How does the Internet Work?

### The answer to all the questions can be found in the listed videos. I suggest reading through all the questions first so that you know what answers you’re looking for, then watching videos that sound like they will answer the question you’re trying to answer. **Answers must be in complete sentences to receive credit.**

Internet Infrastructure as Fast as Possible - <https://youtu.be/n71TUnTNdw8>

DNS as Fast as Possible - <https://youtu.be/Rck3BALhI5c>

Internet vs Web as Fast as Possible - <https://youtu.be/laepk9KrAZY>

Internet Protocol - IPv4 vs IPv6 as Fast as Possible - <https://youtu.be/aor29pGhlFE>

Routers vs. Switches vs. Access Points - And More - <https://youtu.be/Vc16CCAAz7Q>

What is TCP/IP? - <https://youtu.be/PpsEaqJV_A0>

HTML5 as Fast as Possible - <https://youtu.be/IsXEVQRaTX8>

Bits vs Bytes as Fast as Possible - <https://youtu.be/Dnd28lQHquU>

How Do URLs Work? - <https://youtu.be/OvF_pnJ6zrY>

# Questions:

1. What is the difference between bits and bytes and what are they used for?

A bit is equal to a one or a zero. A byte has 8 bits and can represent characters.

1. Why is HTML5 the new standard?

For internet streaming, and also to be better supported on mobile devices.

1. What is the difference between the Internet and the Web?

Internet: interconnected computers around the world

Web: a virtual space where content is stored.

1. What is the role of an ISP?

Brings the connection to your house.

1. What is a modem?

Processes signal from you Isp and interfaces with your home network.

1. What is a browser?

Allows access to the worldwide web in a GUI.

1. What is the difference between guided and unguided media?

Guided Media uses a physical path and Unguided uses transmissions through air.

1. Summarize how the internet was developed.

A huge series of interconnected computers, servers, routers, etc…

1. What is a web server and what purpose does it serve?

Stores websites on the internet.

1. What is a router and what purpose does it serve?

Creates a LAN with each device assigned its own local Ip address.

1. What are packets and what purpose do they serve?

Little combinations of data that are then reassembled at your computer.

1. What are IP addresses and what purpose do they serve?

An address assigned to your computer so that packets on the internet can be delivered to the correct computer.

1. What is Intranet and what purpose does it serve?

A private network contained in an enterprise usually made up of several LANs.

1. What is bandwidth?

Range of frequencies within a band

1. What is a firewall?

A preventative program that stops Malicious Malware from being downloaded.

1. What is the “backbone” (Internet backbone service providers) and what purpose does it serve?

HTML, it makes websites possible

1. What is the purpose of a domain name?

To categorize websites in the internet.

1. Match the parts of the URL to its name:

Beginning, Domain, path,

1. What is a static IP address?

Stays the same

1. What is a dynamic IP address?

A temporary Ip address assigned to a computing device.

1. What is the difference between IPv4 and IPv6?

Ipv4: only 4billion unique addresses

IPV6: allows 34 trillion trillion trillion addresses.

1. What is the function of a DNS?

To Translate Domain Names to Ip addresses

1. What does HTTP stand for and how is it used?

Hyper Text Transfer Protocol to go to websites

1. What does HTTPS stand for and how is it used?

Hyper Text Transfer Protocol Secure to go to websites securely.

1. What does FTP stand for and how is it used?

File Transfer Protocol to transfer files

1. What does SMTP stand for and how is it used?

Simple Mail Transfer Protocol to transfer mail

1. What does TCP/IP stand for and how is it used?

TCP: Transmission Control Protocol

IP: Internet Protocol.

Both of these are used to simplify and control the Internet transmission.