

# Computer Fundamentals



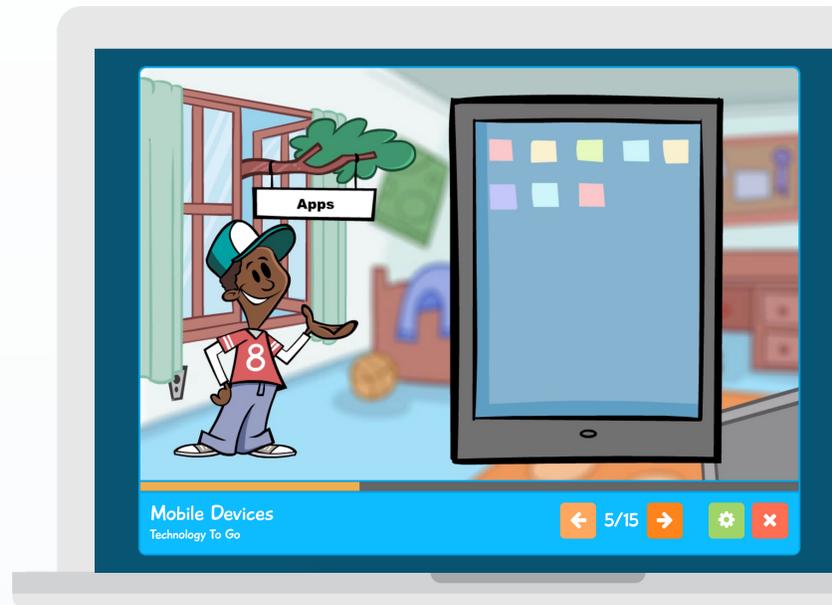
Learning.com’s K-8 computer fundamentals content area develops students’ digital skills and computer proficiency through scaffolded instructional content. The curriculum enhances students’ computer proficiency and empowers them to be adept technology users.

Blending computer science and digital literacy curriculum, students grow their understanding of the fundamental concepts of technology operations; demonstrate the ability to choose, use, and troubleshoot current technologies; and are able to transfer their knowledge to explore emerging technologies.

The interactive learning sequences, collaborative activities, and hands-on projects enable students practice 21st-century skills, like communication and collaboration, within digital interfaces; gain real-world experience creating computational artifacts; develop critical thinking and problem-solving strategies with technology; and cultivate their computing prowess.

## Learning.com’s instructional content includes:

- L** **Lessons:** Self-paced, digital videos with an interactive interface
- AE** **Application Exercises:** Hands-on and collaborative learning opportunities with unplugged options
- Rocket** **Skills Checks:** Pre and post grade-level tests designed to capture student growth
- Q** **Quizzes:** Formative check-ins to inform instructional decisions
- D** **Discussions:** Guided conversations to help students practice communication and articulate their understanding



For a comprehensive look at EasyCode Pillars through the Learning.com platform - including the built-in gradebook, dynamic progress monitoring, and district-wide reporting - contact us for a live demo, [sales@learning.com](mailto:sales@learning.com).

## ABOUT LEARNING.COM

Learning.com’s digital literacy curriculum enables schools to develop students’ technology skills throughout core instruction.

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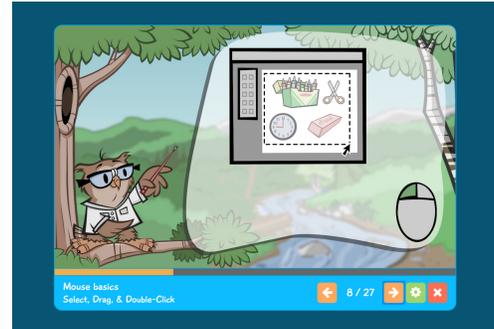
## UNIT 1

## Computer Fundamentals: The Basics

**Big Idea:** Computers, and digital tools more generally, are comprised of both hardware and software components that enable their specific functionality.

### Skills

- Use a mouse to select, drag, and double-click objects on the screen.
- Identify basic computer components such as the processor, keyboard, mouse, monitor, speakers, and printer.
- Classify computer components as either an input or output device.
- Associate pictures and symbols with functions of technology.
- Differentiate between different data storage devices.
- Define stored information as data.



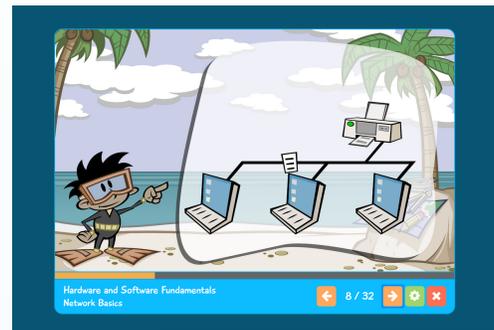
## UNIT 2

## Computer Fundamentals: Hardware

**Big Idea:** Hardware includes the physical components of computers, or the tools the computer uses to function.

### Skills

- Communicate with appropriate terminology in identifying and describing the function of hardware components.
- Use scanners to save copies of copy images or objects, as well as preview and print entire documents or selected pages.
- Define and troubleshoot common computer hardware problems.
- Differentiate between internet and intranet and understand networking concepts, such as LANs, WANs, and file format compatibility.
- Perform research and share resources via networks, and identify intellectual property and ethical use of another's intellectual property.
- Access remote equipment via networks.



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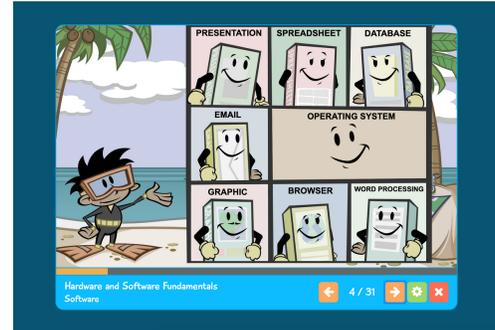
## UNIT 3

## Computer Fundamentals: Software

**Big Idea:** Software represents the directions that tell computer hardware what to do, making a computer a computer.

### Skills

- Use desktop icons, windows and menus to open applications and documents.
- Read file structures, and store, copy, search, retrieve, modify, and delete information.
- Use controls to close, maximize, minimize, restore, and resize windows, as well as controls like the scroll bar.
- Create text boxes and click on urls, radio buttons, check boxes.
- Leverage online help and mouseover text, and navigate dialog boxes, options windows, program menus, and toolbars.
- Identify software groups and select task-appropriate software.



### Skills Post-Check

Estimated Time: 15 Minutes

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## Skills Pre-Check

Estimated Time: 15 Minutes

### UNIT 1

## Computer Fundamentals: Devices & Connectivity

**Big Idea:** The different functions of computing systems model how humans think by inputting, storing, processing, and outputting data.

### Skills

- Define input, output, and processing devices.
- Describe how internal and external parts of computing devices function to form a system.
- Model how computer hardware and software work together as a system to accomplish tasks.
- Optimize for cross-platform connectivity and file format compatibility.
- Understand peripherals and how to connect to them over a network.
- Conceptualize the cloud and cloud computing.
- Model how information is broken down into smaller pieces, transmitted as packets through multiple devices over networks and the Internet, and reassembled at the destination.
- Discuss privacy issues and how personal information can be protected.



## Skills Post-Check

Estimated Time: 15 Minutes

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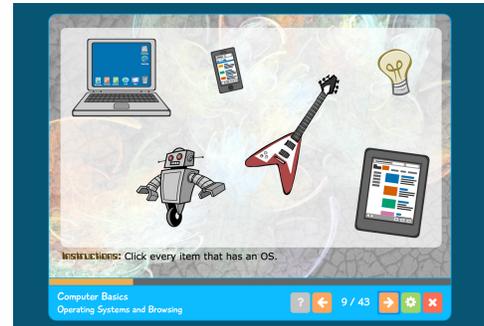
## UNIT 1

## Computer Fundamentals: Fundamentals Review

**Big Idea:** The operating system manages how software accesses and uses hardware in a computer; it fuels what users see and do via computers.

### Skills

- Demonstrate proficiency in the use of computers and applications as well as an understanding of the concepts underlying the hardware, software and connectivity.
- Identify and use a variety of storage media, and provide a rationale for using a certain medium for a specific purpose.
- Differentiate between analog and digital information.
- Define operating system (OS) and various OS groupings, as well as define Graphical User Interface (GUI).
- Identify differences and similarities in OS type.
- Transfer knowledge learned in one OS to another while considering differences in GUI.
- Access and manipulate information from various storage devices.
- Identify successful troubleshooting strategies for hardware issues.



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## UNIT 2

## Computer Fundamentals: Software

**Big Idea:** Though the different types of software are vast, there are often common, transferrable functions between each.

### Skills

- Navigate through program menus in a program and access the help tool.
- Identify successful troubleshooting strategies for software issues.
- Leverage the toolbar for common program tasks and open, create, print, and save documents.
- Differentiate between software types and when to use each.
- Use dialog boxes and common buttons and controls.
- Explain the different tabs and the functions performed within each.
- Define and identify the Application button, contextual menus, Galleries, and Quick Access.
- Insert an illustration into a report.



## UNIT 3

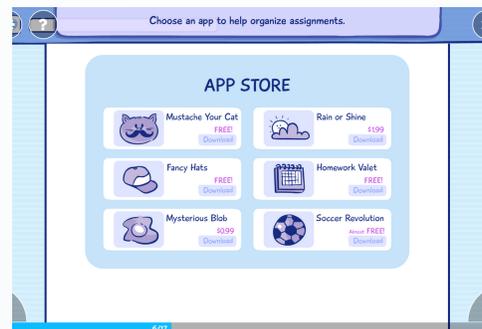
## Computer Fundamentals: Mobile Devices

**Big Idea:** Consumers need to be informed about the applications, and technology more general, that they use – from privacy policies to ad placement or notifications.

### Skills

- Review making in-app purchases and ad-supported apps and limiting push notifications.
- Understand responsibility for reviewing terms and privacy policies of every app.
- Create, access, and send data via a wireless, touchscreen device.
- Recognize that free apps can be useful, but some apps are designed to sell additional features.
- Recall that location and time data are saved with every photo.

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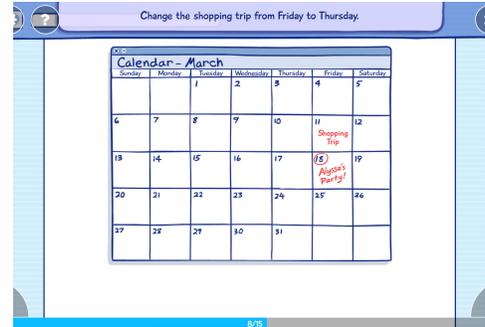
## UNIT 4

## Computer Fundamentals: Network & Computing

**Big Idea:** Networks enable technology users to connect and collaborate with others and find and share resources at scale.

### Skills

- Operate peripheral equipment independently.
- Detail how a network functions, cross-platform connectivity, and compatibility issues.
- Differentiate between LAN and WAN, as well as intranet and Internet.
- Store, locate, and retrieve files from a networked file server.
- Discuss the ethical use of networks.
- Define cloud computing, its benefits, and how it operates.
- Access software programs through the cloud, and collaborate and edit projects at the same time with peers.



### Skills Post-Check

Estimated Time: 15 Minutes

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