**Day 1 – Domain Names & IP Addresses**

**Warm-Up Activity**

1. Go to the web page: <https://centralops.net/co/>
2. Select the “NsLookup” tool and search for the following domains:
   1. [www.peelschools.org](http://www.peelschools.org)
   2. some of your favorite / popular domains
3. Try the “Traceroute” tool for the same domains
   1. What is the purpose of this tool?
4. Try the “Ping” tool for the same domains
   1. What is the purpose of this tool?
5. Try the “Whois” tool for [www.peelschools.org](http://www.peelschools.org)
   1. Who is the owner of this domain?
   2. Who is the registrar of this domain?
   3. When does the registration expire?

**Presentation Notes: Client-Server Model**

1. What is a client?

An app that runs on your phone or PC

* 1. Where does it run?

On the PC

* 1. What does it do?

-Provides the interface and displays data. But it does not control data

* 1. List some examples of a client.

-Chrome

1. What is a server?
   1. Where does it run?
   * -Software that runs on hardware owned by   
     the app company
   1. What does it do?

-It sends and receives data between multiple clients  
using internet connections

* 1. List some examples of a server.
* Online Games, Banks

1. Explain why you need both a client and a server to complete an internet application?

You need both because one is useless without the other. One provides interface which means display and server sends and receives the data(information)

**Presentation Notes: Domain Names & IP Addresses**

1. What is a Domain Name?
   1. What is it used for?

-An ID for a service on the internet

* 1. Is it for human or computer use?

-It is a human readable format

* 1. Provide an example of a Domain Name.

-**www.peelschools.org**

1. What is a IP Address?
   1. What does IP stand for?

-Internet Protocol

* 1. What is it used for?

-It is used to route messages and data   
between computers (clients and servers)

* 1. Is it for human or computer use?\

-Computer Use (Computers read numbers)

* 1. Provide an example of an IP Address.

-**67.21.152.99**

1. Who can register a domain name?

Domain names can be registered by companies and individuals

1. Who controls domain names for countries (i.e. .CA, .UK, etc.)?

Government Agencies Control the Registration of Names

1. Who controls domain names like .COM, .ORG, etc.?

Network Solutions

1. Who owns and controls IP Addresses?

IP Addresses are owned by large Internet Companies

1. If you own a Domain Name does that mean you also own an IP Address?

No, you have to go to Network Solutions or a middleman such as Godaddy.com

1. What services do *middleman* companies like GoDaddy.com provide?

You could go directly to Network Solutions. But most people go to Godaddy.com to make it easier to give paper work and provide a IP address

1. What are some issues and features related to IPv4?

* 4 numbers, 64 bits (2^64 combinations)
* Issues: Limited Speed & Limited Number of Connections

1. What are some issues and features related to IPv6?

* 8 alpha –numerics, 128 bits (2^128 combinations)
* Advantages: Higher Speed & Unlimited Number of Connections

1. What are some issues and features related to 5G Networks?

**Day 2 – Internet Services (Software)**

Questions t.b.d.