A technician needs to have knowledge of what kinds of portable devices?

List the types of portable computers

Why are laptops a popular technology?

List portable handheld devices

What features are offered by PDA's and Smartphones

What are two popular features of laptops?

Common uses of laptops

What is a PDA?

What is the difference between PDA and Smartphone?

What are the connectivity types for smartphones and PDA's?

List common laptop features?

What does a port do?

List some examples of ports

What could have an LED indicator

List examples of input devices

What is required when installing a device?

Where are two places to look to configure devices?

What is the purpose of the Fn key?

What does the LCD cutoff switch do?

What is a base station?

List the two types of base stations

List the differences between a docking station and a port replicator

What does a desktop component have that a laptop component does not?

What do laptop manufactures focus on?

Difference between laptop/desktop motherboards

What does the CPU do?

Summarize a laptop processor

What is power management?

What is the difference between laptop/desktop power supply?

Two methods of power management

List examples expansion devices

Define hot-swappable

Two most commonly used ports for expansion devices

Three types of storage methods

Describe magnetic hard drives

Describe Solid State Drives

Describe optical drive

Describe the difference between R and R/W for optical media

Compare the storage space between CD, DVD and Blu-ray

Examples of devices that connect using a PC Card

Give specifications for PCMCIA standard Type I and an example

Give specifications for PCMCIA standard Type II and an example

Give specifications for PCMCIA standard Type III and an example

Give specifications for PC ExpressCard/34 and an example

Give specifications for PCMCIA standard Type III and an example

Why must a technician know how to configure laptops?

How do you increase the amount of time a laptop can be disconnected from AC power?

Define the ACPI Power Management States

BIOS configuration affect what conditions

What can you control under the "Use Power Options" for in XP/Vista

What are the laptop Power Options for XP if not shutting down

What are the laptop Power Options for Vista if not shutting down

What should all techinicians do before removing components?

What are common components that might need replaced?

What ways do laptops communicate?

Describe the process of analog systems?

Describe the process of digital systems?

List the standards used in 1G of cellular phones?

List the standards used in 2G of cellular phones?

What started in cellular technology with the release of 3G standards?

What do you do to keep a laptop clean and running at optimal conditions?

What are the common procedures when cleaning any parts of a laptop?

What is used to clean the keyboard?

What is used to clean the vents?

What is used to clean the LCD?

What is used to clean the touch pad?

What is used to clean the floppy drive, optical drive, or optical medium?

What guidelines should a technician follow to ensure optimal operating performance?

What should a technician determine when troubleshooting a laptop?

What can cause computer problems?

Identify the steps of the troubleshooting process

6.1.2 Worksheet: Research Laptops, Smartphones, and PDAs

Print and complete this worksheet.

In this worksheet, you will use the Internet, a newspaper, or a local store to gather information, and then enter the specifications for a laptop, smartphone, and PDA onto this worksheet. What type of equipment do you want? What features are important to you?

For example, you may want a laptop that has an 80 GB hard drive and plays DVDs or has built-in wireless capability. You may need a smartphone with Internet access or a PDA that takes pictures.

Shop around, and in the table below list the features and cost for a laptop, smartphone, and PDA.

Equipment	Features	Cost
Laptop Computer		
Smartphone		
PDA		

6.2.3 Worksheet: Complete Docking Stations True or False Questions

Print and complete this worksheet.

True or False?

	Docking stations are usually smaller than port replicators and do not have speakers or PCI slots.
	The exhaust vent is an outlet through which the fan expels hot air from the interior of the docking station.
	A laptop can be secured to a docking station with a key lock.
	The RJ-11 modem port connects a laptop to a cabled local area network.
	The Ethernet port uses an RJ-45 socket to connect a laptop to a standard telephone line.
	The DVI port is a 15-pin socket that allows output to external displays and projectors.
	The Line In connector is a socket used to attach an audio source.
	The eject button releases the peripherals from the docking station.
	The parallel port is a socket used to connect a device such as a printer or a scanner.

6.3.4 Worksheet: Answer Laptop Expansion Questions

Print and complete this worksheet.

1) List three types of PC Cards and the thickness of each.

Type	Thickness

2) Are PC ExpressCards interchangeable with PC cards?

3) What does APM use to control power management?

4) What does ACPI use to control power management?

5) Can you add desktop RAM to a laptop motherboard?

6) Does a desktop processor use more or less power than a laptop processor of the same speed?

7) Does a laptop processor generate more or less heat than a desktop processor?

6.4.1 Worksheet: Match ACPI Standards

Print and complete this worksheet.

Enter the ACPI standard next to the matching power management state description.

S0   S1   S2   S3   S4   S5

ACPI Standard	Power Management States
	The CPU is off, but the RAM is refreshed to maintain the contents.
	The CPU and RAM are off. The contents of RAM have been saved to a temporary file on the hard disk.
	The CPU is not executing instructions; however the CPU and RAM are still receiving power.
	The CPU is off, and the RAM is set to a slow refresh rate.
	The computer is off and any content that has not been saved will be lost.
	The computer is on and all devices are operating at full power.

6.7.2 Worksheet: Research Laptop Problems

Print and complete this worksheet.

Laptops often use proprietary parts. To find information about the replacement parts, you may have to research the web site of the laptop manufacturer.

Before you begin this worksheet, you need to know some information about the laptop.

Your instructor will provide you with the following information:

    Laptop manufacturer:
    Laptop model number:
    Amount of RAM:
    Size of the hard drive:

Use the Internet to locate the web site for the laptop manufacturer. What is the URL for the web site?

Locate the service section of the web site and look for links that focus on your laptop. It is common for web site to allow you to search by the model number. The list below shows common links that you might find:
- FAQs
- WIKIs
- Service notices
- White papers
- Blogs

List the links you found specific to the laptop and include a brief description of the information in that link.

Briefly describe any service notices you found on the web site. A service notice example is a

driver update, a hardware issue, or a recall notice for a laptop component.

Open forums may exist for your laptop. Use an Internet search engine to locate any open forums that focus on your laptop by typing in the name and model of the laptop. Briefly describe the web sites (other than the manufacturer website) that you located.