

# 2

# Health and Safety

## KEYWORDS

accidents  
ear protection  
face shield

flammable  
hazardous

precaution  
safety equipment

## SAFETY

The materials technology room is a workshop, so it can be **hazardous**. Safety is always a priority in the room. You must always take care of yourself and others while working. **Accidents** can be avoided by following basic workshop rules.



Clean as you go by keeping the bench area tidy

## Safety guidelines

- Keep your work area tidy by regular clean
- Always walk, never run
- Store coats and bags properly
- Follow teacher's instructions – ask if you are unsure
- Read and follow safety signs and warning labels
- Report all accidents
- Report all breakages or damaged equipment
- Always use the safety equipment provided
- Always avoid 'horseplay' and don't throw things in the workshop
- Never rush, as trying to get things finished quickly can end in accidents
- Tie up long hair, secure loose clothing and remove jewellery
- Keep your hands and fingers behind the cutting edge of tools

Keeping your work area tidy and well organised will save time and help you to work safely. Put tools and equipment away when not being used. Brush down the bench and keep your work area tidy. Keeping your hands clean will also help you to avoid getting your work piece dirty.

Loose clothing and long hair can get caught in drills and machinery, so avoid loose clothing and tie up long hair. Jewellery can get caught in machinery also, so it's best to remove it before class.

## Tools and equipment

The tools and equipment in the room are safe if you use them properly and follow the safety precautions. Your teacher will show you how to use the tools safely. Don't use tools that are damaged – always report any faulty tools to the teacher.

Keep both hands behind and away from the cutting edge of sharp equipment. When carrying tools keep them by your side. Work away from your body when using sharp tools such as chisels.

## MATERIALS

Usually, the workshop is a safe place but working with some materials requires extra care.

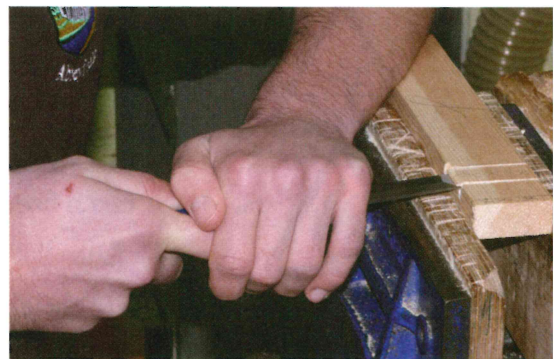
- Dust can affect breathing, especially fine dust created during sanding.
- Dust can also get into eyes if it is blown off a surface. Use a brush instead and wear safety glasses always.
- Wear gloves when handling hot materials.
- Adhesives and finishes often contain strong chemicals. Always read the labels and use the correct protective equipment.



*Tie up long, loose hair*



*Carry tools by your side*



*Keep both hands behind the cutting edge*










## SAFETY SIGNS

It is important to know the meaning of different safety signs in the room. Here are some examples. Always follow safety signs. They are there to inform you of safe procedures and equipment that must be worn when working with certain tools.

Always read instructions on containers. Labels show warning signs that tell you about the possible dangers of the contents. Some common warning signs are shown below.



Safety signs

| Symbol  | Label symbols explained  |
|---|--|
|    | <b>Caution:</b> Warns you to be careful.   |
|   | <b>Poison:</b> Tells you that the contents of the container are poisonous.   |
|  | <b>Corrosive substance:</b> Warns that a substance or chemical is harmful. Handle with care and do not consume it.       |
|  | <b>Explosive:</b> Warns that a substance can explode. Avoid ignition sources and naked flames.                           |
|  | <b>Environmental hazard:</b> The substance will damage the environment. Always dispose of it according to instructions.  |
|  | <b>Flammable:</b> Warns that it is a substance that is likely to catch fire. Avoid naked flames and heat sources.        |
|  | <b>Electric hazard:</b> Warns that there is an electric hazard with a tool or machine. Take care, you could get a shock. |

## SAFETY EQUIPMENT

There is a range of **safety equipment** to protect you against hazards and other dangers.

### Personal protective equipment

Special equipment is worn to guard against personal injury. Safety glasses and face shields protect your eyes and face from dust and other particles.

Many people suffer from dust allergies and asthma, which can be triggered by too much dust in the air. Dust masks can be worn which protect you from breathing in dust particles, particularly when sanding.

Excessive noise in the room can also be a problem, when many machines and tools are working. You can help reduce the damaging effect of noise on your eardrum by using ear defenders or earplugs.

Safety gloves should be worn when handling sharp, hot or harmful materials.



*Safety face shield*

### Workshop safety features

There are a number of safety features in school workshops which are for protection and in the event of an emergency. You should know the location of the fire extinguishers and the

fire escape procedure for your room. Each workshop has emergency cut off buttons which should only be pressed in an emergency. They cut all power to the machines and sockets.

Machines also have safety cut off buttons and isolation switches that enable the power to a machine to be turned off quickly or for the machine to be locked, so that it cannot be used without permission. Machines have guards to protect the user. These should always be in place.

### Dust extraction

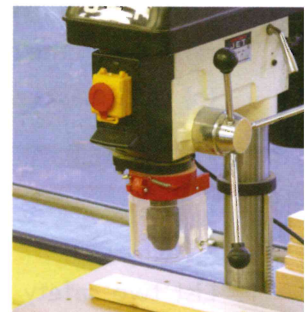
Workshops have dust extractors that suck the dust and fine particles from most tools or machines into a bin or collection bag. These should be used and the collectors emptied regularly.



*Dust masks and face mask*



*Ear protection*



*Machines have safety guards and emergency stop switches*