JSS 1 FIRST TERM REVISION ON BASIC TECHNOLOGY

# WEEK ONE

RESUMPTION TEST EXERCISE

# WEEK TWO

CONCEPT OF TECHNOLOGY

Technology means processes and products that make life easy and stress free.

TYPES OF TECHNOLOGY

The two main types of technology include:

1. Underdeveloped technology
2. Developed technology.

UNDERDEVELOPED TECHNOLOGY

Underdeveloped technology involves the use of old methods and tools to do things. Examples of underdeveloped technology are: Hoe, matchet, cutlass, oil lamp, rake, mopping stick, etc.

DEVELOPED TECHNOLOGY

Developed technology involves the use of modern methods and equipments to do things. Examples of developed include: Computers, GSM, cars, aeroplane, vacuum cleaner etc.

BENEFITS OF TECHNOLOGY

The benefits/importance of technology include:

1. It makes work easier and faster.
2. It makes our work neater.
3. Our works are also more accurate and;
4. More reliable.

PRODUCTS OF TECHNOLOGY

Some products of technology of include: Mobile phones (GSM), cars, aeroplane, blender, ship etc.

CAREER

Career also known as vocation is a particular job or occupation for which someone is trained in. It is also known as vocation.

CAREERS IN TECHNOLOGY

|  |  |
| --- | --- |
| FIELD | OCCUPATION |
| 1. ENGINEERING | 1. Mechanical Engineering 2. Electrical Engineering 3. Electronics Engineering 4. Computer Engineering 5. Telecommunication Engineering 6. Agricultural Engineering 7. Civil Engineering 8. Building Engineering 9. Chemical Engineering 10. Aeronautic Engineering |
| 1. ARCHITECTURE | 1. Architecture |
| 1. MEDICINE | 1. General Practice 2. Dental Medicine 3. Surgery 4. Gynecology & Obstetrics 5. Ophthalmology 6. Pharmacy 7. Veterinary Medicine |
| 1. AGRICULTURE | 1. Animal Production 2. Crop Production |
| 1. BUSINEESS | 1. Management 2. Accountancy |
| 1. INFORMATION AND COMMUNICATION TECHNOLOGY | 1. Information Management System. |

# WEEK THREE

WORKSHOP SAFETY

Workshop safety is the act of maintaining a safe working environment in a workshop.

ACCIDENT/HAZARD

An accident is a negative experience that happens to somebody when he/she does not expect it. It is also called hazard.

CAUSES OF ACCIDENTS

1. Negligence
2. Carelessness
3. Rough play
4. Faulty devices/machines
5. Lack of maintenance
6. Fire (i.e. both chemical and electrical fire)

ACCIDENT PREVENTION TECHNIQUES

Some notable accident prevention techniques are:

1. Teacher’s supervision
2. Students’ comportment
3. Preventive measures
4. Routine checking
5. Routine servicing

SAFETY DEVICES

Safety devices are those devices which can serve as preventive and protective measure against accidents.

TYPES/EXAMPLES OF SAFETY DEVICES

1. Gloves
2. Helmets
3. Google and face shield
4. Nose mask
5. Boots
6. Sand buckets
7. Fire extinguisher.

# WEEK FOUR

IDENTIFICATION OF MATERIALS

Identification of materials involves identifying the properties of materials and also the various methods of identifying them. Some notable materials include: Wood, metal, ceramic, glass, plastic and rubber.

WOOD

A wood is a body of tree which is suitable for engineering work. It is called timber

TYPES OF WOOD

There are two types of wood namely:

1. Standing wood (timber) and;
2. Rough wood (timber).

CLASSES OF WOOD

Wood is further classified into:

1. Hardwoods;
2. Soft woods and;
3. Engineered woods.

METHODS OF IDENTIFYING WOODS

1. By checking the wood grain.
2. By texture
3. By color/luster
4. Density
5. Sound and;
6. Visibility of growth rings.

METALS

A metal is a mineral ore which is found in the ground and also as a rock mineral.

TYPES OF METALS

There are two main types of metals, namely:

1. Ferrous metals and;
2. Non-ferrous metals.

METHODS OF IDENTIFYING METALS

1. Density
2. Color/luster
3. Fusibility
4. Magnetic effect
5. Heat and electricity conduction and
6. Sound.

CERAMICS

Ceramics are those items made from treated clay and mud.

GLASS

Glass is an inorganic solid material that is usually brittle, transparent or translucent.

TYPES OF GLASS

1. Flat/float glass
2. Shatterproof glass
3. Laminated glass
4. Extra clean glass
5. Chromatic glass
6. Tinted
7. Tempered/toughened glass
8. Glass blocks/bricks
9. Glass wool and;
10. Insulated glazed units/double glazed units.

METHODS OF IDENTIFYING GLASS

1. Physical sampling
2. Chemical test analysis

PLASTIC

Plastics are non-metallic products that are used to mould household wares like cups, buckets, trays etc.

TYPES OF PLASTICS

1. Thermoplastics and;
2. Thermosetting plastics/thermo sets.

METHODS OF IDENTFYING PLASTICS

1. By flame/burn test and;
2. By Fourier Transform Infrared Spectroscopy (FTIR)

RUBBER

A rubber is a non-metallic product like plastic but usually more elastic than plastic.

TYPES OF RUBBER

1. Natural rubber and;
2. Artificial/synthetic rubber.

METHODS OF IDENTIFYING RUBBER

1. By measuring specific gravity
2. Flame/burn testing and;
3. Infrared spectroscopy (IR)

# WEEK FIVE

DRAWING INSTRUMENTS AND MATERIALS

1. ***Drawing Instruments:*** Drawing instruments are those instruments which are used for drawing on drawing materials and are not consume in the process, e.g.: Tee-square, set-squares, dividers, compass etc.
2. ***Drawing Materials:*** Drawing materials are consumable items (i.e. they cannot be reused after being used), e.g.: Drawing paper, eraser, pen, pencil etc.

|  |  |  |
| --- | --- | --- |
| S/N | DRAWING INSTRUMENTS | DRAWING MATERIALS |
|  | Tee-square | Drawing paper |
|  | Set-squares | Eraser |
|  | Divider | Pen/ink |
|  | Compass | Pencil |
|  | Protractor | Sketchbook |
|  | Emery cloth | Drawing surfaces |
|  | Clips | Sharpener |
|  | Drawing board | Charcoal |
|  | Rules/Rulers | Blending stumps/tortillions |
|  | Adhesive tapes etc. | Artwork storage/portfolio |

# WEEK SIX

BOARD PRACTICE

Board practice involves learning technical drawing procedures and setting of drawing instruments and materials.

1. **Setting up the Board**

Drawing instruments and materials required for good board practice are listed below:

|  |  |
| --- | --- |
| * Drawing board | * Protractor |
| * Tee-square | * French curves |
| * Set-squares (30⁰, 45⁰, 60⁰ angles) | * Drawing pencils (HB and 2H) |
| * Compass | * Eraser |
| * Dividers | * Drawing paper |

1. **Procedures for Setting Drawing Paper on the Board**

**Step 1:** Place the drawing board conveniently on the table with the square edge to the left-hand side.

**Step 2:** Place the drawing paper on the board, leaving equal space all round.

**Step 3:** Place the tee-square on the paper, and gently move or slide the tee-square to the top edge of the paper.

**Step 4:** Gently slide the tee-square down without moving the paper.

**Step 5:**  Cut four pieces of adhesive tape to hold the paper in position and place them over the four corners of the paper.