology	U.S. History or AP U.S. History	*Other Language III (<i>for DAP</i>) or Coun./Mental Health	Agriculture Mechanics & Metal Technologies	Horticulture Science I
Senior	English IV, AP English Lit. & Comp., or <i>Dual Credit</i> English	Precalculus or 4th year Math	Advanced Animal Science	Gov't or AP Gov't AND Economics or AP Macroeconomics	Horticulture Science II (<i>2 credits</i>)		Business Information Management or tech elective



TRANSPORTATION, DISTRIBUTION AND LOGISTICS

TexasAchieve career cluster for Transportation, Distribution and Logistics involves the movement of people and goods using a variety of systems, vehicles and market compatibilities.

I am pursuing a career as an

Automotive Technician first, and later a *Mechanical Engineer*

I have made plans on how to achieve my dream of some day getting my degree from Texas A & M. I have had three technology classes and would have taken more if there were more hours in a day.

David Worley Jr., HHS Graduate

Automotive Technology has definitely trained me and prepared me to move on to the Ford ASSET Program to fulfill my dream of becoming an automotive technician. The good thing about my class is we actually work on real problems, real cars and with real customers. It is actually like we are technicians working in the field.

Alex Patino, HHS Graduate

WHERE CAN I GO WITH TRANSPORTATION, DISTRIBUTION & LOGISTICS?

HS Diploma/ On-the-Job Training	Airport Ground Crew, Ambulance/Attendant Driver, Bus Driver, Dispatcher, Fork Lift Operator, Highway Maintenance Worker, Inspector/Grader/Tester, Longshore Worker/Stevedore, Merchant Marine, Deckhand, Railroad Transportation, Taxi Driver, Chauffeur, Welder & Cutter
Jr/Technical/ Community College or Apprenticeship	Aircraft Pilot, Air Traffic Controller, Aircraft Mechanic, Automotive Technician, Diesel Bus/Truck Technician, Industrial Traffic Manager, Inventory/Warehousing, Logistics Specialist, Military Mechanic Operating Engineer, Travel Agent, Scheduler
Bachelor's or Master's Degree, Doctorate	Aerospace Engineer, Air & Marine Navigator, Airplane Pilot, Air Traffic Controller, Mechanical Engineer, Industrial Engineer, Manager, Inventor, Inventory/Warehousing Logistics Specialist, Marine Engineer, Marine Architect, Military Pilot, Production Coordinator, Ship Captain, Travel Agent

HOW CAN I GAIN EXPERIENCE?

School Activities

Academic Competition, Skills USA, National Honor Society, Science Fairs, Student Government
Club Officer

Community Activities

Community Activities, Explorer, Public Library Volunteer, Red Cross Volunteer, Geocaching Clubs, Civil Air Patrol

College Majors

Air Traffic Control, Air Transportation, Aviation Management, Commercial Fishing, Construction Equipment Operation, Flagging and Traffic Control, Flight Instruction, Merchant Marine Science, Professional Diving and Instruction, Railroad and Railway Transportation, Transportation and Materials Moving, General Truck and Bus Driving

AUTOMOTIVE TECHNOLOGY:



Repair & Maintenance



8th Graders:

You recently took the EXPLORE test which categorized your likes and dislikes. Using the EXPLORE chart people suited to the Transport Operations field enjoy working with

THINGS

BISD Related High School Courses

- Aviation Maintenance
- Statistics and Risk Management
- Engineering Math
- Marketing Dynamics (WBL)
- Automotive Technology
- Practicum in Transportation, Distribution and Logistics
- Principles of Business, Marketing & Finance
- Business Information Management
- Travel and Tourism
- Principles of Manufacturing
- Business Law
- Computer Programming

Interlink targeted occupations for high demand employment opportunities for 2009-2014

SAMPLE 4 YEAR PLAN FOR TRANSPORTATION, DISTRIBUTION & LOGISTICS

This Transportation, Distribution & Logistics focused graduation plan is reflective of SBOE requirements. The first four columns represent the Texas 4x4 plan of required core subjects. *Courses may be completed at any level.

Science	1	2	3	4	5	6	7
Freshman	English I or Pre-AP English I	Algebra I or Pre-AP Geometry	Biology or Pre-AP Biology	World Geography or Pre-AP World Geography	*Other Language I	*Fine Arts Elective	*P.E. or substitute (if needed)
Sophomore	English II or Pre-AP English II	Geometry or Pre-AP Algebra II	Chemistry or Pre-AP Chemistry	World History or Pre-AP World History	*Other Language II	⌘ Prin. of Manufacturing or Tech. Elective	*Professional Communications and Health
Junior	English III or AP English	Pre-AP Algebra II or Precalculus	Physics, Pre-AP Physics or Principles of Technology	U.S. History or AP U.S. History	*Other Language III (for DAP) or Elective	Automotive Technician (2 credits)	
Senior	English IV, AP English Lit. & Comp., or Dual Credit English	Precalculus or 4th year Math	4th year Science	Gov't or AP Gov't AND Economics or AP Macroeconomics	⌘ Digital Electronics or Elective	Advanced Automotive Technology (3 credits)	



SCIENCE, TECHNOLOGY, ENGINEERING, MATHEMATICS AND INFORMATION TECHNOLOGY

TexasAchieve career cluster for Science, Technology, Engineering, Mathematics & Information Technology involves analyzing, testing, studying, discovering and/or applying scientific principles as they relate to hardware, software and machines.

The world of *Technology* is growing so rapidly that five years from now the appearance of the applications used in business will venture far beyond our current expectations. Completing a business computer information systems course provided me with the opportunity to recognize the ever growing need for computer literacy as well as the ability to excel in multiple software programs.

Brandon Jackson, RHS Graduate

My involvement in business classes has helped me evaluate my career interest. Learning how to keyboard and use Excel, Word and Publisher has helped me understand that computers are essential no matter what career you choose.

Doreen Kagaju, HHS Graduate

WHERE CAN I GO WITH SCIENCE, TECHNOLOGY, ENGINEERING, MATHEMATICS & INFORMATION TECHNOLOGY?

HS Diploma/ On-the-Job Training	Assembler, Solderer, Computer Data Entry Clerk, Construction Worker/Technician, Drafting Technician, Machine Operator, Mechanic Assistant
Jr/Technical/ Community College or Apprenticeship	Computer Operator, Programmer, Technician, Computer Systems Analyst/Designer/Drafter, Electrical Engineering Technician, IT Support Specialist, Machinist, Mechanical Technician, Network Systems Technician, Spreadsheet Application Specialist
Bachelor's or Master's Degree, Doctorate	Application Programmer, Hardware/Software Purchasing, Computer Engineer, Systems Management, Software Engineer, Database Programmer, Electrical Engineer, Network Administrator, Semiconductor Technologist/Operator, System Administrator, System Analyst, System Engineer

HOW CAN I GAIN EXPERIENCE?

School Activities

Academic Decathlon, Computer Club, Computer Programming Contests, Robotics Competition, UIL Academic Competition in Computer Science, Career & Technology Education Leadership Organizations

Community Activities

Computer Science Tutoring, Internships, Independent Web Design and HTML tutorials, Boy Scouts of America Programs

College Majors

Aerospace Engineering, Civil Engineering, Computer Engineering Technology, Computer Systems Technology, Electrical Engineering, Hazardous Materials Information Systems Technology, Hydraulics/Fluid Power Technology, Integrated Circuit Design, Laser and Optical Technology, Nuclear Engineering, Petroleum Technology, Robotics Technology, Applied Mathematics, Computational Mathematics, Financial Mathematics, Mathematical Statistics & Probability



COMPUTER MAINTENANCE:

Debugging and Reprogramming

Interlink targeted occupations for high demand employment opportunities for 2009-2014

8th Graders:

You recently took the EXPLORE test which categorized your likes and dislikes. Using the EXPLORE chart people suited to the Mathematic Technology field enjoy working with

THINGS & IDEAS

BISD Related High School Courses

- Principles of Information Technology
- Digital and Interactive Media
- Web Technologies
- Computer Programming
- Cisco Internetworking I-II
- Computer Maintenance
- Computer Technician
- Principles of Engineering
- Statistics & Risk Management
- Virtual Business
- Computer Science
- Engineering Design and Presentation
- Principles of Technology
- Computer Integrated Manufacturing
- Engineering Math

SAMPLE 4 YEAR PLAN FOR SCIENCE, TECHNOLOGY, ENGINEERING, MATHEMATICS & INFORMATION TECHNOLOGY

This Science, Technology, Engineering, Mathematics & Information Technology focused graduation plan is reflective of SBOE requirements. The first four columns represent the Texas 4x4 plan of required core subjects. *Courses may be completed at any level.

<u>Science</u>	1	2	3	4	5	6	7
Freshman	English I or Pre-AP English I	Algebra I or Pre-AP Geometry	Biology or Pre-AP Biology	World Geography or Pre-AP World Geography	*Other Language I	*Fine Arts Elective	*P.E. or substitute (if needed)
Sophomore	English II or Pre-AP English II	Geometry or Pre-AP Algebra II	Chemistry or Pre-AP Chemistry	World History or Pre-AP World History	*Other Language II	*Professional Communications and Health	☑ Prin. of Information Technology
Junior	English III or AP English	Pre-AP Algebra II or Precalculus	Physics, Pre-AP Physics or Principles of Technology	U.S. History or AP U.S. History	*Other Language III (for DAP) or Elective	☑ Computer Maintenance (2 credits)	
Senior	English IV, AP English Lit. & Comp., or Dual Credit English	Precalculus or 4th year Math	4th year Science	Gov't or AP Gov't AND Economics or AP Macroeconomics	☑ Web Technologies	Computer Technician (2 credits) or Cisco Internetworking (1 or 2 credits)	



MANUFACTURING, ARCHITECTURE AND CONSTRUCTION

TexasAchieve career cluster for Manufacturing, Architecture and Construction involves the design and assembly of products as well planning, designing, building and repairing structures.

Thanks to *Computer Applications*, I have a better chance of succeeding in the future. I think that in today's world you need to know how to use a computer to get basically any job.
Derick King, RHS Graduate

WHERE CAN I GO WITH MANUFACTURING, ARCHITECTURE & CONSTRUCTION?

HS Diploma/ On-the-Job Training	Bindery Worker, Brick/Stonemason, Carpenter, Building Inspector, Drafter, Construction Laborer, Dry-wall/Lath Installer, Electromechanical Assembler, Metal/Plastics Machine Operator, Packager, Painter, Plumber, Pipefitter, Roofer, Tile Setter
Jr/Technical/ Community College or Apprenticeship	CAD Drafter, Cement Mason, Chemical Equipment Operator, Compositor & Typesetter, Cost Estimator, Electrician, Electrical Technician, Heating/AC Technician, Industrial Traffic Manager, Millwright, Tool & Die Maker, Welder
Bachelor's or Master's Degree, Doctorate	Cost Estimator, Mining Engineer, Electrical Engineer, Computer Engineer, Mechanical Engineer, Industrial Engineer, Aerospace Engineer, Inventor, Civil Engineer, Architect, Urban & Regional Planner, Graphics Designer, Landscape Architect, Marine Engineer & Architect, Budget Analyst, Production Coordinator, Purchasing Agent, Sales Engineer

HOW CAN I GAIN EXPERIENCE?

School Activities

Academic Decathlon, Computer Club, Computer Programming Contests, Robotics Competition, UIL Academic Competition in Computer Science, Career & Technology Education Leadership Organizations

Community Activities

Computer Science Tutoring, Internships, Independent Web Design and HTML tutorials, Boy Scouts of America Programs

College Majors

Architectural and Building Sciences/Technology, Architectural Technology, Architecture, City, Community, and Regional Planning, Environmental Design, Interior Architecture, Landscape Architecture, Real Estate Development, Building Construction Technology, Construction Site Management, Electrical and Power Transmission Installation, Metal Building Assembly, Plumbing Technology, Well Drilling



CONSTRUCTION TECHNOLOGY:

Outdoor Playhouse Construction Project

Interlink targeted occupations for high demand employment opportunities for 2009-2014

8th Graders:

You recently took the EXPLORE test which categorized your likes and dislikes. Using the EXPLORE chart people suited to the Manufacturing, Architecture field enjoy working with

THINGS

BISD Related High School Courses

- Principles of Information Technology
- Architectural Design I-II
- Construction Technology I-IV
- Interior Design I-II
- Principles of Manufacturing
- Intro to Engineering Design
- Engineering Math
- Digital Electronics
- Practicum in Construction Mgmt
- Computer Programming
- Computer Integrated Manufacturing
- Statistics & Risk Management

SAMPLE 4 YEAR PLAN FOR MANUFACTURING, ARCHITECTURE & CONSTRUCTION

This Manufacturing, Architecture & Construction focused graduation plan is reflective of SBOE requirements. The first four columns represent the Texas 4x4 plan of required core subjects. *Courses may be completed at any level.

Science	1	2	3	4	5	6	7
Freshman	English I or Pre-AP English I	Algebra I or Pre-AP Geometry	Biology or Pre-AP Biology	World Geography or Pre-AP World Geography	*Other Language I	Principles of Architecture & Construction	*P.E. or substitute (if needed)
Sophomore	English II or Pre-AP English II	Geometry or Pre-AP Algebra II	Chemistry or Pre-AP Chemistry	World History or Pre-AP World History	*Other Language II	Construction Technology (2 credits)	
Junior	English III or AP English	Pre-AP Algebra II or Precalculus	Physics, Pre-AP Physics or Principles of Technology	U.S. History or AP U.S. History	*Prof. Communications and Health	Advanced Construction Technology (2 credits)	
Senior	English IV, AP English Lit. & Comp., or Dual Credit English	Precalculus or 4th year Math	4th year Science	Gov't or AP Gov't AND Economics or AP Macroeconomics	*Fine Arts Elective	Practicum in Construction Management (2 credits)	



SCIENCE AND ENGINEERING

TexasAchieve career cluster for Science and Engineering involves practical problem solving using scientific principles to design, produce and improve products and systems.

My interest and dream in *Robotics* and nanotechnology is a direct result of participation and success in the Career and Technology Education classes at Haltom High School.

Grant Hensarling, HHS Graduate

WHERE CAN I GO WITH SCIENCE AND ENGINEERING?

HS Diploma/ On-the-Job Training	Automation/Robotics Technician, Automobile Service Advisor, Broadcast Technician, Construction Worker, Dental Lab Technician, Energy Conservation and Use Technician, Engineering Technician, Fish and Game Warden, Ophthalmic Lab Technician, Surveyor Assistant
Jr/Technical/ Community College or Apprenticeship	Automation/Robotics Technician, Broadcast Technician, Clinical Lab Technologist, Computer Programmer, Dental Lab Technician, Electrical Engineering Technician, Laser Technician, Nuclear Quality Control Inspector, Radio Operator, Science Technologist, Surveyor
Bachelor's or Master's Degree, Doctorate	Biological Scientist, Chemist, Geoscientist, Natural Scientist, Meteorologist, Physicist, Astronomer, Science Technologist, Aerospace Engineer, Biomedical Engineer, Chemical Engineer, Computer Hardware Engineer, Electrical Engineer, Environmental Engineer, Geographic Specialist, Industrial Engineer, Materials Engineer, Mechanical Engineer, Nuclear Engineer, Petroleum Engineer

HOW CAN I GAIN EXPERIENCE?

School Activities

Academic Decathlon, Computer Club, UIL Academic Competition in Science, Mathematics and Computer Science Robotics Competitions, Skills USA, National Honor Society, Science Club Mathematics Club, Student Government

Community Activities

Internships, Part-Time Employment, Independent Web Design and HTML tutorials, Boy Scouts of America Programs

College Majors

Biology and Biotechnology Laboratory, Technology, Chemical Technology, Industrial Radiologic Technology, Nuclear Technology, Science Technology, Mathematical Statistics and Probability, Mathematics, Mathematics and Statistics, Statistics



PRINCIPLES OF ENGINEERING

Simple and Complex Machines



Interlink targeted occupations for high demand employment opportunities for 2009-2014

8th Graders:

You recently took the EXPLORE test which categorized your likes and dislikes. Using the EXPLORE chart people suited to the Science & Engineering field enjoy working with

IDEAS & THINGS

BISD Related High School Courses

- Principles of Information Technology
- Principles of Technology
- Computer Programming
- Introduction to Engineering Design
- Principles of Engineering
- Computer Integrated Manufacturing
- Aerospace Engineering
- Digital Electronics
- Civil Engineering & Architecture
- Engineering Math
- Statistics and Risk Management

SAMPLE 4 YEAR PLAN FOR SCIENCE & ENGINEERING

This Science and Engineering focused graduation plan is reflective of SBOE requirements. The first four columns represent the Texas 4x4 plan of required core subjects. *Courses may be completed at any level.

Science	1	2	3	4	5	6	7
Freshman	English I or Pre-AP English I	Algebra I or Pre-AP Geometry	Biology or Pre-AP Biology	World Geography or Pre-AP World Geography	*Other Language I	☞ Introduction to Engineering Design	*P.E. or substitute (if needed)
Sophomore	English II or Pre-AP English II	Geometry or Pre-AP Algebra II	Chemistry or Pre-AP Chemistry	World History or Pre-AP World History	*Other Language II	☞ Principles of Engineering	*Prof. Communications and Health
Junior	English III or AP English	Pre-AP Algebra II or Precalculus	Physics, Pre-AP Physics or Principles of Technology	U.S. History or AP U.S. History	*Other Language III (for DAP) or Elective	☞ Digital Electronics (1 credit) & Civil Engineering & Architecture (1 credit)	
Senior	English IV, AP English Lit. & Comp., or Dual Credit English	Precalculus or 4th year Math	4th year Science	Gov't or AP Gov't AND Economics or AP Macroeconomics	*Fine Arts Elective	☞ Aerospace Engineering (1 credit) & Project Lead the Way course (1 credit)	