# Computers 10 – Networks and WiFi

Your assignment is to make a 1 page (double-sided) brochure in Publisher that explains how to set up a home network.

* Connecting Ethernet cables to the router/pc/internet/etc.
* Configuring your router’s wifi settings (network name/password/security etc.)
* Wiring & crimping an Ethernet cable
* Show the basics of how IP addresses get assigned to different devices

## Making an Ethernet Cable

Answer the following questions:

* What is the purpose of the white boots?
* How do you strip the cord?
* How do you know what order the wires go in?
* What does crimping the cable do/mean?
* How do you test if your cable will work properly?

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| Vocab | Definition |
| Cable | The entire set of wires and the plastic shielding |
| Wire | One of the 8 coloured wires that is inside the plastic shielding |
| Crimper | The tool that squishes the pins into the wires and attaches the connector. |
| Connector | The clear plastic bit that hooks up to the PC/Router |
| Boot | The white plastic cover that protects the connector. Especially the plastic tab that holds the cable attached to the PC/router. That thing breaks off easily. |

## Routers

* How do I log in?
* What wifi settings should I use?   
  (Network name, password, security, etc.)
* What is the difference between the LAN ports and the WAN port?

## IP Addresses

* What is the purpose of an IP Address in the network?
* What is the difference between an “internal” and an “external” ip?
* Explain the steps to connect your phone to a new wifi network.  
  Take a 2-4 screenshots of the wifi settings panel showing:
  + how you connected
  + the IP address your phone got
  + etc.
* Draw a diagram showing your network connections using a network diagram maker, such as: [draw.io](https://www.draw.io/)
  + Create New Diagram
  + Choose one of the formats from the Network category.
  + Show the following information on the network diagram
    - Your phones (with their IPs)
    - Your PC (with its IP)
    - Your router (with its internal AND external IP addresses)
    - Show the difference between wireless connections and wired connections