

# Designing a School Network

## Overview.

You have been hired to design the network infrastructure of a school. The school consists of two separate building joined together by a commons and large gym. The building are called West and East building.

The west building has two floors with 14 classrooms rooms on each floor plus a library on the main floor. The east building also has two floors with 7 classrooms on each floor. The West building also has the school office.

The West building rooms are labeled W101, W102, W103, ...W114, W201, W202, W211, ...W214, W100( Library) & Office. The east building rooms are labeled E101, E102, ... E107, E201, E202, ... E207

There are three computer labs; W211, W213 and E206. Each of these will have 32 computers. The library will have 26 computers, the office 8 computers. Each classroom one computer.

There will also be wireless access points in the commons, library, gym, and each floor of each building.

There can be a wiring closet in each building and fibre to connect the buildings together. The school will connect to the 'cloud' via a router in the east building.

The design must allow for expansion.

## Tasks

- a. Create an equipment purchase list, this will include how many computers, how many switches, wireless access points, routers, etc.
- b. Create an equipment 'labeling plan' so it will be easy to identify the equipment and location by the name assigned to it.
- c. Create a plan configure diagram (use packet tracer) for the entire network.  
Note: for rooms with multiple computers (e.g. computer labs) you do not have to put in every computer, just enough to show the naming plan.