Goal

- Students will identify **Information Technology** as a Georgia career cluster

Objectives

- define a career cluster as a grouping of occupations with common skills and knowledge
- identify sample occupations aligned with the **Information Technology** career cluster

Aligned Indicators and Standards

National Career Development Guidelines

- CM3.K4   Identify several ways to classify occupations
- PS2.K2   Recognize the benefits of interacting with others in a way that is honest, fair, helpful, and respectful
- ED2.A7   Demonstrate participation in informal learning experiences

ASCA National Standards

- C:B1.4   Know the various ways in which occupations can be classified
- PS:A2.6   Use effective communication skills
- PS:A1.9   Demonstrate cooperative behavior in groups
- A:A3.5   Share knowledge

Related Georgia Performance Standard

- S5CS5   Students will use tools and instruments for observing, measuring, and manipulating objects in scientific activities

Materials

- Georgia's Career Cluster chart
- occupational frame
- pencils or color pencils
- handout, "Sample Information Technology Careers"
- handout, "Information Technology Careers: Video Game Programmer"

Activity:

- *Say:* "Today we're going to learn about the career cluster, **Information Technology**." *Write:* ***Information Technology*** *on the board. Ask*: "Does anyone know what a career cluster is*?" Allow students time to answer. Say:* "Career clusters organize occupations into groups that are similar**. Information Technology** career cluster includes careers related to the design, development, support, and management of hardware, software, multimedia, and systems support services**."** *Distribute the* Sample Information Technology Careers handout. *Review the various occupations listed on the handout and ask:* "Do you know anybody that might work in the area of Information Technology?" *and* "Would you like to work in the area of Information Technology? If so, which area?"

- *Ask:* "Did you know that people who develop video game consoles like the Wii and the video games that go with them, work in this career cluster?" *Say:* "These people are called video game programmers. *Ask:* "Can you list things about video games that you like?" *Write the responses on the board. Say:* "Video game programmers make sure that the computer programs that make these video games run have all of the characteristics in place so that the games run smoothly. Today, let's pretend we are video game programmers."

- *Distribute the **Information Technology Careers: Video Game Programmer** handout and explain the directions. Divide the class into small groups to allow for full participation. Make sure all students understand and answer any questions. Walk around the room and offer assistance.*

- *Once the students have filled in their answers, have them share their handouts and sketches.*

- *Say:* "I hope you learned something today about occupations in **Information Technology**. Technology is becoming more and more important in the way we live and communicate. The future looks very promising for these type occupations. If you are interested, take some time to further explore these occupations on the internet or in the media center. Have a great day."

Evaluation

- Students will be evaluated on their participation and their understanding of their answers on the handout

Enhancement

- Facilitator should consult with the media specialist at the local school to help select books related to the career cluster being taught. This will ensure books are appropriate for the grade level and for the learner.

DISCLAIMER

The sources and web links listed in the activities may be of help to you as you consider the career awareness activities. While these sources are provided to assist you in your search, it is your responsibility to investigate them to determine their value and appropriateness for your situation and needs. These sources are provided as a sample of available resources and are for informational purposes only. THE GEORGIA DEPARTMENT OF EDUCATION DOES NOT MONITOR, EVALUATE, OR ENDORSE THE CONTENT OR INFORMATION OF THESE RESOURCES. NONE OF THESE RESOURCES SHOULD BE CONSIDERED THE ADVICE OR GUIDANCE OF THE GEORGIA DEPARTMENT OF EDUCATION.

Sample Information Technology Careers

Computer Programmer - People who design write, test, and maintain computer the source code of computer programs. The purpose of programming is to create a set of instructions that computers use to perform specific operations.

Computer Security Specialists – plan, coordinate, and implement the organization's information security. They install computer security software.

Animators– use drawings, sculptures, or computers to create the illusion that characters and scenes are moving.

Computer Support Specialists – provide technical assistance, support, and advice to customers and other users. **Network Administrators** – manage local area networks (LAN), wide area networks (WAN), and Internet areas. They maintain hardware and software, and analyze problems.

Information Technology Careers: Video Game Programmer

Directions: You are a video game programmer. Your boss wants you to develop a new game based on "whatever the kids like." Choose something you like and develop a video game about it.

What will your video game be about?

_____

List four things you need to include in your video game to make sure that everyone likes it.

_____

What are some skills you think that you (the video game programmer) might need to successfully create the program?

_____

On the back of this sheet, sketch the cover picture that will go on the box of your video game.

Dr. John D. Barge, State School Superintendent
"Making Education Work for All Georgians"

Building Linkages in IT Occupations Framework: For Entry Level, Technical, and Professional Careers Related to the Design, Development, Support and Management of Hardware, Software, Multimedia, and Systems Integration Services.

Occupational frames can be printed at www.careertech.org under the tab Career Clusters.

Information Technology

Occupational Frame

Programming / Software Engineering:
Applications: Analyst * Engineer
Business Analyst *
Computer Engineer * Data Modeler
Operating System: Designer/Engineer *
Programmer Analyst
Program Manager *
Programmer*
Programmer/Analyst *
Project Lead
Software Applications: Specialist * Architect *
Design Engineer *
Development Engineer *
Engineer * QA Specialist *
Tester
Systems: Analyst *
Administrator
Test Engineer * Tester

Digital Media:
2D/3D Artist * Animator *
Audio/Video Engineer *
Designer * Media Specialist *
Media/Instructional Designer
Multimedia: Author *
Authoring Specialist *
Developer * Specialist
Producer * Production
Assistant * Programmer *
Streaming Media Specialist *
Virtual Reality Specialist
Web: Designer * Producer *
Specialist
Web Development and Administration:
Web: Administrator * Architect
* Designer * Page Developer *
Producer * Site Developer *
Specialist
Webmaster
Web Developer
Social Networking Specialist
Blog Developer *
Search Engine Marketing Specialist
Search Engine Optimization Specialist

Database Development and Administration:
Data: Administrator * Analyst * Architect * Management Associate *
Modeler * Modeling Specialist
Database: Administration Associate * Administrator * Analyst * Developer
* Manager * Modeler * Security Expert * DSS (Decision Support Services)
* Knowledge Architect
Senior: Database Administrator * Systems Analyst
Systems: Administrator * Analyst
Tester
Technical Writer:
Desktop Publisher * Document Specialist * Documentation Specialist *
Editor
Electronic Publications Specialist * Publisher
Instructional Designer, Online Publisher
Technical Communicator * Editor * Publications Manager * Writer
Technical Support:
Analyst * Call Center Support Representative * Content Manager
Customer: Liaison * Service Representative * Service Professional
Help Desk Specialist * Technician
Maintenance Technician * PC Support Specialist * PC Systems
Coordinator * Product Support Engineer * Sales Support Technician *
Technical: Account Manager * Support Engineer * Support Representative
Testing Engineer
Enterprise Systems Analysis and Integration:
Application Integrator * Business Continuity Analyst * Cross-Enterprise
Integrator
Data: Systems Designer * Systems Manager * Warehouse Designer
E-Business Specialist * Electronic Transactions Implementer
Information Systems: Architect * Planner
Systems: Analyst * Architect * Integrator

Network Design and Administration:
Communications Analyst * Data Communications Analyst * Information Systems Administrator * Information Operator * Information Technology Engineer
Network Consulting Engineer
Network Pre-Sales Engineer
Network: Administrator * Analyst * Architect * Engineer * Manager * Operations Analyst * Security Analyst * Specialist * Technician * Transport Administrator
PC Support Specialist *
Systems: Administrator * Engineer * Support Lead
Technical Support Specialist * User Support Specialist
Telecommunications Network Technician

Georgia's Career Clusters: Groupings of occupations with common knowledge and skills	
Cluster	**Cluster Description**
Agriculture, Food & Natural Resources	Careers with common knowledge and skills related to production, processing, marketing, financing, distribution, and development of agricultural commodities and resources. These commodities include food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.
Architecture & Construction	Careers with common knowledge and skills related to the designing, planning, managing, and building of structures.
Arts, A/V Technology & Communications	Careers with common knowledge and skills related to designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.
Business, Management & Administration	Careers with common knowledge and skills related to the preparation of students with computer skills for future college and career plans. Cluster skills mastered include planning, organizing, directing, and evaluating as well as owning and operating a successful business.
Education & Training	Careers with common knowledge and skills related to planning, managing, and providing education and training services as well as related learning support services.
Energy	Careers with common knowledge and skills related to preparing individuals for careers in the design, planning, maintaining, generating, transmission and distribution of traditional and alternative energy.
Finance	Careers with common knowledge and skills related money management, including planning, investing, and spending. Students gain career development skills for the finance world with opportunities that expand beyond basic business skills into financial literacy, banking, investing, insurance, and risk management.
Government & Public Administration	Careers with common knowledge and skills related to the planning and performing of government management and administrative functions at local, state, and federal levels. Careers are available in national security, foreign service, revenue, and regulations.

Health Science	Careers with common knowledge and skills related to planning, managing, and providing services in therapeutics, diagnostics, health informatics, support areas, and biotechnology research and development
Hospitality & Tourism	Careers with common knowledge and skills related to the management, marketing, and operations of restaurants, and other food services, lodging, attractions, recreation events, and travel related services.
Human Services	Careers with common knowledge and skills related to family and human needs such as nutrition and food science, counseling and mental health services, family and community services, personal care, and consumer services.
Information Technology	Careers with common knowledge and skills related to the preparation for careers that create, use, modify, and engage technology skills. Graphics, multimedia animation, web design, game and application development, networking, and computer repair are all possibilities.
Law, Public Safety, Corrections & Security	Careers with common knowledge and skills related to employment in emergency and fire services, legal services, protective services, and homeland security.
Manufacturing	Careers with common knowledge and skills related to the processing of materials into intermediate or final products and related professional and technical support activities, such as production control, maintenance, and process engineering.
Marketing	Careers with common knowledge and skills related to the process of anticipating, managing, and satisfying consumers' demand for products, services, and ideas. The Marketing career cluster generates the strategy that underlies advertising and promotional techniques, business communication, and business development.
Science, Technology, Engineering & Mathematics	Careers with common knowledge and skills related to planning, managing, and providing scientific research and professional and technical services.
Transportation, Distribution & Logistics	Careers with common knowledge and skills related to planning, managing, and moving people, materials, and goods by road, pipeline, air, rail, and water, and also includes other related professional and technical support services.