

STANDARD HIGH SCHOOL - ZZANA

COMPUTER CARE AND SAFETY

COMPUTERS AND LAB CARE

A computer laboratory is a special room set aside and prepared specifically for safe installation and use of computers.

In schools, a computer laboratory provides a safe conducive environment for teaching and learning of computer studies and ICT related disciplines.

The computer laboratory Rules and Regulations

1. Computer components should be kept dust-free. Avoid smoking and exposing computers to dust.
2. Never try to remove the cover on your computer or touch inside the system unit. There are many sensitive components. Instead, take it to a qualified technician.
3. Keep all liquids and food items away from your computer. Liquids and food crumbs can cause rusting and corrosion and damage electronic circuits. Also, mixing liquids and electronic components can cause serious electrical shock!
4. Never use your computer during a storm. The computer is connected to electricity and that means that lightning could be conducted to the computer.
5. Physically, be careful, avoid knocking and dropping any hardware to the ground as this could cause any of the delicate components to break or be damaged and stop working.
6. Proper shut down of computers should be followed to avoid disk and system failure (avoid abrupt switching off)
7. Be careful when using the internet. Do not accept downloads from Internet sites that you don't know and trust. And never open an email attachment unless you know and trust the person who sent it.
8. Avoid making hardware connections to the motherboard when the computer is on. E.g. keyboard, monitor and mouse connections.
9. Don't bring magnetic devices to the lab. The computer has magnetic disks which can be spoilt if they come near other magnetic fields.
10. Handle delicate storage devices with care. Don't touch the inner surface of Compact disks and Floppy disks. Safely remove Flash disks from the system.

11. Avoid excessively bright and flickering computer monitors. The brightness of the computer monitors should be adjusted to avoid eye strain.
12. Always sit upright to avoid muscle pains and back aches caused by poor sitting posture.
13. Do not use any school computer facility to violate the terms of any software license agreement, or copyright provisions.
14. Do not copy, rename, change or delete files or information belonging to some other user.
15. Do not deliberately use computing facilities to harass others, or to interfere with their work (for example to send abusive, threatening or repetitive messages to a user or users).
16. Do not attempt to modify system facilities, illegally obtain extra resources or degrade the performance of any system.

MANAGEMENT OF COMPUTERS AND THEIR ENVIRONMENTS

After the establishment of the computer laboratory, a number of precautions should be observed to provide a safe conducive environment for teaching and learning as seen below:

1. **Avoid direct sunlight** and high Temperatures that may damage hardware components.
2. Always use surge protectors, **Uninterruptible Power supply (UPS)** or voltage stabilizers to ensure **steady power supply** to safeguard their system.
3. Protection against fires. A computer room should have **fire extinguishers** of carbon dioxide but not water or powder.
4. **Proper cable installation** and placement. Cables should be preferably along walls, avoiding danger of exposing the use to electric shock
5. **Burglar proofing** avoid unauthorized access to computer room. Fit strong locks, doors, windows and roofing. Security should be good around computer room to avoid thefts.
6. **Overcrowding** of either machines or people should be avoided.
7. Always install **lightening conductors** to the computer laboratory to protect the machines and the users of the computers.
8. **Ventilation** should be good. Good aeration enables the computer to cool and

hence avoids overheating

9. Minimize **Electrical noise** / interferences in the computer environment.
10. **Dust control**. When setting up the computer laboratory, consider a location away from excessive dust.
11. The room should have special curtains and computers should remain covered using dust covers when not in use.
12. **Damp Control**: Humidity must be regulated in the computer laboratory to remain at an optimum 50%.
13. A computer room should have **enough light** avoid eyestrain, and headaches.
14. **Radiation filter screens** should be fitted to reduce the light that reaches the eye.
15. **Standard furniture**: The table on which a computer is placed must be strong and wide enough to bear the weight and accommodate all the peripheral devices

MAINTENANCE OF COMPUTERS IN GOOD WORKING CONDITIONS

The following measures should always be carried out to keep computers in good working conditions:

- i. **Regular servicing** should be done for hardware and software updates to ensure proper working conditions of the computers
- ii. Computers require **special cleaning** even on the inside including hardware parts such as the mouse and keyboard to perform correctly.
- iii. Always use **optimizer utilities** that modify programs to make computers to improve/ boost performance and make them to run more quickly.
- iv. Always use and regularly updated **antivirus software**. Viruses and worms are horrible computer-unfriendly programs that can crash your system and cause damage.
- v. Avoid **Installation Marathons** Sometimes; installing a new program can cause conflicts within your system.
- vi. It is therefore advisable to use the computer long enough to see how your system responds to the installation before installing the next program.
- vii. Carry out **Disk Defragmentation** when necessary. Disk Defragmentation is the process in which scattered pieces of individual files and free space are

- reorganized and stored in an adjacent manner (next to each other) on the disk
- viii. Remove programs you no longer use

Safety precautions that should be observed to provide a conducive working environment for Hardware, Software and Human ware in a computer laboratory

For Hardware safety,

1. Keep computer components dust free.
2. Keep away liquids and food items to prevent hardware corrosion.
3. Don't drop hardware to ground (handle with care).
4. Don't make hardware connections to motherboard when computer is on.
5. Don't bring magnetic devices to the laboratory.
6. Avoid direct sunlight and high temperatures in the laboratory.
7. Install Fire extinguishers that can be used in case of a fire outbreak.
8. Do burglar proofing to keep all devices and components secure from thieves.
9. Install lightening conductors to guard against destruction by lightening.
10. Avoid overcrowding of both hardware and humanware in the laboratory.
11. Ensure Proper ventilation of the building in order to have good aeration.
12. Minimize Electrical Noise in the Computer environment.
13. Humidity should be regulated to an optimum 50%
14. Use standard furniture that can accommodate and support all hardware components.
15. Do regular servicing of computer components by qualified technicians.
16. Always use surge protectors, Uninterruptible Power supply (UPS) or voltage stabilizers to ensure steady power supply to safeguard the computer system.

For Software safety,

17. Install antivirus software to guard against malware and viruses.
18. Use optimizers that keep the computer performance to be as good as expected.
19. Often Defragment hard disks on your computer. Defragmentation is the process in which scattered pieces of individual files and free space on a disk are reorganized in an adjacent manner, to ensure easy and quick access of files by operating

system.

20. Keep all your software updated in order to achieve the best performance.

21. Avoid software installation marathons. Use your computer long enough to see how your system responds to a new installation before loading the next program.

For Humanware safety,

22. Avoid using computers during a storm or lightening to avoid the hazard.

23. Cables should be installed and placed properly, to avoid danger of exposing the users to electric shock.

24. Avoid too bright and flickering computer screen that can lead to eye sight damage.

25. Computer lab should have enough light to avoid eye strain.

26. Always sit upright to avoid muscle pains and back aches caused by poor sitting posture.

27. Usually take frequent short breaks off from computer work to relax before resuming to reduce work-related physical strain.