

BA SANGAM COLLEGE
YEAR 12
APPLIED TECHNOLOGY
WORKSHEET 1

(Attempt the questions at the back of your exercise book)

1. Identify and list seven hazards in the industrial workshop shown below.



2. Identify and list at least five hazards and five unsafe work practices shown below.



(Attempt the questions at the back of your exercise book)

1. List three responsibilities of an employer to their employees.
2. List three responsibilities of an employee at the work place.
3. List three responsibilities OHS committee.
4. Label the different types of PPE shown below.



1 _____	2 _____	3 _____
4 _____	5 _____	6 _____
7 _____	8 _____	9 _____

TOPIC: ENGINEERING MATERIAL


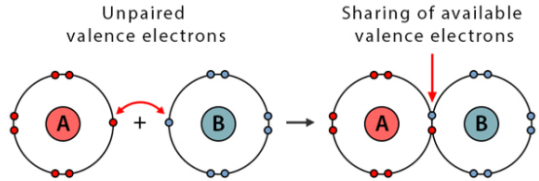


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(Attempt the questions at the back of your exercise book)

MATCHING

Write the correct alphabet in the space provided

1	Element		A	
2	Compound		B	Posi
3	Alloy		C	Examples are timber, polymer, glass and leather
4	Ferrous metal		D	Smallest particle of a matter
5	Example of non ferrous metal		E	
6	Thermoplastic		F	Mixture of two or more pure metals eg. Brass = Copper + Zinc
7	Thermosetting		G	property of metals that defines their ability to be hammered, pressed, or rolled into thin sheets without breaking
8	Non-metals		H	
9	Atom		I	canr  after it takes the shape
10	Electron		J	Heated & Re-Moulded 100's of times! ... can also be recycled! Consist of H ₂ O
11	Proton		K	Metal is drawn into a wire

12	Covalent bond		L	Material that fractures when subjected to stress eg. Cast iron
13	Malleability		M	Substances that cannot be chemically broken down into simpler substances
14	Ductility		N	pure substance consisting only of atoms that all have the same numbers of protons in their atomic nuclei
15	Brittleness		O	Negative charge

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(Attempt the questions at the back of your exercise book)

Fill in the blanks

brittle or soft	Ductility	Diamond
Malleability	non metal	Conductivity

- I allow the heat and current to pass through the metal easily. - _____.
- I am a property that allows metals to be drawn into the wires for electricity. - _____.
- I allow the metal to be beaten into thin sheets. - _____.
- One of the properties of non metals is being _____.
- _____ is the hardest non metal.
- A _____ may be either in solid, liquid or gaseous state.

STRAND: Design & Enterprising **STRAND NO:** 2
WEEK: 3 **PAGE NO:** 1
(Attempt the questions at the back of your exercise book)

Design Problem: Providing comfortable furniture to guests is what many hotel owners strive for, however, the storage of these furniture often can create a problem to the hotel owner.

Design Brief: Design a pool-side chair for guests to use while sunbathing around the hotel's swimming pool.

Specifications: The furniture should:

- be made of readily available materials;
- cater for two people;
- be portable;
- be easily folded using mechanical joints for limited storage space;
- have a headrest that can be raised and lowered.

(a) Draw two possible solutions.

(b) Draw the Final solution

(c) Draw the Detail drawing between any two components or joints

(d) Explain how the pool-side chair will be stored.

(e) Evaluate

Safety	Material used	Environmental factor

STRAND: Design & Enterprising **STRAND NO:** 2
WEEK: 3 **PAGE NO:** 2
(Attempt the questions at the back of your exercise book)

Design Problem: A small village in the interior of Viti Levu requires electricity for their lights, refrigerators and other electrical appliances.

Design Brief: Design a simple mechanical or electrical device that will make use of sunlight, water or wind to produce electricity.

Specification: The device should:

- be made of readily available materials;
- have fittings and members that can be dismantled and refitted;
- have electrical and mechanical parts that comply with OHS standards;
- have mechanical and electrical parts that are replaceable and serviceable;
- have a storage voltage of 12 volts (DC)

(a) Draw two possible solutions.

Possible solution 1

Possible solution 2

(b) Draw the Final solution

(c) Draw the Detail drawing between any two components or joints

(d) Explain how to preserve the structural parts of the device

(e) Evaluate

Safety	Material used	Environmental factor