

The Great Digital Highway!

Windroid Academy Grade 6 ICT | ICT by Nimanka

Welcome to the digital world! Have you ever wondered how a message travels from your tablet all the way to your friend's phone? Today, we are going to explore the magic of networks, web browsers, artificial intelligence, and how to stay safe online.

1. What is a Computer Network?

Imagine two kids talking to each other using two tin cans connected by a string. When one speaks, the sound travels down the string to the other person.

A **Computer Network** works the exact same way! It is simply two or more computers connected together so they can talk and share things like files, games, or a single printer.

✨ **Fun Fact:** Your school computer lab is a network! If you draw a picture of a cute cat on one computer, the network allows you to send that picture to the teacher's computer instantly.



2. What is the Internet?

If a regular network is like the tin cans and string, the **Internet** is like millions of strings connecting every house, school, and country in the whole world!

The Internet is a massive, global "**network of networks**." It connects millions of computers globally, acting like a giant digital superhighway. When you play an online game with someone in another country, your computer's data is traveling on that superhighway!

Did you know?

The Internet isn't just in the air! Huge, thick cables run under the real oceans to connect continents together, letting Sri Lanka talk to Australia or Europe in a split second!

3. What Do You Need to Connect? 🖱️

You can't just jump onto the digital superhighway without the right gear. To connect to the internet, you need four magical items:

📱 1. A Device

A laptop, desktop computer, smartphone, or tablet.

📶 2. A Connection

A wired **Ethernet cable** that plugs into the wall, or an invisible wireless signal called **Wi-Fi**.

🏠 3. An ISP

Internet Service Provider: The company giving you access (like SLT, Dialog, or Mobitel). They are the toll booth for the highway.

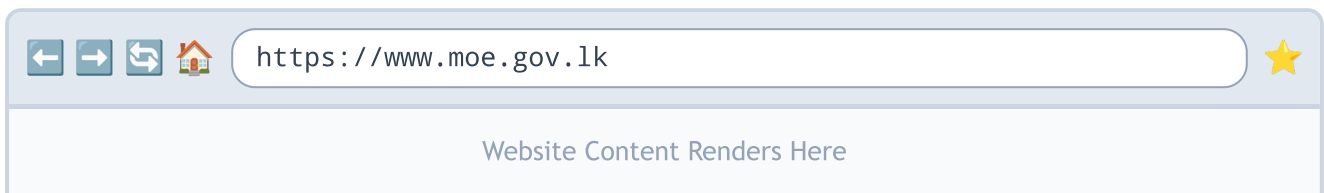
🌐 4. A Web Browser

The special software application you use to view websites and travel the web.

4. Exploring the Web Browser (Your Digital Car) 🚗

Your **Web Browser** is the software installed on your device that you use to "drive" around the internet. Popular examples include **Google Chrome**, **Apple Safari**, and **Mozilla Firefox**.

When you open your browser, you will see a control panel with some very important buttons. Let's look at a map of your browser's controls:



- **Address Bar:** The long white box. Type the exact website address (URL) here.
- **Back (←) & Forward (→):** Go back to the page you were just on, or forward again.
- **Refresh/Reload (↻):** Reloads the page if it gets stuck or needs updating.
- **Home (🏠):** Takes you directly to your favorite starting page.
- **History:** A menu that keeps a list of every website you have visited! Great for finding a page you accidentally closed.
- **Bookmarks/Favorites (★):** Saves a website so you don't have to type it out next time.

5. The Search Engine (Your Digital Map)

If the browser is your car, the **Search Engine** is your map. It is a specific website you visit *inside* your browser to help you find answers to questions. Popular examples include **Google Search**, **Bing**, and **Yahoo!**.

Search Engine Secrets

Knowing how to use a search engine is like having a digital superpower. Here are the golden rules for getting exactly what you want:

Trick	How to use it	Example
Be Specific	Use multiple keywords instead of just one broad word.	Instead of <i>Space</i> , search for <i>Planets in our solar system</i> .
Quotation Marks (" ")	Put quotes around a phrase to force the search engine to find those exact words grouped together.	<i>"History of Sri Lanka"</i>
The Minus Sign (-)	Put a minus sign right in front of a word you want to hide from your results.	<i>Jaguar -car</i> (Shows the jungle animal, but hides the car brand).
Check the Source	Websites ending in .edu (education) or .gov (government) usually have the most trustworthy facts.	<i>www.nie.lk</i> or <i>moe.gov.lk</i>

6. Say Hello to AI (Artificial Intelligence)

When you search for things on the internet today, you might meet an **AI**. Artificial Intelligence is a super-smart computer program designed to think, learn, and help you like a digital robot assistant.

Instead of just giving you a list of website links like a regular search engine, AI can actually read the information and talk back to you in sentences! We use AI when we ask Siri or Google Assistant a question with our voice.

The Golden Rule of AI: AI is like a very smart friend, but sometimes it makes mistakes (called "hallucinations"). You should *never* let AI do your homework for you, and always double-check its facts using a real educational website!

7. The Key to the Castle: Super Strong Passwords

If your online accounts are castles, your password is the lock. Hackers use computer programs to guess thousands of words a second. A simple password like *password123* is like leaving your front door wide open!

Here is how to build a password that is almost impossible for a computer to guess:

1. Start with a Passphrase (Longer is Stronger)

Instead of one random word, pick a silly, secret sentence. A password should be at least 12 characters long.

Example: MyblueBicyclejumps! is much stronger than *Blue123*.

2. Mix It Up

Your password must include a mix of uppercase letters (A), lowercase letters (a), numbers (1), and symbols (@, #, \$).

3. Remove Personal Clues

Never use things people can easily guess. Do not use your real name, your birthday, your school's name, or a pet's name.

8. Cyber Safety: The 3 Golden Rules

The internet is amazing, but just like crossing a real street, you need to look both ways and stay safe.

Rule 1: Keep it Secret!

Never share your real name, home address, phone number, school name, or passwords online without asking a parent or teacher.

Rule 2: Stranger Danger!

The internet is full of pretend profiles. Someone saying they are a 12-year-old kid might actually be an adult stranger. Never agree to meet someone you only know from the internet.

Rule 3: The Grandma Test!

Before you post a comment or a picture, ask yourself: *"Would I want my Grandma to*