Making technology learning safer: Technology (Mandatory)

In *Technology* you will learn about the safe and responsible use of materials, tools and equipment and learn to use the tools, materials and techniques in a responsible and safe manner in each design project. This activity allows you to consider the factors that contribute to a safe work space for your class.

This material addresses aspects of the following syllabus outcome:

4.3.2 A student demonstrates responsible and safe use of a range of tools, materials and techniques in each design project.

Extract from: Stage 4 Technology Syllabus © Board of Studies NSW 2003.

Your task

Design an A3 size poster to highlight key safety issues for students to be aware of in a technology classroom.

Activities

- Identify safety issues for the technology classroom.
- Analyse a range of posters to identify characteristics of effective communication.
- Examine a variety of fonts.
- Research the use of pictograms especially related to safety.
- Identify the visual safety information already in the classroom.
- Compile a set of safety rules for your technology classroom.
- Complete the design task.

Activity 1

- Brainstorm with your class or group the possible safety issues in a technology classroom.
- Draw a concept map from the brainstormed list of issues. This will help reduce the number of ideas to some key issues.
- Think about the term *safety first*. What message is it sending?

Safety first is a term that describes the idea that all activities and environments need to be controlled to avoid injury to everyone in that situation. Although following a set of rules can help, *safety first* is more about attitude and personal responsibility.

Does your concept map include the following key safety issues?

Movement around the room

Electrical equipment

Behaviour

Dust and fumes

Clothing, footwear and personal protective equipment

Storage of dangerous materials

Floors

Tidiness

Tools, equipment and machines

Activity 2

- Analyse a range of posters. Consider the following:
  - What is the message the poster is trying to convey?
  - What type of font has been used? Serif or non-serif? Upper case or lower case or a mix?
  - Does the font suit the message?
  - Is there enough *white* space?
  - What are the images like? Are they line drawings, paintings, photos or maybe a montage? Do they work?
  - Are there logos? Are they designed to be seen from a distance or just as a badging?
  - Have pictograms been used? How effective are they? Do they convey the message without the use of words?
- Write a list of the characteristics of effective communication.

Activity 3

- Using a word processing program select a font and type *safety*. Copy the word a number of times and then modify each one to see what it looks like at different sizes and different styles.
- Use a computer drawing or painting program. Create your own font by writing a word using the freehand tool. Enlarge the word then add or delete pixels to modify its appearance. Keep looking back at the normal view to see how the changes are affecting the end product.
- Experiment with calligraphy or other hand drawn writing.

Activity 4

- Pictograms are simplified drawings that easily convey a message without words. Look around the technology classroom, are there any safety pictograms? What colours are used in pictograms? Do they have particular meanings?
- Research safety pictograms using the following web site: http://www.seton.net.au/static/index_signs.cfm. In particular look at admittance; fall/trip hazard; fire; first aid; flammable materials; hazardous substances; personal protection signs; manual handling signs.

Activity 5

Identify the visual safety information already in the classroom. Check walls, floors, doors and machinery.

Activity 6

In a group or individually, assess the risks in your technology classroom and develop a set of safety rules which reflect the brainstormed ideas and the concept map. The rules should help students to control the hazards.

Activity 7

Apply the information you have learnt about effective communication, fonts, images and pictograms to design your poster.

Safety signs

Standard safety signs are used to:

- communicate information on hazards
- communicate the need for personal protective equipment (where other control strategies are inadequate or impracticable)
- communicate the location of safety equipment/emergency facilities (first aid kit)
- give guidance and instruction in an emergency.

Types of safety signs

There are two main types of safety signs:

- picture signs which use text and symbols to represent the hazard, equipment or process as well as the standard colours and shapes used to convey a message, e.g. personal protective equipment (PPE) signs

- signs with text only messages which are supplemented by the use of standard colours and shapes, e.g. Fire Exit signs.

Colours and shapes of safety signs

Stop and prohibition signs Circle: white background with red borders and cross bar; black symbol.	
Caution (warning) signs Triangle: yellow background with black border; black symbol.	
Emergency information signs Rectangle: green background; white symbol.	
Mandatory signs Circle: blue background; white symbol.