

8.1 Physical Safety

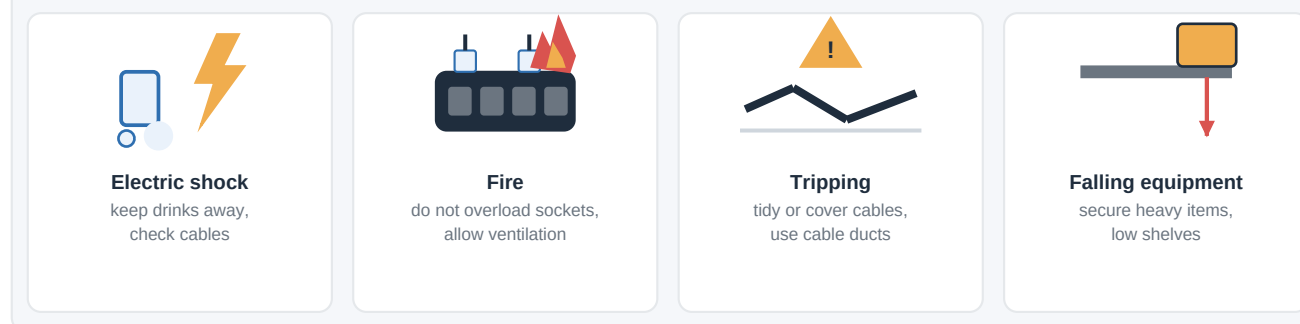
Syllabus 2026 - 2028

WHAT YOU NEED TO KNOW

- Safety issues: electrocution, fire, tripping over cables and heavy equipment falling
- The causes of these safety issues
- Strategies for preventing them

Physical safety is about protecting people from injury when they use IT equipment. Computer rooms and offices have electricity, cables and heavy equipment, so risks must be managed.

Figure 28: Common physical safety hazards with IT equipment



Safety issue	Causes	Prevention
Electrocution (electric shock)	Spilling drinks or liquids on or near electrical equipment; touching live (bare or damaged) cables; faulty or wet equipment.	Keep drinks and food away from equipment; check cables and plugs regularly and replace damaged ones; do not touch bare wires; fit a residual current device (RCD) or trip switch; have equipment checked by a qualified person; switch off before cleaning or repairing.
Fire	Too many devices in one socket or extension lead (overloaded sockets); equipment overheating because vents are blocked or in poor air flow; faulty wiring.	Do not overload sockets or daisy-chain extension leads; keep vents clear and allow air flow; do not cover equipment; fit smoke detectors and have fire extinguishers (CO2) nearby; switch off equipment that is not in use; have wiring checked.
Tripping over trailing cables	Cables lying across floors and walkways, causing people to trip and fall.	Tidy cables with cable ties, clips or ducts; cover cables with cable covers or run them under the floor or along walls; place equipment close to sockets; use wireless connections where possible.
Heavy equipment falling	Heavy equipment such as monitors, printers or projectors placed on unstable tables or high shelves, or too close to the edge.	Place heavy equipment on strong, stable furniture and low down; fix projectors and screens securely to a wall or ceiling; keep equipment away from edges; use trolleys and lift with care.

General rules for a computer room

- Follow the rules displayed for the room and report any damage or fault to the teacher or technician
- Keep bags and clutter out of the walkways
- Never try to repair equipment yourself
- Know where the fire exits and extinguishers are, and follow the evacuation routine
- Keep the room well ventilated and the equipment clean and dust-free

EXAM TIP

Link each risk to its **cause** and then a **prevention**: 'drinks can be spilled on a computer and cause an electric shock, so drinks must be kept away from equipment'. Avoid the word 'dangerous' on its own.

Key terms

Term	Meaning
Electrocution	Injury or death from electric current passing through the body.
Live cable	A cable carrying an electric current.
Overloaded socket	A socket with more devices than it can safely supply.
Overheating	Equipment becoming too hot to work safely.
RCD	Residual current device; cuts off the power if a fault is detected.
Cable duct	A cover or channel that holds cables out of the way.
Ventilation	Air flow that keeps equipment cool.
Hazard	Something that could cause harm.

Practice questions

Answer each question in full sentences. Command words used: State (give a short answer), Describe (say what it is like), Explain (give reasons), Analyse (break it down and examine it), Suggest (apply your knowledge to a situation), Compare and contrast (similarities and differences), Evaluate (weigh up and reach a judgement).

No.	Question	Marks
1	State two safety issues that can occur in a computer room.	[2]
2	Describe how overloaded sockets can cause a fire.	[3]
3	Explain why trailing cables are dangerous and how the risk can be reduced.	[3]
4	Analyse why heavy equipment should not be kept on high shelves.	[3]
5	Suggest three safety rules for a school computer room.	[3]
6	Evaluate the measures a school can take to keep learners physically safe in a computer room.	[5]

Total: 19 marks