Courseware Resource Elements

For each lesson in this courseware, a number of learning elements are used to facilitate learning. Teachers have the ability to use the various resources to suit their teaching style as well at the learning styles of their students.

Lists of each of these elements have been produced for use by teachers for curriculum planning and the creation of individual lesson plans/guides. Most of the learning elements are somewhat modular in size, which makes them ideal for use by study groups both within and outside the classroom.

Lesson Case Studies

This courseware uses the Case Studies assessment element to organize exercise problems designed to assess the learner's *knowledge* of content presented in the eBook and other resource elements for the lesson. Each lesson consists of two or more Case Studies in combination with Quiz Questions at the end of the lesson.

Case Studies and Quiz Questions generally include a scenario to provide context. The question form may be multiple-choice, true-false, select-from-a-list, or arrangement of a list.

Apply Your Knowledge Case Studies

This courseware uses the Apply Your Knowledge assessment element to organize exercise problems designed to assess the learner's ability to *apply the knowledge* of content presented in the courseware and other resource elements for the lesson. This element is found in Appendix C of the courseware.

Each Case Study generally includes a scenario to provide context for solving a problem. The problem being solved may require the learner to apply knowledge from multiple sources in the lesson or from previous lessons. The question form may be multiple-choice, true-false, select-from-a-list, or arrangement of a list.

Total Courseware Hours: 50-80

Teacher Resource Elements

Component Counts and Timings

A detailed breakdown of all components included in each level/lesson. This worksheet shows the number of each component in the learning environment and their estimated completion times, arranged by levels and lessons.

- **Lesson Objective Domains to Exercise Timing:** All Levels table on the left shows the details of each lesson according to the Objective Domains (OD) and exercises included in the lesson, with lesson totals.

- **Summary Per Level:** Overall Timing table on the second page summarizes each level in hours.

Both tables have been provided to allow the teacher to get the information needed for whatever timing is needed. For example, the table on the left may be used to obtain timing for remediation of specific ODs, while the table on the right may be used for curriculum planning.

Answer Keys

The Teacher Resources include an Answer Key for the following elements:

- Lesson Case Studies per Level

- Lesson Quiz Questions per Level

- Apply Your Knowledge Case Studies per Level

Level 1 – Fundamental Concepts and Essential Components

Lesson 1: Technology Basics

Case Study 1

An operating system is the most important software on a computer. It is often referred to as "the brain" of the computer. All computers must have an operating system.

Which of the following options is <u>NOT</u> a responsibility of the operating system?

    a. **Providing access to the Internet and web sites.**
    b. Managing the activity between the software and hardware on the computer.
    c. Providing a user interface to communicate with the computer.
    d. Managing access to programs and data through user authentication.

The operating system is responsible for managing the activity between the software and hardware on the computer, providing a user interface to communicate with the computer, and managing access to programs and data through user authentication.

Case Study 2

The physical parts of a computer are called *hardware*. Hardware can be found connected to or inside the computer. Hardware that is connected to a computer is called a *peripheral device*. Devices that send information to the computer are *input devices*; those that receive output from the computer are *output* devices.

Which of the following peripheral devices are input devices? Select the three options that apply.

    a. **Scanner**
    b. Monitor
    c. **Keyboard**
    d. **Microphone**
    e. Headphones
    f. Projector
    g. Speakers

Scanners, keyboards, and microphones are input devices because they send information to the computer.

Level 2 – Working Knowledge of Core Skills

Lesson 8 – Technology Basics

1. In a Windows 10 system, which settings category is used to change your audio output device from speakers to headphones?

   a. System
   b. Devices
   c. Personalization
   d. Apps

   The System category in Settings includes the option for setting the audio output device from speakers to headphones. It also has options for changing display, notifications, and power settings. Devices is used to view, connect, remove, or select hardware and devices connected to your computer, such as Bluetooth and printers. Personalization is used to change the background, color, theme, and lock screen used. Apps is used to view, search, and uninstall the applications on your devices, as well as set default applications and adjust application features.

2. Which one of the following items is <u>NOT</u> customizable in most major web browsers?

   a. Default home page.
   b. The visibility of the Bookmark toolbar.
   c. Cookie and site permissions.
   d. The extensions used to increase browser's functionality.
   e. The settings menu options.

   The Settings menu options are not customizable in most web browsers. All other options are customizable.

3. After creating a new appointment on your calendar, you can customize or adjust all of the following items EXCEPT the _____.

   a. start and end time
   b. list of attendees
   c. reminder notifications
   d. location availability
   e. repeat frequency

   After creating a new appointment, you are able to change the location of the appointment, but not its availability since that is provided by an external source. All other listed options are customizable.

Level 3 – Advanced Understanding of Digital Literacy

Lesson 15 – Technology Basics

Case Study 1

Carmella needs to purchase a new computer. The device needs to be able to run multiple programs at the same time and accommodate both 32-bit and 64-bit software applications. Which three hardware specifications should Carmella pay particular attention to?

 a. Computer Memory (RAM)
 b. GPU (Graphics card)
 c. Platform (OS) bit systems
 d. Processor (CPU) bit size
 e. Bandwidth speed
 f. Types of ports

Carmella needs to pay particular attention to the device's computer memory (RAM), the CPU bit size, and the supported platform operating system (OS) bit size. To support both 32-bit and 64-bit software applications, the device's operating system needs to be a 64-bit system. Running multiple programs simultaneous consumes more RAM.

Case Study 2

When Sarah turned on her laptop, the screen images appeared blurry and distorted. Which of the following actions should Sarah perform <u>first</u>?

 a. Reboot the laptop
 b. Call technical support.
 c. Replace the video card.
 d. Run hardware diagnostics.

Of the options listed, Sarah should first reboot the laptop to see if that solves the problem. If rebooting does not solve the problem, Sarah should begin performing basic troubleshooting steps: define the problem, identify possible causes, determine the most likely cause, apply solutions, and verify resolution of the problem.

IC3 GS6 Component Count and Lesson Timing
ALL LEVELS

Level / Lesson	Component Count				Lesson Content Timing (minutes and hours)								
					Lessons Only				Appendix C			Lessons & Appendix	
	OD	Obj	CS	QQ	CS (6m)	QQ (8m)	Total (m)	Total (hr)	Apply	Total (8m)	Total (hr)	Total (m)	Total (hrs)
LEVEL 1													
Lesson 1	6	21	6	28	36	224	260	4.33	7	56	0.93		5.27
Lesson 2	3	9	3	10	18	80	98	1.63	3	24	0.40	122	2.03
Lesson 3	3	7	4	12	24	96	120	2.00	4	32		152	2.53
Lesson 4	4	12	5	19	30	152	182	3.03	5	40	0.67		3.70
Lesson 5	2	7	3	15	18	120	138	2.30	3	24	.40	16.	2.70
Lesson 6	2	5	2	10	12	80	92	1.53				108	1.80
Lesson 7	4	11	4	16	24	128	152	2.53	4	32	0.53	184	3.07
Level 1 Totals	**24**	**72**	**27**	**110**	**162**	**880**	**1042**	**17.37**	**28.0**	**224.0**	**3.73**	**1266**	**21.10**