Wireless standards

Wi-fi networks

**Many of standards have been developed to ensure that wireless devides can communicate**

They specify the RF spectrum used, data rates, how the info is transmitted…

IEEE = Institute of Electrical and Electronics Engineers

The IEEE 802.11 standart governs the WLAN enviroment

They are:

Use the 2.4GHz and 5GHz frequency bands

Another organization known as the wifi alliance is responsible for testing wireless LAN devices from different manufacturers

**WIFI Logo on the device means that this device meats standards and should operate with other devices that use the same standard**

Wireless settings

Wireless routers using the 802.11 standards have multiple settngs that have to be configured  
 they include:

Network mode

**Determines the type of technology that must be supported**

(802.11b, 802.11g or mixed)

Network name (SSID)

**Used to identify the WLAN**

All devices that wish to participate in the WLAN must have the same SSID

Standard channel

**Specifies the channel over which communication will occur**

By default this is set to auto to allow the access point to determine the optimum channel to use

SSID broadcast

**Determines if the SSID will broadcast to all devices within range**

By default its on enable

Network mode

802.11 protocol can provide increased throughput based on the wireless network enviroment

If **all devices connect with the same** 802.11, **maximum speed can be obtained**

If access point is configurated to accept only one 802.11, devices that do not use that cannot connect to the access point

**Mixed mode** can include devices that use any of the existing wifi standards

**Easy acces but not latest standards**

**When building WLAN its important to connect to appropriate WLAN that is done using the SSID**

Its case-sensitive, alphabetic string of max 32 characters

It tells the wireless stations (STAs) which WLAN they belong to and with who they can communicate with

**Wireless routers usually broadcast their SSIDs by default when its dissabled you need to manually enter the SSID on wireless devices**