# UNIT 8
Workstation Health and Safety

Picture 8

Learning Outcomes:

By the end of the lesson, the students are expected to be able to use appropriate English to:

- list computer and safety problems.

- undertand rules for using a company computer and computer laboratory.

- write a set of rules or procedures for using computer at computer laboratory

Exercise 1: Work in groups. Make a list of computer health and safety problems that you have ever found at our computer laboratory or while you are studying at it.

Exercise 2: Look at the picture below. What computer health and safety issues that you see? Write down as many issues as possible.
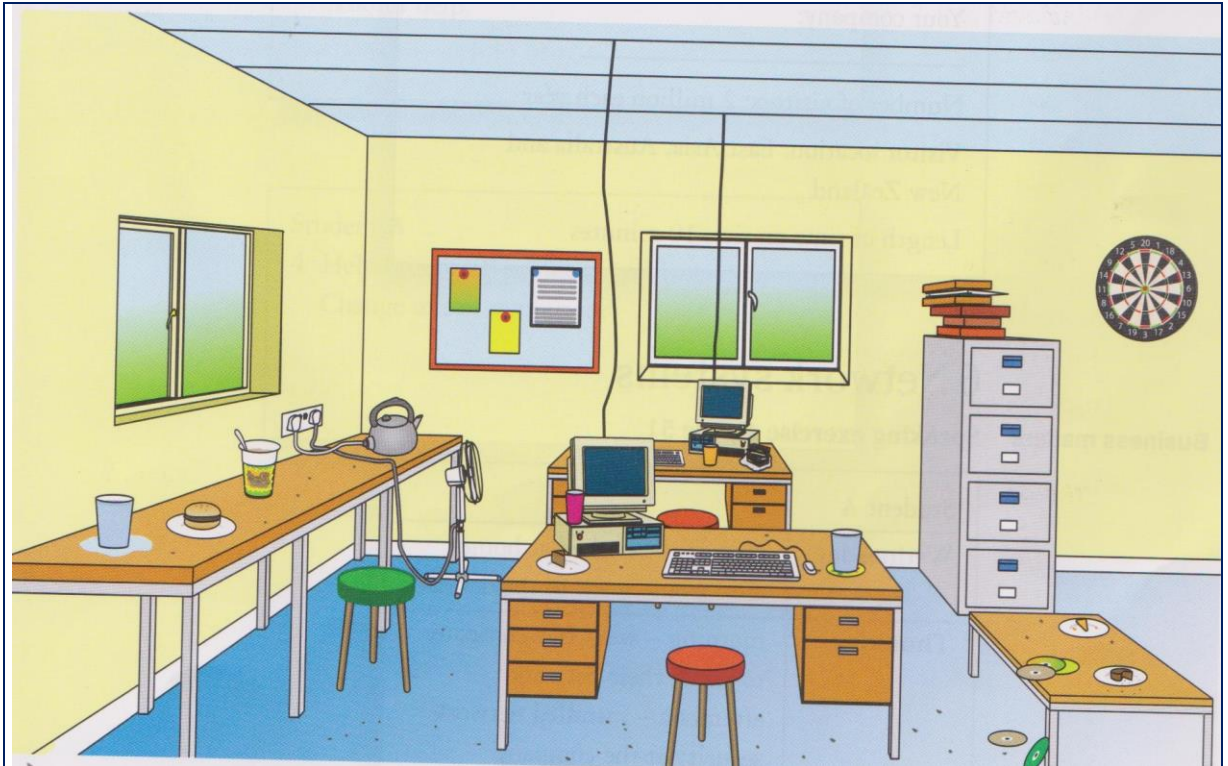
1.   _____.

2.   _____.

3.   _____.

4.   _____.

5.   _____.

Exercise 3: Look at these pictures. Match pictures A-F to dangers 1-6 in the leaflet below. Then match dangers 1-6 to the pieces of advice a-f.
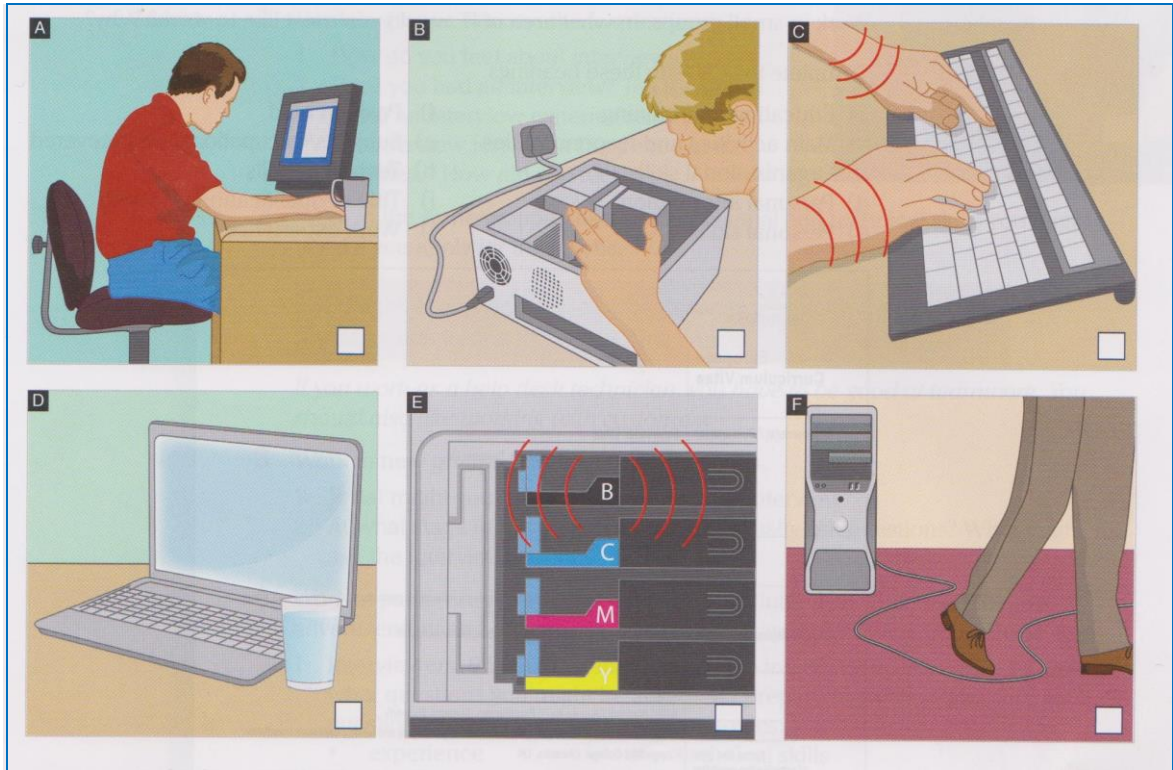
Safety at Work	
Dangers ✖	**Advice √**
1. backache	a. Move the cables.
2. electric shock	b. Don't bend your back while sitting at a desk.
3. RSI (Repetitive Strain Injury)	c. Let it cool down.
4. trips and fall	d. Unplug.
5. short circuit	e. Keep your wrists straight.
6. burns	f. Don't spill your drink.

Exercise 4: Read the following text and answer the questions.

Computer ergonomics

There are a number of health and safety problems that may result from continuous use of computers.

- Typing constantly at high speed may provoke repetitive strain injury or RSI, which causes pain in the neck, arms, wrists, hands and fingers
- Bad work postures and sitting in uncomfortable chairs may cause backache and stress
- Looking at the screen for long periods of time, and lights reflecting off the screen, can cause headaches and eye strain, pain and fatigue of the eyes.
- Cathode Ray Tube monitors can emit electromagnetic radiation which can be dangerous 10 health.

The study of how people interact safely and efficiently with machines and their work conditions is called ergonomics. In computing, ergonomics is about designing computer facilities so they are safe and comfortable. Here are a few tips:

- Get an adjustable chair so you can change its height and angle
- Make sure your feet rest firmly on the ground or on a foot rest.
- Ensure you have enough leg room under the desk.
- Put the monitor at eye level or just below
- Sit at arms' length from the monitor (40-80 cm). Don't sit near the sides or back of CRT monitors; or use LCD screens, which are free from radiation.
- Use a document holder, in line with the screen, to reduce awkward neck and eye movements between the document and the screen
- Position the keyboard at the same height as your elbows, with your arms parallel to the work surface. Try to keep your wrists straight and flat when typing.
- Take regular breaks from the computer and look away from the screen at regular intervals

Electronic rubbish

Irresponsible disposal of electronic waste, from old computers and mobile phones to hi-fi and video systems, can cause severe environmental and public health problems. For example, children or workers who come into contact with the toxic components of electronic products may suffer from skin and breathing problems.

- We should recycle or treat ICT equipment (e.g. plastics from mobiles could be used to make pens and rulers).
- Manufacturers should pay to finance recycling programs.

The risks of using mobiles and in-car computers

Frequent use of mobile phones has been the cause of concern and there is ongoing research into whether radiation emitted causes health problems.

A serious risk is the use of mobiles and navigation systems in cars; this can distract the driver and cause accidents.

- Don't use your mobile while driving

Another health problem is Internet addiction, including obsessive game playing, gambling, ctc.

- If you are an Internet addict, you should ask for help from specialists.

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Complete the sentences with words from the text above.

1. Experts believe the best way to reduce musculoskeletal injuries is through _____ - designing jobs to fit people instead of making people fit the job. It can mean everything from adjusting the height of a desk to buying a new chair or overhauling a production line.

2. The Safetype ergonomic keyboard may look strange, but its makers claim that it can prevent _____ or RSI.

3. Visual problems, such as _____ and irritation, are often reported by computer users. Causes of these problems include glare, poor lighting, and focusing the eyes on the screen for a prolonged period.

4. Some companies have begun to test ways to _____ and dispose of _____. For example, Epson Portland sponsored an electronics collection day this year on Earth Day.

5. Road safety campaigners say motorists using _____ while driving are six time more likely to crash.

6. When a person is spending so much time on the Internet that their lives are affected negatively, they are suffering from _____.

Exercise 5: Label this diagram with the advice 1-8.

1.   There should be clearance under the work surface.

2.   You should have your feet flat on the floor.

3.   Make sure your forearms and hands are in a straight line.

4.   Your lower back should be supported.

5.   Your screen should be positioned to avoid reflected glare.

6.   Keep your shoulders relaxed.

7.   You should have your thighs tilted slightly.

8.   Make sure the top of the screen is at or slightly below eye level.

Read about expressions used for giving advice and declaring prohibition.

Giving Advice	
A strong recommendation (we use this to give advice)	You <u>should keep</u> your shoulder relaxed while you are working on your computer.
Declaring Prohibition	
A rule or requirement (we use this when it is necessary not to do this or to tell someone not to do something).	You <u>must not</u> put your glass on the keybord.
	You are <u>not allowed/permitted</u> to touch these cable when your hand is wet.

Exercise 6: Listen carefully then complete the sentences below.

1. You musn't _____.

2. You musn't _____.

3. You aren't _____ __.

4. We aren't _____.

5. You shouldn't _____.

Exercise 7: Go back to exercise 3. Write sentences using the above expression.

Exercise 8: Read this list of rules for using a company computer. Which ones do you follow? Why?

COMPUTER
DOS AND DON'T

Things you should do:

- Run Scandisk regularly to check and repair your file systems.
- Connect all peripherals before you switch the computer on.
- Keep your keyboard and screen clean.
- Keep CDs and DVDs in covers and hold them by the edge when using.
- Always shut down your laptop computer first if you need to move it.
- Secure your hardware from sudden power surges.

Things you should NOT do:

- Do not disconnect the keyboard, mouse, monitor, printer, or any peripheral if the PC is on.
- Do not eat food or drink near the keyboard and computer.
- Do not blow smoke over your PC.
- Do not move or lift your desktop computer when it is on.
- Do not clean your hardware with a household polish or cleaner.
- Do not turn your computer off for lunch breaks.
- Do not load unauthorized software.

Exercise 9: Write down the computer rules/regulations that you know regarding the use of the computer and the computer laboratory at your college. Use the expressions you have learned on exercise 6-8.

Exercise 10: Read the following text about Exercise at your Computer. Answer the questions that follows.

Neck/Shoulders

Neck Rotation: Slowly rotate your head as far as comfortable to the right, then left.
Shoulder Rotation: Circle your shoulders, then reverse directions.
Head Side to Side: Bend your neck so left ear approaches left shoulder, then repeat for right. Add a little resistance by pressing your hand against the side of your head.
Chin Tuck: Slide your chin inward, without bending your neck up or down. This is easiest to practice initially against a wall. Tuck chin in, attempting to touch back of neck to the wall while also maintaining head contact. Don't jam your chin down to your chest.
Shoulder Blade Retraction: Pull your shoulders down and back.
Shrug: Slowly raise your shoulders toward ears and hold for a few seconds. Gradually bring shoulders down and relax.

Hands/Wrists

Wrist Flex: With your elbows on desk, gently use left hand to bend right hand back toward forearm. Hold for a few seconds, then relax. Repeat on other side.
Finger Fan: Spread your fingers as far apart as possible, hold, then clench fists, then release.
Back

Shoulder Squeeze: Raise your arms in front of body, with elbows bent and thumbs up. Pull elbows back, squeezing shoulder blades together. Hold for a few seconds then release.

Stretch Up: Sit up straight and imagine a cable attached to the top of your head. Gradually stretch to be as tall as possible, hold for a few seconds, then relax.

Arms
Arm Relaxation: Drop your arms and hands to your sides. Gently shake them for a few seconds.
Arm Rotation: Raise your arms in front of your body. Rotate arms so palms face up, then rotate so backs of hands face each other.

Feet
Toe Curl: Flex toes up, then curl toes under. Release.
Foot Rotation: Circle foot slowly from the ankle, then reverse.

Eyes

Eye Rolls: Roll your eyes clockwise then counterclockwise briefly.
Palm Eyes: Without touching your eyes, cup hands lightly over eyes for 30 seconds to rest them from light.
Look Away: Exercise your eyes by periodically looking away from your computer to focus on distant objects.

Adopted from: https://www.uhs.umich.edu/computerergonomics#exercise

1. What is the best title for this text?
2. How many body parts can you do the exercise with to protect your body from strains and pain? What are they?
3. Mention some ways that you can do to decrease the chance of getting sore eyes during working long hours.
4. What is Finger Fan?
5. How would you do an Arm Relaxation?

Exercise 11: Create a cathy safety slogan that promotes Workstattion Health and Safety. You can use the data you have from Exercise 1 to help you give some more ideas. Here are some slogan samples for you.
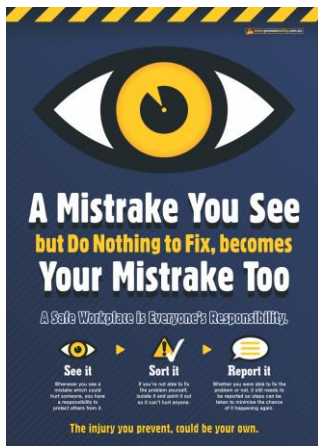
Exercise 12: Imagine you are designing an ICT classroom with 16 networked PCs, Internet access and peripherals. What safety precautions should be taken into account? Use these notes to help you write four tips or suggestions.

1. Room conditions (space, desks, chairs, lights and windows).
2. Ergonomic devices.
3. Electrical safety: layout of cables and connectors, hotspots for a wireless network, etc.
4. Notice Boards and posters with health and safety recommendations.