

ELEMENTARY CAREER STUDIES

Teacher Notes

Elementary career studies emphasize career awareness and exploration – not career choice. Career exploration at the elementary school level should allow children to become more self-aware of their skills, abilities and interests and how those traits relate to future career goals. Integrating career conversations across the curriculum allows students to connect the classroom to the real world. The goal of elementary career studies is to provide:

- equal access to career exploration
- opportunities to explore interests, abilities, values and goals
- develop the mindset that learning is lifelong for any career they pursue

CAREER EXPLORATION CONTINUUM

PRIMARY GRADES

Students in kindergarten and 1st grade should be introduced to careers in their community. Students in the 2nd and 3rd grade can understand the similarities and differences between groups of careers making this an ideal time to introduce the [sixteen \(16\) career clusters](#). This organizational framework is important to future career development and understanding future career pathways. INTERMEDIATE GRADES

Rather than focusing on a career, students in the 4th and 5th grades should begin the process of self-discovery through exploring the knowledge, skills and working environments common to careers within the 16 clusters. The resource within this document, “Dig Deeper,” provides sample tasks that allow students to explore those skills and knowledge. The resource, “Is a Career in (*cluster*) for Me?” guides students to reflect to determine their interest in this cluster.

USING THIS DOCUMENT

These activities do not constitute a curriculum, rather they provide a variety of activities to be used within the context of a career studies program that spans K-5. Resources progress by grade level from kindergarten to 5th grade and may be modified to meet student needs. For each cluster, instructional routines may include:

- **Engage** students through videos, online activities, guest speakers or hands on activities
- **Explore** by using texts from the cluster book list as read alouds or part of the classroom library
- **Extend** learning by using resources from this document in learning centers, individual work or group projects

ACKNOWLEDGEMENTS

Special thanks is given to the [Delaware Career Resource Network](#) and the [Labor Market and Career Information \(LMCI\) department of the Texas Workforce Commission](#) for granting permission to revise and include their resources in this document.

INFORMATION TECHNOLOGY

Teacher Resource

Note: Careers in Information Technology are divided into pathways. Below you will find some of the careers found in each pathway. This list serves as a resource to build educator knowledge. Elementary students should only be exposed to those careers common to their communities and experiences.

Information Support and Services

Professionals in this pathway provide technical assistance and manage information systems for a wide variety of organizations, including businesses, industries, schools and medical facilities. Their work enables employees to share information between locations and provide quality service to customers

- Account Manager
- Data Systems Designer
- Database Administrator
- Database Analyst
- Help Desk Specialist
- Information Systems Architect
- Systems Analyst
- Testing Engineer

Network Systems

Specialist in this pathway design, install, maintain and manage network systems, such as those that allow multiple doctors to view the same patient's X-rays in real-time to determine diagnosis and the best course of treatment. These experts are critical to the success of almost every organization.

- Data Communications Analyst
- Information Systems Operator
- Information Technology Engineer
- Network Administrator
- Network Architect
- Network Engineer
- Network Technician
- PC Support Specialist

Programming and Software Development

Individuals in this pathway design, develop, implement and maintain computer systems and software to develop tomorrow's products for use by businesses and consumers.

- Applications Analyst
- Applications Engineer
- Computer Engineer
- Data Modeler
- Game Developer
- Operating System Designer/Engineer
- Programmer
- Software Design Engineer
- Systems Analyst

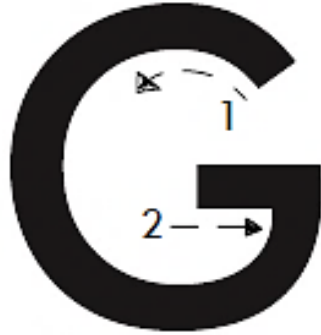
Web and Digital Communications

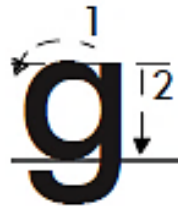
These experts create, design and produce interactive multimedia products and services to communicate with existing and potential customers, to track transactions and to collaborate with colleagues.

- Business Analyst
- Communications Analyst
- Data Systems Designer
- Database Analyst
- Operating System Designer/ Engineer
- Systems Engineer

Alphabet Letter Printing Worksheet

Practice writing each upper case and lower case letter on the lines below as shown on the sample letters. Then write the name of the occupation.

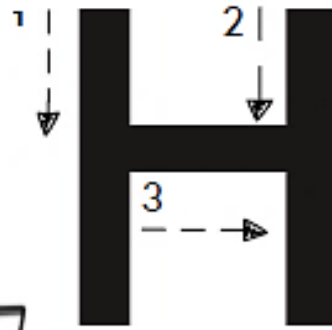


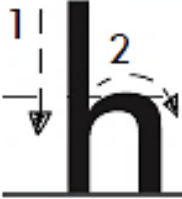


Game Developer

Alphabet Letter Printing Worksheet

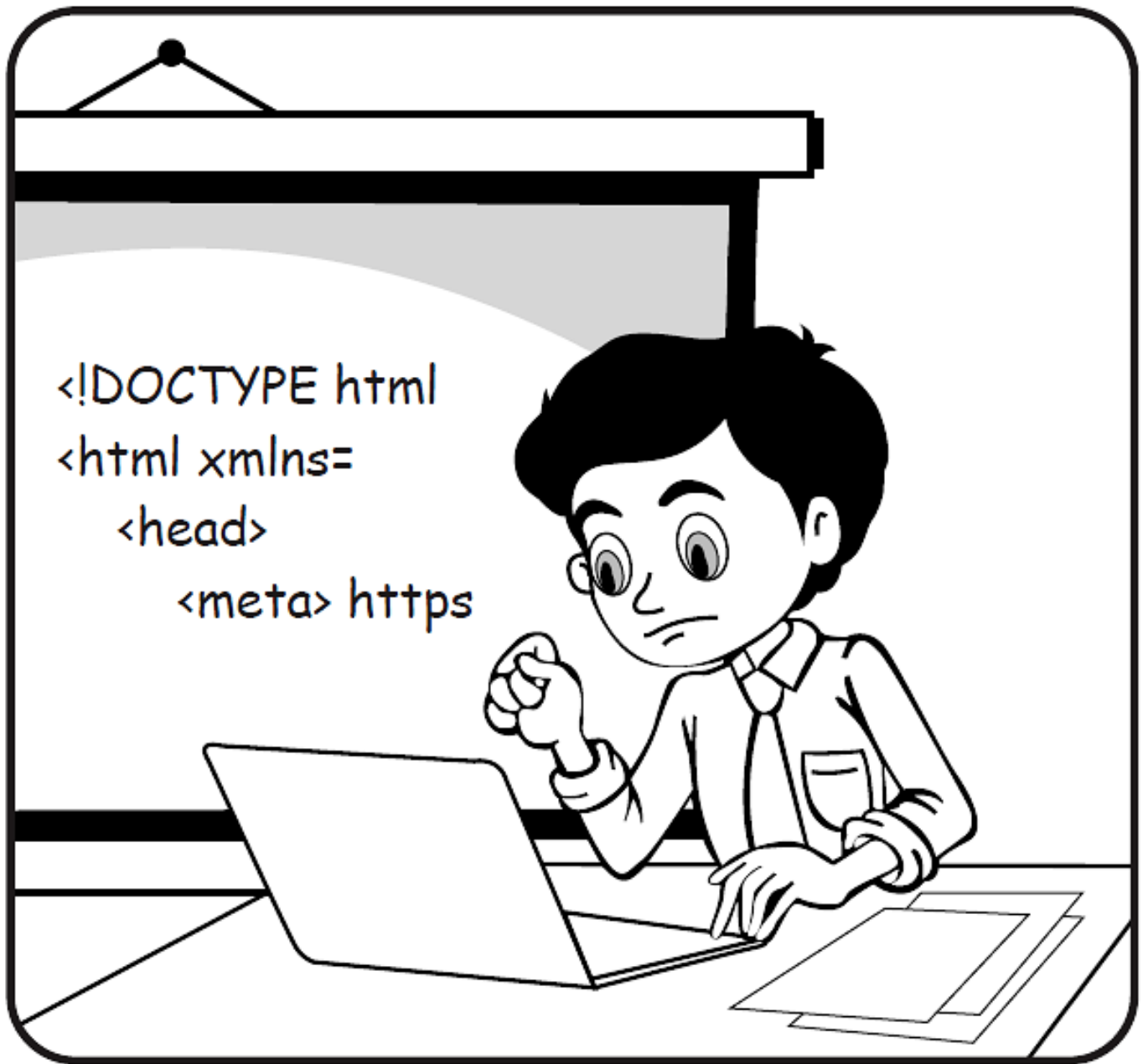
Practice writing each upper case and lower case letter on the lines below as shown on the sample letters. Then write the name of the occupation.





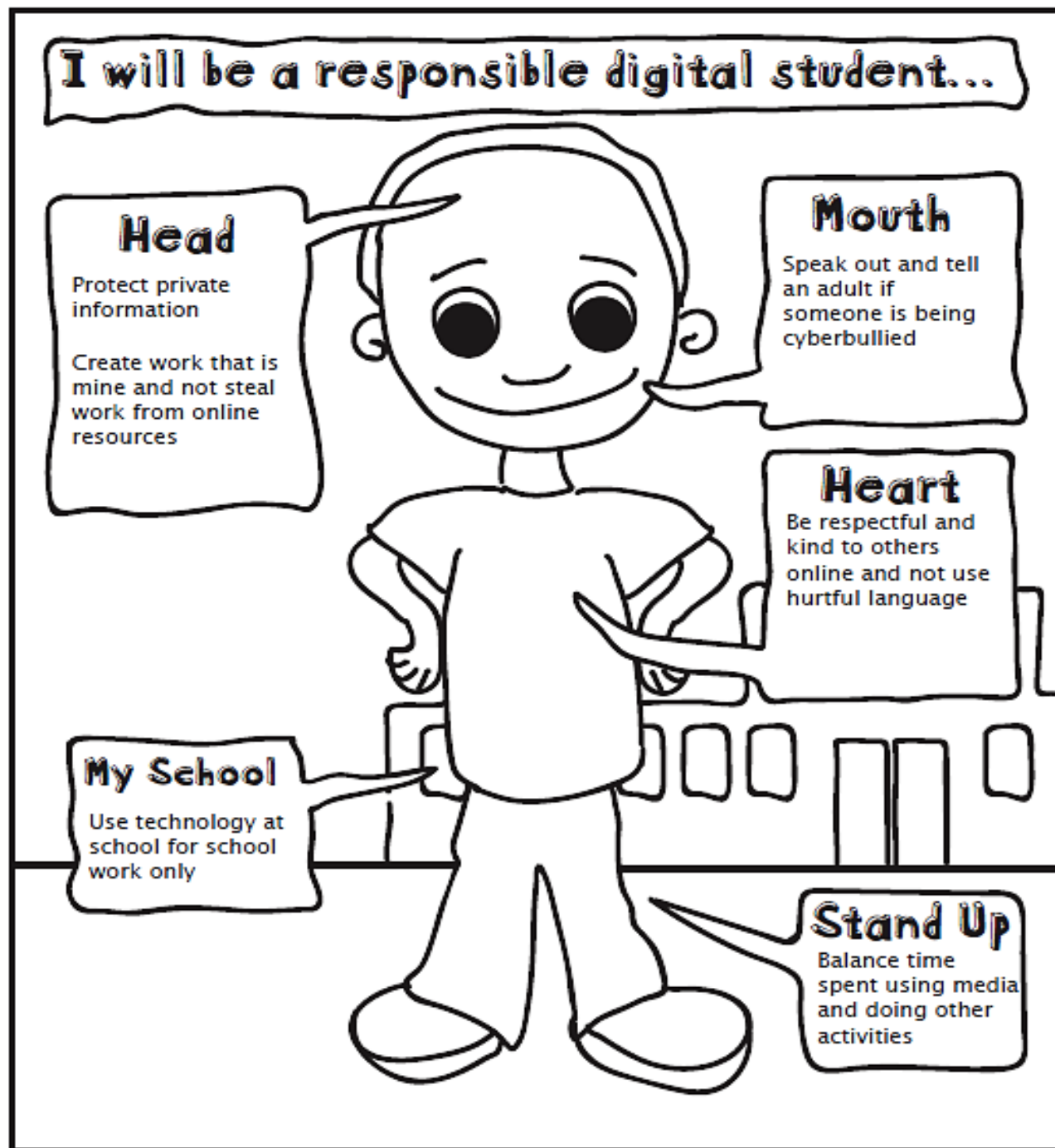
Help Desk Specialist

COMPUTER PROGRAMMER



Computer programmers design computer software programs. They tell computers what to do in a language called code.

INFORMATION TECHNOLOGY



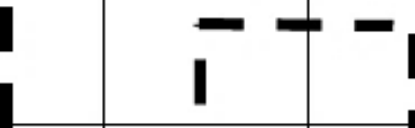
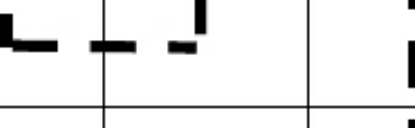






CYBER SECURITY SPECIALISTS


Cyber Security Specialists work to protect computer systems and our electronic personal information. They work to prevent and solve problems.

Write The Code That Leads to the Treasure

Directions: Use the arrows to write a code leading to the treasure.





CRYPTOGRAPHY

Secret codes have long been used to send and receive important information. Cryptography refers to the writing and deciphering of a message written in code. A substitution code is created by substituting letters, numbers or symbols. Use the table below to create your own substitution code.

A	B	C	D	E	F	G	H	I	J	K	L	M

N	O	P	Q	R	S	T	U	V	W	X	Y	Z

Use the substitution code to write a secret message. Ask a friend to decode your message.

SECRET MESSAGE:



Sample Careers

1. Help Desk Technician
2. Webmaster
3. Cable TV Installer
4. Computer Programmer
5. _____

Can you think of another?

Careers in the Information Technology cluster are usually very technical. People in these occupations work with computers and lots of information. They may work in almost any business where computers are used. They may develop or design computer programs and hardware. You can be a web master, programmer or database administrator and be in this career cluster.





Name _____

Design the home page for your school or class webpage.

What information is important to include on the webpage?

Would you like to do this type of work? Explain why or why not.

DIG DEEPER

Note: These tasks serve only to generate ideas and connect real world activities to academic content. **Exploratory Tasks** may be teacher led through a class project, demonstration or assignment. **Extension Tasks** may be modified to align with ELA, math, science or social studies content through writing, determining/comparing costs, human impact, etc.

Exploratory Tasks	Extension Tasks
Identify the different parts of a computer.	Create an infographic to illustrate the different parts and describe the function of each.
Interview the school's technology specialist to learn basic care and use of a computer.	Create a User's Guide describing basic care and use of a computer.
Explore ways to protect personal information when using the internet.	Create a Public Service Announcement (PSA) to share your information.
Interview a member of your school's computer or technology club.	Join a computer or technology club at your school and participate in the club's competitive events.

Is a Career in Information Technology for Me?

Would you be interested in a career in Information Technology? Below are knowledge and skill statements related to the careers in this cluster. Read each statement. Decide if this describes you by checking the Yes, No or Maybe box.

THINGS I LIKE TO DO	YES	NO	MAYBE
Work with computers			
Reason clearly logically to solve complex problems			
Use machines, techniques and processes			
Read technical materials and diagrams and solve technical problems			
Adapt to change			
Play video games and figure out how they work			
Concentrate for long periods without being distracted			
PERSONAL QUALITIES THAT DESCRIBE ME	YES	NO	MAYBE
Logical or analytical			
Able to see details in the big picture			
Persistent			
Good concentration skills			
Precise and accurate			
SCHOOL SUBJECTS THAT INTEREST ME	YES	NO	MAYBE
Math			
Science			
Computer technology			
Communications			
Graphic design			

Did you check YES most often? If so, continue to explore careers and opportunities in this cluster. And don't forget to focus on your math and science classes to build the academic skills you need for these careers.

Did you check NO most often? If so, don't worry. There are hundreds of jobs to explore in the other 15 career clusters.

Did you check MAYBE most often? If so, continue to explore this cluster as well as investigating how your skills and interests may be a good match in other clusters.