



## Introduction

Welcome to the world of computer systems servicing! This worksheet is designed to introduce you to the basics of computer hardware and troubleshooting techniques. By the end of this worksheet, you will be able to identify and describe the primary components of a computer system, understand the role of each component in the overall functioning of the computer, and apply basic troubleshooting methods to common computer issues.

## Computer Hardware Components

A computer system consists of several key components, each playing a vital role in the overall functioning of the system. The main components include:

- Central Processing Unit (CPU)
- Motherboard
- Random Access Memory (RAM)
- Hard Drive
- Power Supply

### Activity 1: Matching Game

Match the following computer hardware components with their functions:

Component	Function
CPU	?
Motherboard	?
RAM	?
Hard Drive	?
Power Supply	?

## Answers to Activity 1

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\* CPU: Executes instructions and performs calculations \* Motherboard: Connects all hardware components together \* RAM: Temporary storage for data and applications \* Hard Drive: Permanent storage for the operating system, programs, and data \* Power Supply: Provides power to all components of the computer

## Troubleshooting Techniques

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Troubleshooting is the process of identifying and resolving problems in a computer system. Here are some basic troubleshooting techniques:

- Check for loose connections
- Restart the computer
- Run diagnostic tests
- Check for software updates

### Activity 2: Troubleshooting Scenario

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*A computer won't turn on. What steps would you take to troubleshoot the issue?*

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

## Answers to Activity 2

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1. Check the power cord and ensure it is properly connected 2. Check the power button and ensure it is functioning correctly 3. Check for any signs of physical damage to the computer

## Computer Maintenance

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Regular maintenance is essential to ensure the optimal performance and longevity of a computer system. Here are some basic maintenance tasks:

- Clean dust from the components
- Update software and operating system
- Run disk cleanups

### Activity 3: Maintenance Schedule

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Create a maintenance schedule for a computer system, including the tasks to be performed and the frequency of each task.

Task	Frequency
Clean dust from components	?
Update software and operating system	?
Run disk cleanups	?

## Answers to Activity 3

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\* Clean dust from components: Every 3 months \* Update software and operating system: Every month \* Run disk cleanups: Every week

## Activities and Questions

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1. What is the primary function of the CPU?

1. a) To store data
2. b) To execute instructions and perform calculations
3. c) To provide power to the computer
4. d) To connect hardware components together

Answer: b) To execute instructions and perform calculations

## More Activities and Questions

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2. What is the difference between RAM and ROM?

1. a) RAM is permanent storage, while ROM is temporary storage
2. b) RAM is temporary storage, while ROM is permanent storage
3. c) RAM is used for input, while ROM is used for output
4. d) RAM is used for output, while ROM is used for input

Answer: b) RAM is temporary storage, while ROM is permanent storage

## Even More Activities and Questions

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3. What is the purpose of a firewall?

1. a) To protect the computer from viruses
2. b) To protect the computer from malware
3. c) To protect the computer from unauthorized access
4. d) To protect the computer from physical damage

Answer: c) To protect the computer from unauthorized access

## Glossary

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\* CPU: Central Processing Unit \* Motherboard: The main circuit board of the computer \* RAM: Random Access Memory \* Hard Drive: Permanent storage for the operating system, programs, and data \* Power Supply: Provides power to all components of the computer \* Firewall: A security system that monitors and controls incoming and outgoing network traffic

## Resources

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\* Computer Hardware Diagrams \* Troubleshooting Guide \* Computer Simulation Software \* Online Resources

## Assessment

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1. Quiz: Computer Hardware Components 2. Quiz: Troubleshooting Techniques 3. Project: Create a Maintenance Schedule for a Computer System

## Conclusion

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Congratulations! You have completed the introduction to basic computer systems servicing. You now have a basic understanding of computer hardware components, troubleshooting techniques, and computer maintenance. Remember to practice what you have learned and continue to explore the world of computer systems servicing.

