



IT Midterm Study Guide - Grade 6

This guide will help you prepare for your exam by outlining the key topics from "Unit 1, Lesson 1: Changes and Improvements in Technology".

1. The Troubleshooting Process

When you have a problem with technology, you can troubleshoot to solve it. It is important to know the five steps in the correct order.

- **Step 1:** Identify the problem.
- **Step 2:** Think of a possible cause of the problem.
- **Step 3:** Make a plan to solve the problem.
- **Step 4:** Test the possible cause to see if you are right.
- **Step 5:** Make sure everything works correctly.

Study Tip: Memorize the order of these five steps. For each step, try to think of a real-life example, like figuring out why a video game isn't loading.

2. Technology Careers

You should be familiar with different technology-related careers and what each professional does.

- **Robotics engineer:** Builds machines that can go where people cannot.
- **E-commerce specialist:** Uses data to see what people are buying online.
- **Online security expert:** Keeps computer systems safe.
- **Automation expert:** Makes machines and systems that work by themselves.

Study Tip: Use flashcards with the career on one side and the description on the other to test your knowledge.

3. Human-Computer Interaction (HCI)

HCI is about how people and computers work together. When designers and developers look at HCI, they are mostly thinking about the

user.

- **Three important parts of HCI are:**
 - The technology should be **available** for everyone.
 - It should have a **good** design.
 - It should be **easy** to learn.

Study Tip: Think about your favorite app or device. Why is it easy for you to use? This will help you understand the goals of HCI.

4. Technology in Our Lives

- **The Invention Process:** When improving an invention, like a robot-controlled toy car, driving it around to see how it works is part of the **testing and making it a better** step.
- **Online Safety:** You must be careful when you shop online because some websites are fake. You also need to be careful when looking for information online.
- **Modern Tools:** Technology tools like **e-books** allow you to carry an entire library in a single device.
- **Communication:** Technology has significantly changed how people communicate. You should be able to give examples of this change.

Study Tip: For the exam, be ready to provide at least two examples of how technology has changed communication (e.g., social media, video calls, email).