

## Safe use of machinery: Art metal: Industrial Technology

In this activity you will learn about a range of potential hazards in the work environment and the safe use of power and machine tools.

This material addresses aspects of the following syllabus outcomes:

- 4.1.1 A student identifies and applies fundamental OH&S principles when working with materials tools and machines.
- 5.1.1 A student identifies, assesses and manages the risks and OH&S issues associated with the use of a range of materials, hand tools, machine tools and processes.

*Extract from: Years 7–10 Industrial Technology Syllabus © Board of Studies NSW 2003.*

### Safe use of machinery

Machinery such as lathes are often used to undertake processes for the development of art metalwork projects. Therefore it is important that students are familiar with general machine safety procedures.

### Activity

Read the following passage and answer the related questions.

- Keep the machine area clean of oil and metal scraps. Never allow metal scraps or swarf to remain around the machine area or floor.
- Avoid wearing loose fitting clothing. Rings and other jewellery should be removed as they may become caught in the moving parts of the machine.
- Wear appropriate personal protective equipment. When engaging in any operation where there is danger to the eyes, wear eye protection in the form of safety glasses or eye shields. In noisy areas, use ear muffs.
- Hair should be restrained to avoid entanglement.
- Disposable plastic gloves will protect your hands when handling oils, cutting fluids and solvents.
- It is not considered good practice to talk to anyone while you are operating a machine.
- A machine should not be operated unless all guards are in place.
- Never attempt to remove chips or cuttings (swarf) with your hands. A brush should be used for this operation.
- Never attempt to remove chips or cuttings (swarf) while the machine is operating.
- Stop the machine to make adjustments or measurements to the work piece. Never touch the revolving job or make measurements or adjustments whilst the lathe is running. This will help avoid cuts and lacerations.
- Report any cut, bruise, scratch, burn or other injury for medical attention, no matter how minor the injury may appear, to your teacher.

1. Outline the precautions that should be undertaken in maintaining a safe area around a machine.

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2. Explain why jewellery should be removed when using a machine.

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3. Identify the personal protective equipment (PPE) that should be worn when using machines.

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4. Identify the correct method that should be used to remove waste material from machines.

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5. Identify when it would be suitable to measure features or make adjustments to material that is undergoing a machining operation.

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