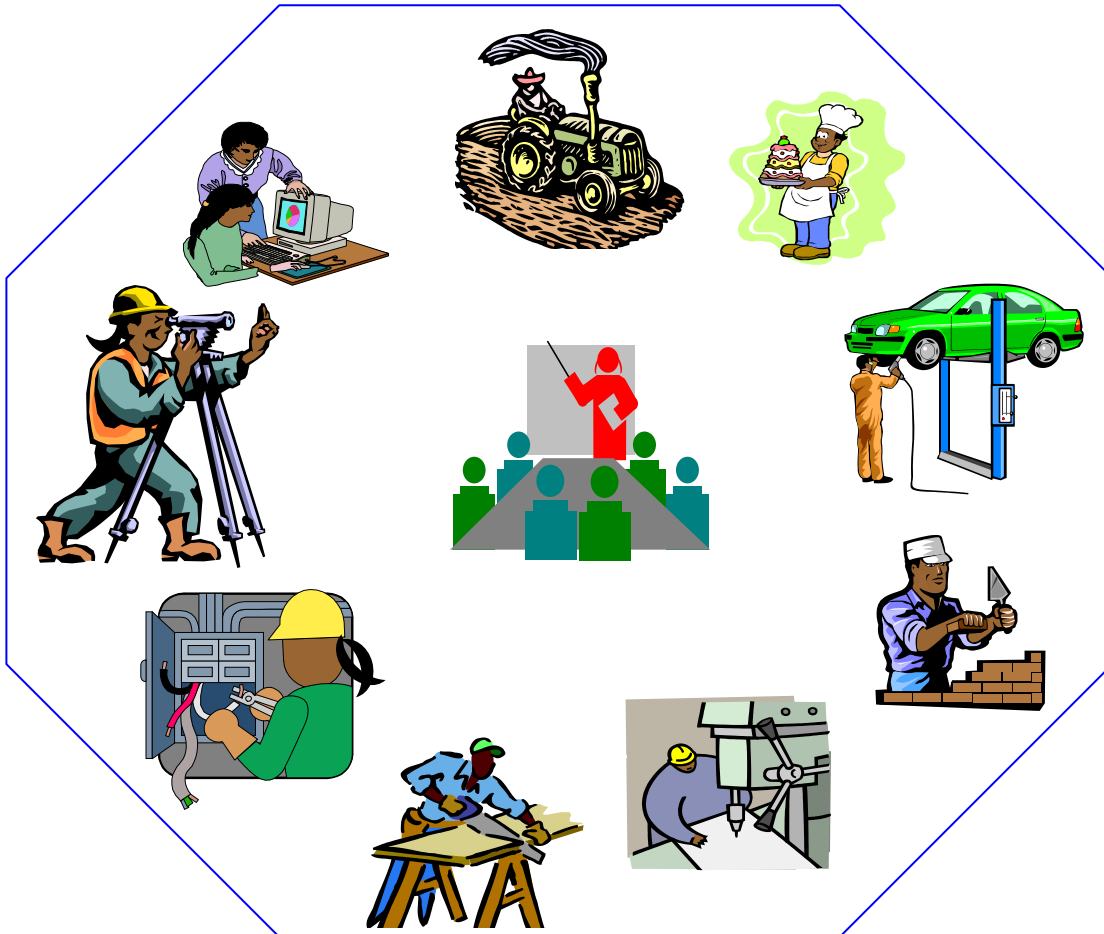




# **ETHIOPIAN TVET SYSTEM**

## **Advanced Leather Goods Production Level III**

**Based on January 2012 Version 4 Occupational Standard (OS) and Dec 2020 version 1 Curriculum**



**Module Title: Developing Understanding Basic Principles, Elements and Methodology of Design**

**LG Code: IND ALP3 M02 LO (1-5) LG (5-9)**

**TTLM Code: IND ALP3 TTLM 1220 V1**

December 2020  
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<b>LG #5</b>	<b>LO #1- Prepare Workstation</b>
<b>Instruction sheet</b>	
<p>This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:</p> <ul style="list-style-type: none"> <li>• Setting up workbench and seating according to OHS practices</li> <li>• Selecting and Setting out drawing tools and equipment</li> <li>• Setting out tools and equipment to facilitate effective work practice</li> </ul> <p>This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:</p> <ul style="list-style-type: none"> <li>• Set up workbench and seating according to OHS practices</li> <li>• Select and set up drawing tools and equipment</li> <li>• Set out tools and equipment to facilitate effective work practice</li> </ul>	
<b>Learning Instructions:</b>	
<ol style="list-style-type: none"> <li>1. Read the specific objectives of this Learning Guide.</li> <li>2. Follow the instructions described below.</li> <li>3. Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.</li> <li>4. Accomplish the “Self-checks” which are placed following all information sheets.</li> <li>5. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks).</li> <li>6. If you earned a satisfactory evaluation proceed to “Operation sheets</li> <li>7. Perform “the Learning activity performance test” which is placed following “Operation sheets” ,</li> <li>8. If your performance is satisfactory proceed to the next learning guide,</li> <li>9. If your performance is unsatisfactory, see your trainer for further instructions or go back to “Operation sheets”.</li> </ol>	



## Information Sheet 1- Setting up workbench and seating according to OHS practices

### Setting up workbench and seating according to OHS practices

A workbench is a sturdy table at which manual work is done. They range from simple flat surfaces to very complex designs that may be considered tools in themselves. Workbenches vary in size from tiny benches to the huge benches. Almost all workbenches are rectangular in shape, often using the surface, corners and edges as flat/square and dimension standards. Design is as varied as the type of work for which the benches are used.

#### How to Prepare Workbench for basic Sketches Set Up according to :-

- Workbenches are made up can be from many different materials including metal, wood, depending on the needs of the workbench for the specific purpose of sketching.
- The workbench consists of the bench itself, 12ft by 24 inches. Three quarter inch plywood was used for the top and the backboard.
- A comfortable height for working with provisions for seated or standing work selected
- In the workbench analyzing Compositional balance, scale and perspective depend on visual weight of material to be sketched.
- A way to fix the workbench to the surface so that it may be worked with both hands
- Provisions for accessing tools
- A variety of element of design techniques are identified for use in sketching
- Proportion, scale and stylization relevant to sketching are selected
- The workbench has a slide for unused components can go in a box for best Utilization of material
- Drawing tools and equipment are selected and prepared
- Figure details are analyzed
- Any changes or adjustments to sketch are carried out as required
- Workbench and seating are set up according to OHS practices
- Reference source appropriate to element of design requirements is selected
- Consider this all and other in accordance to occupational health and safety



## 1.1 MANUAL HANDLING TECHNIQUES

Manual handling is the way all sketching materials, sketching board and tools and equipments that help for sketching are given care in order to minimize risk with utilization of material with occupation health and safety.

When handling tools and equipments used for sketching care must be taken in order to make safe work place. Specially sharpen tools used in sketching like, sharpener cutter and heavy materials (sketch board / horse arm) which damage foot when falling should be handled in care. And also when handle sketch paint which are liquids have a leakage if they are not covered properly. If chemical droplet put /dropped on skin they cause skin irritations and also damage wearing of the operator.

There are times where sketch can express more than words and you get an instant understanding of a concept. Sketches are useful for designers who work in groups and sketches can deliver easy and fast way to brief an idea to others.

This article will introduce the main guidelines to product sketching that are useful to designers who just started the journey to product design and for effective work practice

### a) Material and Equipment

Product designers depend a lot on materials they use for creating sketches. By choosing appropriate equipment it is possible to express your ideas in the best way and create a visual connection of your product with clients.

### b) Perspective

Perspective in dictionary means the reproduction of something that is three-dimensional and is transmitted in a two- dimensional plane. There are several types of perspective drawings: one point perspective, two point and three point. Two point perspectives is most used in product sketching because it creates enough readable product concepts for effective workplace practice.

### c) A Right Position Of a Pencil

A secret for the ability to draw long straight lines is hiding in a way you hold a pencil/a pen. And, usually, for effective work practice first skill that beginners have to obtain is to learn how to draw a straight line without a ruler.

### d) Shadows

Shadows appear on objects in areas where the lighting is blocked or indirect. Before creating shadows it is important to choose a direction where the light source will come from. There are two main shadows that are typically drawn – Sunlight, and Cast shadows

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## 1.2 STANDARD OPERATING PROCEDURES

Standard Operating Procedures (SOPs) help maximum safety and operational efficiency for leather goods manufacturing unit: SOPs are detailed written instructions to achieve uniformity of the performance of a specific function.

A well-written SOP can be used to satisfy compliance requirements. SOPs are recommended for all procedures that pose a potential risk to the health and safety of personnel. Standard Operating Procedures (SOPs) lets you operational documents such as plans, regulation, compliance, and policies. SOPs distil requirements contained in these documents into a format that can be used by staff members in their work environment.

Standard Operating Procedures (SOPs) for effective work practice should be transferred without every modification to insure the expected results. Every modification or divergence of a given standard, the Procedure should being served, while an investigation and results of the investigation documented according to the internal divergence procedure. All high-class processes and procedures should be put on in a Standard Operating Procedure. This Standard Operating Procedure should be the base for the everyday training programmed of every employee. The Standard Operating Procedure should be often updated to insure of obedience to the realization conditions and the working practice.



**Figure: Standard operating procedure**

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## The Need for Standard Operating Procedures with work place practice

Standard operating procedures continue to affect not only the entire flow of company procedures but also the well-being of an employee. Other than that, standard operating procedures offer a number of advantages such as the following:

- Quality control. Standard operating procedures guide employees and supervisors to achieve optimal output.
- Improve skills. With instruction clearly stated, employees, know what to do. They can continue doing their tasks until they achieve a certain level of proficiency. You may also see HR policy templates.
- Monitor performance. Standard operating procedures can help evaluate an employee's productivity.
- However, not everything is covered by standard operating procedures. We also offer an array of acquisition strategy templates that is applicable to assist your company in acquiring new resources, acquiring the services of another entity, or even acquiring and absorbing companies into your own.

### 1.3 PERSONAL PROTECTIVE EQUIPMENT

Every worker obliged to secure its qualified attendance through the respective training from the point of view of the safety or work attendance. The operative must be properly trained and acquainted with the danger existing on tools and equipment.

- Safety glass must be worn when using the grind stone.
- Always use a safe method to break a hacksaw blade; a small device can be used.
- Avoid wearing loose cloth.
- For female workers tide their hairs.
- Never carry around the knife with blade exposed, it could cause injury may be you and others.

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**Figure: personal protective equipment**

#### **1.4 SAFE MATERIAL HANDLING**

Organization safety is extremely important both to staffs/ workers and managers and owners. Generally leather product processing is not as dangerous as many other manufacturing plants. Occasionally accidents can happen .It is easier and cheaper to prevent accidents before rather than later. In leather products some of the high inflammable materials are used, such as Rubber Solution, Dendrite, Rubber Sheet, Eva Sheet, Spirit, Synthetic material and others. But it is needed proper storage and maintenance. For Safety precautions we have to keep in our mind such as: –

❖ **ELECTRICITY :**

- Cables used should be good quality and high resistance,
- Loose connection should always checked,
- Fuses are too strong to protect current flow.

❖ **FIRE :**

- Handling of inflammable materials such as adhesive, chemicals, spirits, rubber sheet etc are dangerous,
- Due to loose connection can cause an accident,
- Sourcing of metal causes small sparks which can glow for hours before igniting, usually occurs when nobody is around.

❖ **ELECTRICITY :**

- Cables used should be good quality and high resistance,
- Loose connection should always checked,
- Fuses are too strong to protect current flow.

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#### ❖ OTHERS :

- Poor knowledge of machines and equipments
- Poor conditions of tools and equipments,
- Bad condition of storage can cause of accidents,
- Poor knowledge of infrastructure planning etc.

### 1.5. ERGONOMIC ARRANGEMENT OF WORKPLACES

The word ergonomics is derived from two words: ergo meaning work & Nomo's meaning the law. Ergonomics is the scientific study of the relationship between the man, the machine (with which he works) & the environment (in which he works). Ergonomics is also termed as human engineering & bio-techniques.

The modern approach of ergonomics is “fit man & machine together”.

Therefore it is very useful tool to make man & machine compatible for maximum efficiency.

There are main constituent areas of study of ergonomics, which guide us towards best ergonomically practices:-

- 1) Stand or sit with the work in front of you – avoid twisted postures.
- 2) Employ smooth, rhythmical movement – avoid sudden changes of direction
- 3) Keep things on the level to avoid vertical movements
- 4) Avoid sudden changes of direction
- 5) Avoid continuous repetition of movement
- 6) Avoid stretching where possible – keep items used frequently within arm's reach



**Fig : Ergonomics**

7) Chairs should provide support for the lower part of the back, and the worker should sit so that his/her back at the lower most curved part, is in contact with this support whether standing or sitting the individual worker should be able to adjust his/her position to enable the requirements.

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### a) Safety representatives

Safety reps do a valuable job in reducing accidents and injuries at work - independent surveys have found that the accident rate in workplaces where there are safety reps who are consulted properly by management can be as much as 50% less than workplaces with no safety

But, to be effective, they need to know what is going on. They have a legal right to inspect the workplace, on a quarterly basis, but they also need to be told when incidents happen.

If members put details into Accident Books, the rep can see what has been going on in the workplace over the preceding three months when they start their inspections.

### b) Legal duty on employees

Under the 1999 Management of Health and Safety at Work Regulations, employees have a legal duty to inform the employer of any work situation that they consider represents a serious and imminent danger to health and safety and, in addition, of any matter which they think represent a shortcoming in the employer's protection arrangements for health and safety.

So, if you know that something is a risk to safety, you must tell your employer (via your line manager) or bring it to the attention of your local PCS safety rep, who can follow the matter up with management.

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## Self-Check -1

Written Test

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

### Part I Answer the following question.(each 2point)

1. what to keep in our mind For Safety precautions ?
2. What the operator should train for his/her safety?
3. what are main constituent which guide us towards best ergonomically practices?
4. How to Prepare Workbench for basic Sketches Set Up?
5. what are five steps to risk assessment for effective workplace practice?

**Note: Satisfactory rating - 6 and 10 points    Unsatisfactory - below 6and 15points**

You can ask you teacher for the copy of the correct answers.

### Answer Sheet

Score = \_\_\_\_\_

Rating: \_\_\_\_\_



## Information Sheet 2 - Selecting drawing tools and equipment

### Selecting Drawing Tools and Equipment

The Design studio/workshop environment is preliminary process for designing. The work is performed according a system of work process and culture. The staff and employees having a considerable knowledge in designing parts ,construction parts, material knowledge, production procedure and experience in preparation of work. The drawing tool department where pencil, knife, eraser etc. and equipment are stored should take care of not only use but also for its storage and handling. Material type is a major data which identifies what data is relevant to the related material and identifies basic behaviors of the material.

#### a) LAYOUT PAD

Layout Pad a book of plain paper containing sketches or for making sketches in Hasty writing notes or sketches. It is in thin to allow see things underneath and trace. It is used for designers and to create layout. It is excellent for blending colors and building tones.

The Layout Pad size is depending according to the paper sizes. In the ISO paper size system, the height-to-width ratio of all pages is the square root of two ( $1.4142: 1$ ). In other words, the width and the height of a page relate to each other like the side and the diagonal of a square. This aspect ratio is especially convenient for a paper size. If you put two such pages next to each other, or equivalently cut one parallel to its shorter side into two equal pieces, then the resulting page will have again the same width/height ratio.



fig .layout pad

The ISO paper sizes are based on the metric system. The square-root-of-two ratio does not permit both the height and width of the pages to be nicely rounded metric lengths. Therefore, the area of the pages has been defined to have round metric values. As paper is usually specified in  $m^2$ , this simplifies calculation of the mass

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of a document if the format and number of pages are known. It uses to make sketching new ideas or creative ideas. So our Sketch book uses as bank account, when we want start new work, we can see our previous Sketches. In addition we can develop our skill of drawing.

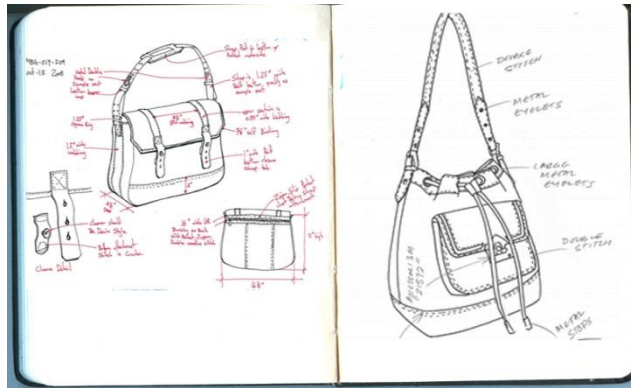
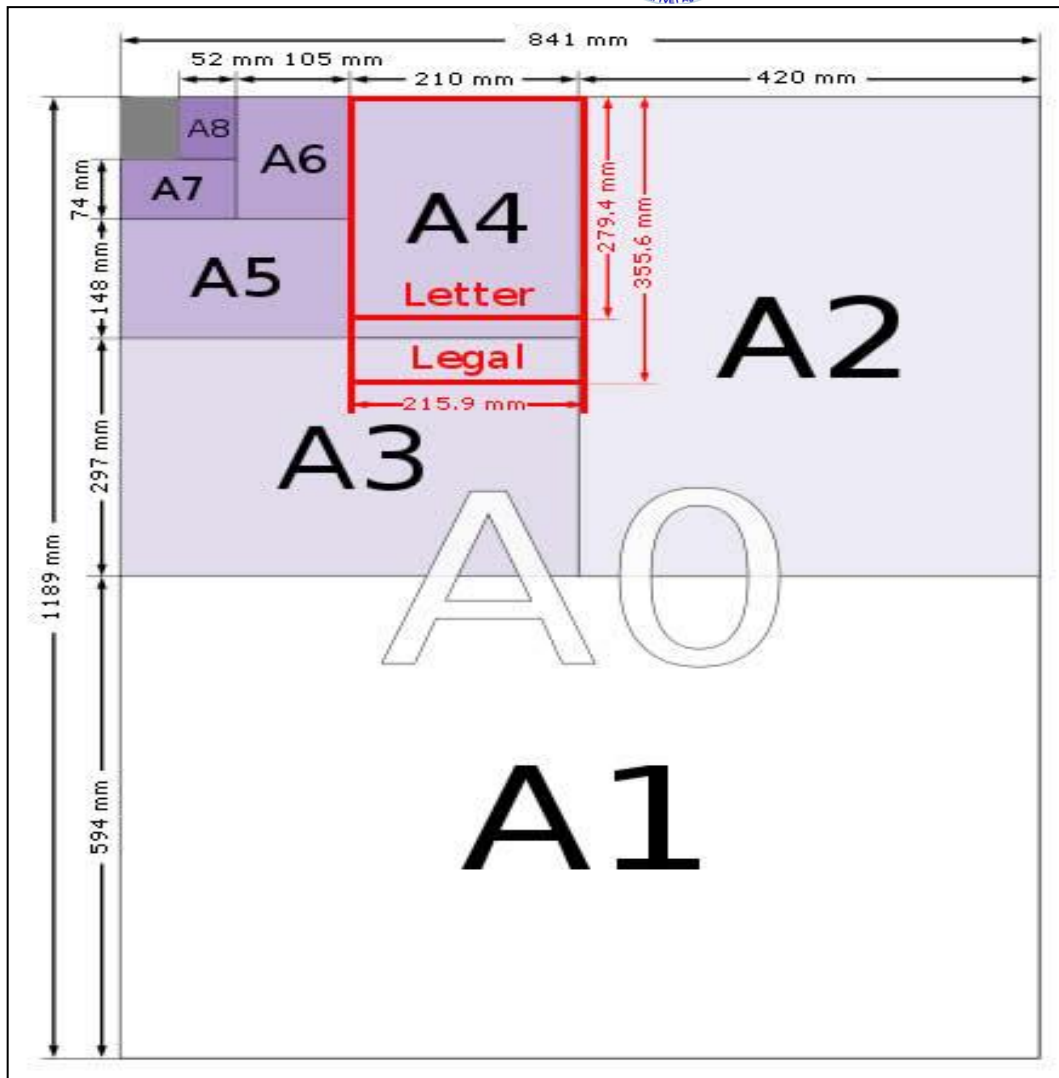


fig. layout pad with sketch

❖ papers: dimensions of a series

❖ paper sizes





## b) PENCILS WITH HB LEADS

Many pencils across the world, and almost all in Europe, are graded on the European system using a continuum from “H” (for hardness) to “B” (for blackness), as well as “F”, a letter arbitrarily chosen to indicate midway between HB and H. (It is a persistent myth that “F” stands for “Fine”; grade F pencils are no more fine or easily sharpened than any other grade). The standard writing pencil is graded **HB**. According to Petro ski, this system might have been developed in the early 20th century by brook man, an English pencil maker. It used “B” for black and “H” for hard; a pencil's grade was described by a sequence or successive Hs or Bs such as **BB** and **BBB** for successively softer leads, and **HH** and **HHH** for successively harder ones.

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As of 2009, a set of pencils ranging from a very hard, light-marking pencil to a very soft, black-marking pencil usually ranges from hardest to softest as follows:



**fig. pencil and mechanical pencil**

Pencils in use are usually mechanical pencils with a standard lead thickness. General line widths are 0.18 mm, 0.25 mm, 0.5 mm and 0.7 mm. Hardness varies usually from HB to 2H. Softer lead gives a better contrast, but harder lead gives more accurate track. Bad contrast of the lead track in general is problematic at photocopying, but new scanning copy techniques have improved the final result. Paper or plastic surfaces do require their own lead types.

### ❖ COLOR PENCILS

Color pencils are used to create the drawings more life. It gives bright and lucrative view to the illustration or drawings. Some of the pencil colors are water based, and it creates an artistic designer. The effects of this color look water color painting. First use it on the drawing and then put water with the brush into the drawing. After drying the image use again the color pencils on the drawing and give an effect of light and dark shades. The drawing will be highlighted and original.

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- ❖ **Graphite pencils** are used for both writing and drawing, and the result is durable: although writing can usually be removed with an eraser, it is resistant to moisture, most chemicals, ultraviolet radiation and natural aging. Other types of pencil core are less widely used.



- ❖ **Charcoal pencils** are mainly used by artists for drawing and sketching.



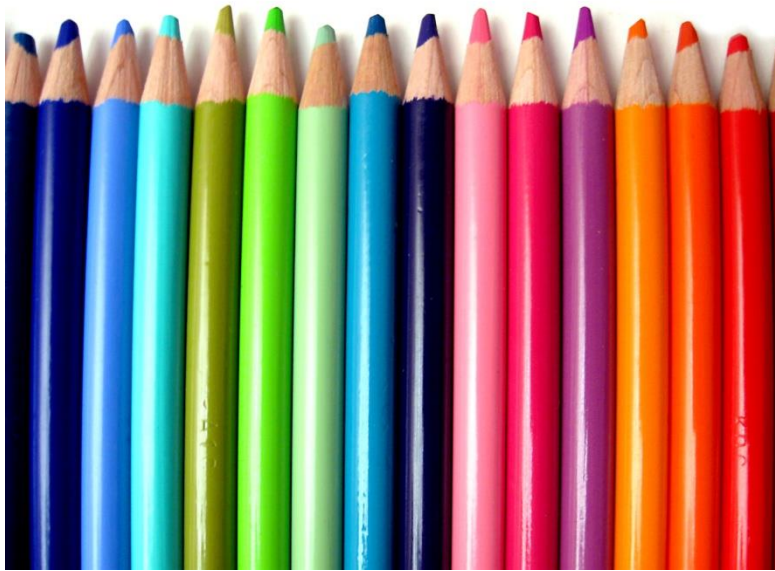
- ❖ **Colored pencils** are sometimes used by teachers or editors to correct submitted texts but are more usually regarded as art supplies, especially those with waxy core binders that tend to smear on paper instead of erasing.



- ❖ **Grease pencils** have a softer crayon-like waxy core that can leave marks on smooth surfaces such as glass or porcelain.



The most common type of pencil casing is a thin wooden cylinder permanently bonded around the core. Similar permanent casings may be constructed of other materials such as plastic or paper. To use the pencil, the casing must be carved or peeled off to expose the working end of the core as a sharp point.



**fig. color pencil**

### **c) PENCIL SHARPNER**



**fig pencil sharpener**

A thin cylindrical instrument used for writing, drawing, etc., consisting of a rod of graphite or other marking substance, usually either encased in wood and sharpened or held in a mechanical metal device.

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**Cutter with blender** it is made up of steal & us you know it uses to cut paper leather and to make sharper a pencil.



**fig .cutter**

#### **d) Eraser (rubber)**

**Eraser (rubber)** an object, typically a piece of soft rubber or plastic, used to rub out something written (or of a synthetic material with properties similar to rubber); commonly mounted at one end of a pencil.

Part of drawing is making mistakes. (I'd probably argue with myself on that opening sentence.) Part of drawing is subtracting. (That's probably more accurate.) Erasers are an inevitable part of the process of subtraction in drawing. I'm not going to discuss the many ways that erasers can be used to actually create the drawing in this article. Instead, I want to give you a run-down of the different types of erasers and what they are generally used for. there are different type of eraser. Such us:-

**1. Rubber Erasers-** A rubber eraser is the most common type of eraser out there. It can be found at the end of every #2 pencil. Rubber erasers are generally colored pink, although I have seen them available in all different types of colors. The Pink Pearl brand eraser is a standard for most artists. It comes as a wedge shape and is colored pink. Rubber erasers are best suited for erasing pencil (graphite) on paper. It works by shedding itself as it lifts the pigment from the surface. Rubber erasers will not tear the paper unless they are used over-aggressively. Rubber erasers are also quite economical.



**fig. rubber pencil**

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**2. Kneaded Erasers-** Kneaded erasers are very soft, pliable erasers that are formed and sculpted. They are a unique breed of eraser because of this feature. They work by lifting the pigment off of the surface. Because of this, kneaded erasers will not harm the surface. Because they are easy to form, kneaded erasers are particularly popular with artists. Kneaded erasers become dirty as they erase but can be pulled and manipulated to clean them. They can even be washed. The standard color for kneaded erasers is gray, although I have seen them in all sorts of colors. Kneaded erasers are mostly used for graphite and charcoal. Kneaded erasers are best suited for charcoal. These erasers are a bit more expensive than rubber erasers.



**fig. Kneaded Erasers**

**3. Vinyl Erasers-** Vinyl erasers are made of soft vinyl and are sometimes called plastic erasers. These erasers are the toughest of the bunch. If not used properly, they can easily tear paper. Vinyl erasers can erase almost anything including ink. Vinyl erasers are usually white and come in a variety of shapes. Many draftsmen prefer vinyl erasers because of their ability to erase cleanly and completely. Vinyl erasers are fairly expensive, ranging in depending on the brand.



**Fig. Vinyl Erasers-**





#### e. Drawing board



**fig. drawing board**

The drawing board is an essential tool. Paper will be attached and kept straight and still, so that the drawing can be done with accuracy. Generally, different kind of assistance rulers is used in drawing. The drawing board is usually mounted to a floor pedestal in which the board turns to a different position, and also its height can be adjustable. Smaller drawing boards are produced for table-top use. In the 18th and 19th centuries, drawing paper was dampened and then its edges glued to the drawing board.

After drying the paper would be flat and smooth. The completed drawing was cut free Paper could also be secured to the drawing board with pins. More recent practice is to use self-adhesive tape to secure paper to the board. Some drawing boards are magnetized, allowing paper to be held down by long steel strips. Boards used for overlay drafting or animation may include registration pins or peg bars to ensure alignment of multiple layers of drawing media

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## 6. TEMPLATES

Templates contain pre-dimensioned holes in the right scale to accurately draw a symbol or sign.

Letter templates will deliver the text, as well number as letter characters. Diagrams are usually of a standard letter shape and size to conform to standards of encodings (e.g. DIN or ANSI). For example in Finland the series used is 1.8 mm, 2.5 mm, 3.5 mm, 5.0 mm and 7.0 mm. Except for the very biggest ones, the templates are suitable for only technical pen drawing.

For drawing circles and circle-arcs, circle templates are used, containing a suitable set of holes in certain dimensions. Models are also available for other geometric shapes such as squares and for drawing ellipses.

A good example of this is the ISO Sketch® 3D drawing tool, which allows users to create accurate drawings in isometric projection, in a compact tool that fits into a pencil case or pocket.

There are also specific templates to provide user with the most common symbols in use in different branches of designing. For example the architect templates can be used to draw different sized doors with their "opening arcs", building and equipment symbols and furniture. The templates also provide the symbols for thermal insulation.

Two methods of drawing smooth curves in manual drafting are the use of French curve flat spines or (flexible curves). A French curve is a drawing aid with many different smoothly-varying radiuses curves on it; the manual drafter can fit the French curve to some known reference points and draw a smooth curved line between them. A spine is a flexible ruler, usually rubber or plastic coated with a metal "backbone", which can

## 7. DIFFERENT COLORS:

A Crayon (or wax pastel) is a stick of colored wax, charcoal, chalk or other material. A crayon made of oiled chalk is called an oil pastel; when made of pigment with a dry binder, it is simply a pastel. A grease pencil or china marker (UK china graph pencil) is made of colored hardened grease.

There are also watercolor crayons, sometimes called water-soluble crayons. Crayons, which are available at a range of price points, are easy to work with, often less messy than paints and markers, blunt (removing the risk of sharp points present when using a pencil or pen), usually non-toxic, and are available in a wide variety of colors. These characteristics make them particularly good

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instruments for teaching small children to draw in addition to being used widely by student and professional artists.



Colored Pencil is an art medium constructed of a narrow, pigmented core encased in a wooden cylindrical case. Unlike graphite and charcoal pencils, colored pencils' cores are wax-based and contain varying proportions of pigments, additives, and binding agents. Oil-based, water-soluble and mechanical colored pencils are also manufactured.



Colored pencils can vary greatly in terms of quality and usability; concentration of pigments in the wax core, lightfastness of the pigments, durability of the colored pencil, softness of the lead, and range of colors are indicators of a brand's quality and, consequently, its market price.

Typically, water-soluble and oil-based colored pencils are considered to be a higher quality than their wax-based counterparts, but for many artists, these differences are a matter of preference. Rising popularity of colored pencils as an art medium sparked the beginning of the Colored Pencil Society of America (CPSA).

The CPSA not only promotes colored pencil art as fine art, but also strives to set light fastness standards for colored pencil manufacturers. Other countries such as Great Britain, Canada, and Australia – among many others – have formed their own organizations and societies for colored pencil artists.

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**Water Color** is the medium or the resulting artwork in which the paints are made of pigments suspended in a water-soluble vehicle. The traditional and most common support for watercolor paintings is paper; other supports include papyrus, bark papers, plastics, vellum or leather, fabric, wood, and canvas.



Watercolors are usually transparent, and appear luminous because the pigments are laid down in a relatively pure form with few fillers obscuring the pigment colors. Watercolor can also be made opaque by adding Chinese white. In East Asia, watercolor painting with inks is referred to as brush painting or scroll painting. In Chinese, Korean, and Japanese painting it has been the dominant medium, often in monochrome black or browns. India, Ethiopia and other countries also have long traditions. Finger-painting with watercolor paints originated in China.

**8. PAINT BRUSHES:** A brush is a tool with bristles, wire or other filaments, used for cleaning, grooming hair, makeup, painting, surface finishing and for many other purposes. It is one of the most basic and versatile tools known to mankind and the average household may contain several dozen varieties.

It generally consists of a handle or block to which filaments are affixed either parallel- or perpendicular-wise, depending on the way the brush is to be gripped during use.

The material of both the block and bristles or filaments is chosen to withstand hazards of its application, such as corrosive chemicals, heat or abrasion.

Artists' brushes:

Short handled brushes are for watercolor or ink painting while the long handled brushes are for oil or acrylic paint.

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## SHAPES OF BRUSHES:

The styles of brush tip seen most commonly are:

1. **Round:** pointed tip, long closely arranged bristles for detail.
2. **Flat:** for spreading paint quickly and evenly over a surface. They will have longer hairs than their Bright counterpart.
3. **Bright:** shorter than flats. Flat brushes with short stiff bristles, good for driving paint into the weave of a canvas in thinner paint applications, as well as thicker painting styles like impasto work.
4. **Filbert:** flat brushes with domed ends. They allow good coverage and the ability to perform some detail work.
5. **Fan:** for blending broad areas of paint.
6. **Angle:** like the filbert, these are versatile and can be applied in both general painting application as well as some detail work.
7. **Mop:** a larger format brush with a rounded edge for broad soft paint application as well as for getting thinner glazes over existing drying layers of paint without damaging lower layers.
8. **Rigger:** round brushes with longish hairs, traditionally used for painting the rigging in pictures of ships. They are useful for fine lines and are versatile for both oils and watercolors.
9. **Stippler** and **deer-foot stippler:** short, stubby rounds
10. **Liner:** elongated rounds
11. **Scripts:** highly elongated rounds.

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**9. SPRAY PAINTING:** is a painting technique where a device sprays a coating (paint, ink, varnish, etc.) through the air onto a surface. The most common types employ compressed gas—usually air—to atomize and direct the paint particles.



be smoothly shaped to follow a desired curve and allows drawing a smooth line between initial reference points. Sometimes a spine is temporarily held in position with small weights.

The quality of work according to designing tools and equipment depends on good work environment and work practice. To create a proper preparation for work special attention should be taken —

- Clean your working place,
- Wait for instructors brief,
- Taken over tools, training material, components, product in process,
- Clean and lubricate sewing machine before use if any,
- Work on base the plan or instructors direction
- Keep the time, checking in/ checking out,
- Do not continue on work if any poor quality of component appears/ bad patterns/ machines not tuned or something is damage,
- Observe the rules of safety, tidiness, quality, timing,
- Put everything in order – Working bench, Materials, Machines, Tools etc,
- Record final your Daily Report,

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- Store semi- products, components in progress properly,
- Clean and cover the machines,
- Turn-off the electric power of machines, and main switch,
- Turn in tools, unearned material to instructor,
- Separate wastage materials, and clean the workplace for next day.

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## Self-Check -2

### Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

Fill the blank space.(each 1point)

- 1- ----- a book of plain paper containing sketches or for making sketches in Hasty writing notes
- 2- The ISO paper sizes are based on the \_\_\_\_\_.
- 3- ----- an object, typically a piece of soft rubber or plastic, used to rub out something written.
- 4- . \_\_\_\_\_used for overlay drafting or animation may include registration pins or peg bars to ensure alignment of multiple layers of drawing media
- 5- A \_\_\_\_\_ is a drawing aid with many different smoothly-varying radiuses curves.

### Part II True or False.(each 1point)

- 1- Clean and lubricate sewing machine after use if any.
- 2- Separate wastage materials, and clean the workplace for next day.
- 3- Design of product is haphazard drawn in pencil using templates.
- 4- Use the rubber for drawing as hard as possible.
- 5- Color pencil gives bright and lucrative view to the illustration or drawings.

. Answer the following question!

**Note: Satisfactory rating – 5 and 10 points Unsatisfactory - below 5 and 15 points**

You can ask you teacher for the copy of the correct answers.

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

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### Information sheet 3:- Setting out tools and equipment to facilitate effective work practice.

**Tools and equipment are set out to facilitate effective work practice**



**Working table for designer / artists / crafters:**

**A Place for Everything:** And everything in its place and that is not on the floor or any other traffic area. Organize as best you can and don't let your work area get too cluttered. A few minutes cleaning up and putting up can save you hours later.

**Correct Sitting Posture:** Invest in a proper sized chair for your work area(s) if you sit for more than 1/3 of your day. You should be able to sit back comfortably in the chair with your feet flat to the floor. Do not cross your legs. We begin our series with proper chair setup. If you are not seated correctly, everything else is doomed. It is important that your chair have a seat-pan and back that adjust independently of one another.

**1.) Body Position:** When you sit in a chair, you want your knees to be at the same height or slightly below your hips, with your feet planted firmly on the floor.

**2.) Seat Position:** You want 1 to 4 inches between the seat pan and the back of your leg.

**3.) Back Rest Height:** Adjust the back of the chair, so that the bottom of the back rest hits your lower back.

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**4.) Back Pressure:** Adjust the back of the chair, so that it supports your back and does not propel you forward or force you to lean back.

**5.) Proper Chair:** Once you are seated properly, you can move on to setting up your proper desk ergonomics.

**A Drawing board** is regarded as a table, which can be used for more than one purpose. By this, it means that people can use it for sketching, by putting a sheet of paper on the board. Also, people can use this table for writing or even reading any book that they wish to read. If a person needs to sketch or draw something, he or she will require a smooth surface, which would make it easy to complete the work.

The purpose of the **drawing board** is to ensure that people are given a chance to carry out their work in an effective manner through the use of these boards which allows them to be comfortable while working.

**Proper Lightening on the table:** Invest in it. Natural light is the best, but make sure that there is plenty of non-glare lighting. Try to use as much full spectrum lighting as you can in your work area.

**Effective & precise tools at your comfortable reach:** Try and test tools before buying and look for user-friendly designs like spring-loaded, padded handles, easy grips, and other comforts.

**Work in A Circle & Semi-Circle:** Create a work area that forms a circle. The more a tool or supply is used the closer it should be to your reach and towards the front of the work circle (the front of the work circle is the area in front of you as you are sitting).

**Keep notepad & take Notes at least once in day:** Make notes of repetitive movements. Try to vary and change the repetitive movements.



## Self check 3:written test

**Directions:** Answer all the questions listed below.

### Part- A

**Fill in the blanks: (points 2.5 each)**

1. A Drawing board is regarded as a table, which can be used for more than one \_\_\_\_\_.
2. To get maximum benefits put your effective & precise tools at your \_\_\_\_\_ reach.

### Part- B

**True / False: (points 2.5 each)**

1. SEAT POSITION: You want 1 to 4 inches between the seat pan and the back of your leg.
2. BACK REST HEIGHT: Adjust the back of the chair, so that the bottom of the back rest hits your lower back.

### Part- C

**Short answers questions: (points 5 each)**

1. Why it is advisable to Work in A Circle & Semi-Circle?
2. Explain benefits of place for everything?

**Note: Satisfactory rating - 10 points**  
teacher for the copy of the correct answers

**Unsatisfactory - below 10 points** you can ask your

### Answer Sheet

Score = \_\_\_\_\_

Rating: \_\_\_\_\_



<b>LG #6</b>	<b>LO #2- CREATE COMPOSITIONS USING ELEMENTS AND BASIC DESIGN PRINCIPLES</b>
<b>Instruction sheet</b>	
<p>This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:</p> <ul style="list-style-type: none"> <li>• Selecting and interpreting Elements of designs</li> <li>• Interpreting and studying basic principles of design and visual aesthetics</li> <li>• Developing compositions using design elements</li> <li>• Depicting moods through basic elements of design</li> </ul> <p>This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:</p> <ul style="list-style-type: none"> <li>• Select and interpret Elements of designs</li> <li>• Interpret and study basic principles of design and visual aesthetics</li> <li>• Develop compositions using design elements</li> <li>• Depict moods through basic elements of design</li> </ul>	
<b>Learning Instructions:</b>	
<ol style="list-style-type: none"> <li>1. Read the specific objectives of this Learning Guide.</li> <li>2. Follow the instructions described below.</li> <li>3. Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them</li> <li>4. Accomplish the “Self-checks” which are placed following all information sheets.</li> <li>5. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks).</li> <li>6. If you earned a satisfactory evaluation proceed to “Operation sheets</li> <li>7. Perform “the Learning activity performance test” which is placed following “Operation sheets” ,</li> <li>8. If your performance is satisfactory proceed to the next learning guide,</li> <li>9. If your performance is unsatisfactory, see your trainer for further instructions or go back to “Operation sheets”.</li> </ol>	



## Information Sheet 1: Selecting and interpreting Elements of designs

### Selecting and interpreting Elements of designs

The elements of design create every object around us. Nothing can exist without these ingredients. The discipline of learning the power of these elements and formatting them within the principles of design is the responsibility of the designer. this are

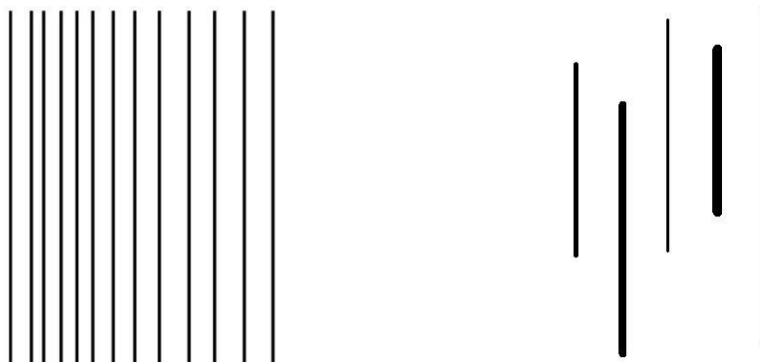
#### I.Line

A line represents a "path" between two points. The simplest design element is the line. A line can be straight, curved, vertical, horizontal, diagonal, or zigzag. Lines imply motion and suggest direction or orientation. A line can also be implied, that is filled in by the mind when several points are positioned geometrically within a frame. Placing four dots on a page in the shape of a square can imply the points are linked as the mind searches for recognizable patterns.

The direction and orientation of a line can also imply certain feelings. Horizontal lines imply tranquility and rest, whereas vertical lines imply power and strength. Oblique lines imply movement, action and change. Curved lines or S shaped lines imply quiet, calm and sensual feelings. Lines that converge imply depth, scale and distance - a fence or roadway converges into the distance provides the illusion that a flat two-dimensional image has three-dimensional depth. A line is an effective element of design because it can lead the viewer's eye. Thick lines are bold, and thin ones are more delicate.

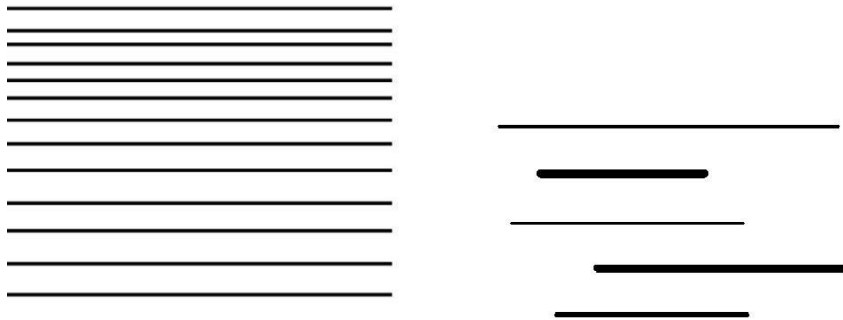
Classification of lines:

- 1) **Vertical lines**- lines that move up and down without any slant

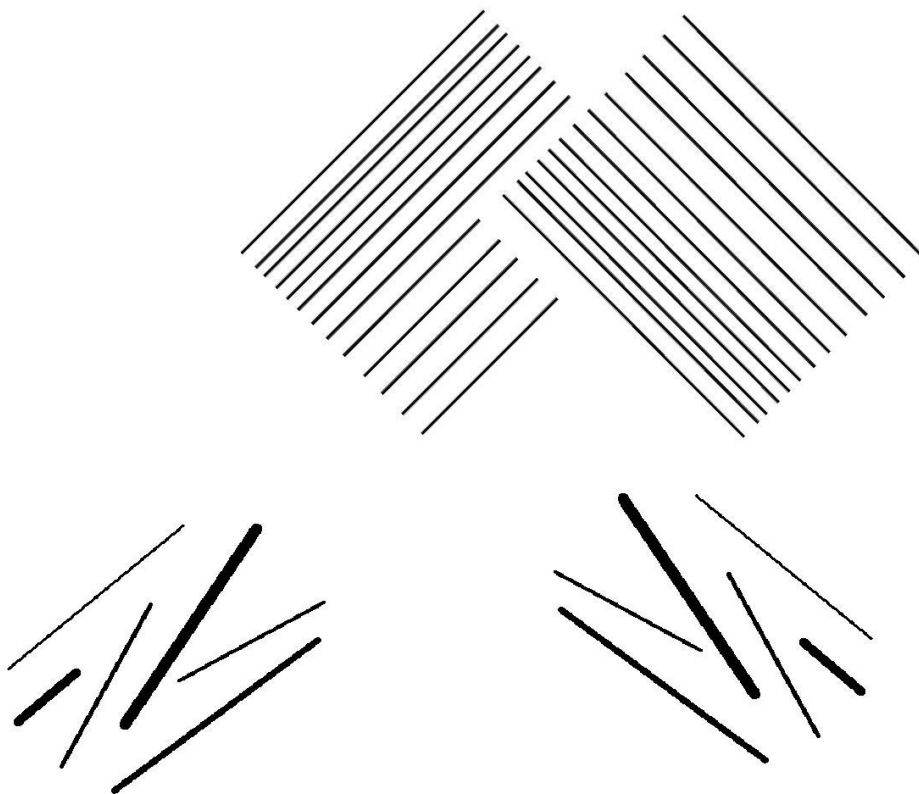




2) **Horizontal lines**- lines that are parallel to the horizon



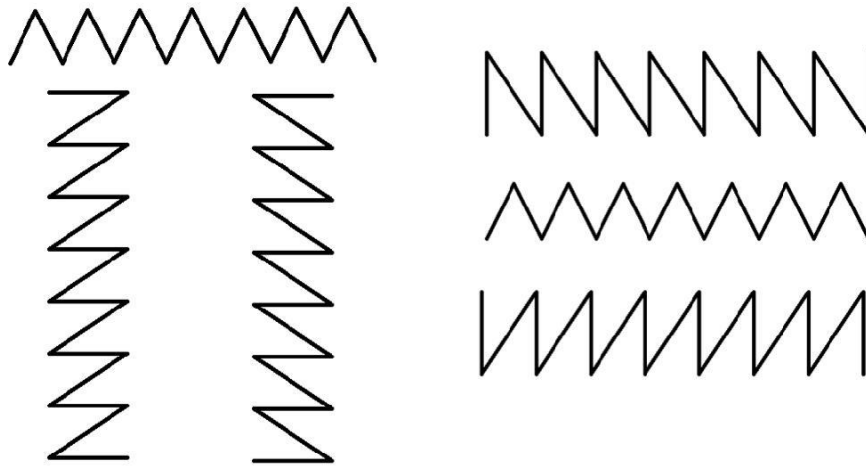
3) **Diagonal lines**- lines that slant way and from right bottom to left top and vise verse.



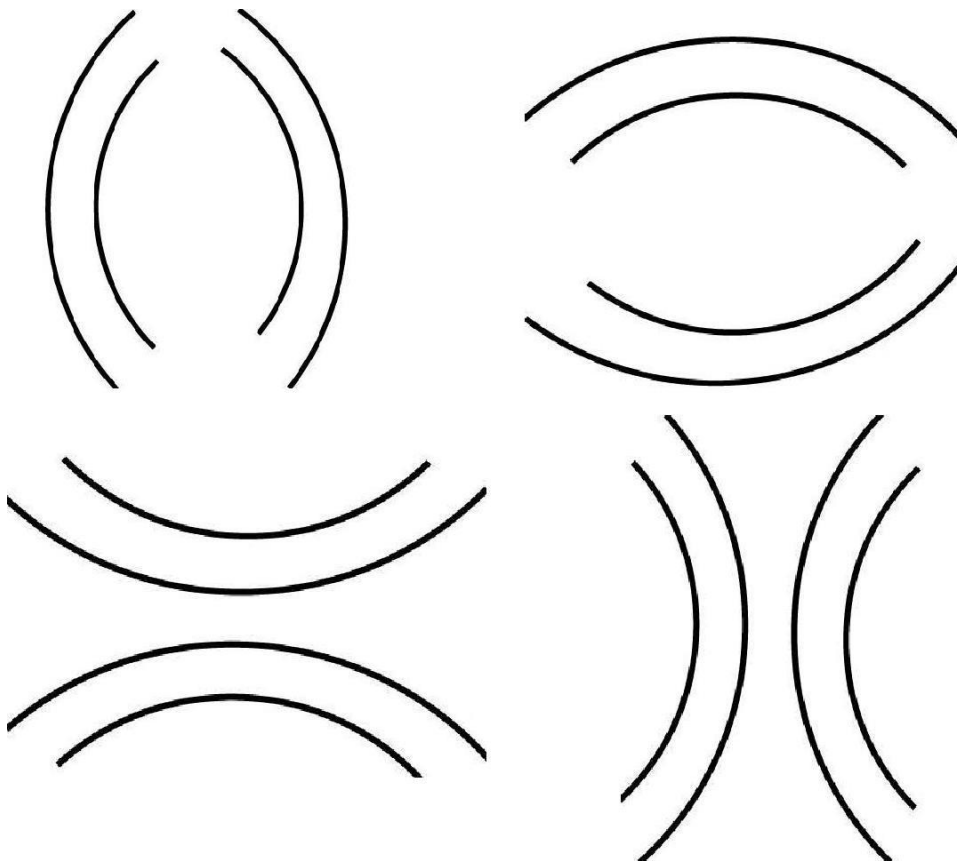


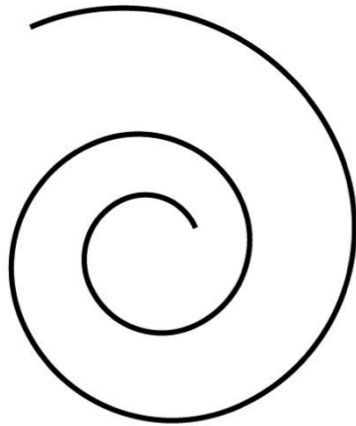


4) **Zigzag lines**- lines made from a combination of diagonal lines



5) **Curved lines**- Lines that change direction gradually





### Dimensional properties of Line:

- Length- lines can be long or short



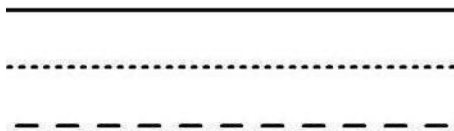
- Width- lines can be wide or skinny



- Texture- lines can be rough or smooth



- Continuity- Lines can be continuous or dotted or dashed





## Application of lines in Goods design:

Line in a goods includes the outline of the goods and the style lines that divide the space within the outline. These lines can be vertical, horizontal, diagonal, and curved. The line can create visual illusions, such as height, which can lengthen or shorten the figure, and width which can make the figure appear heavier or thinner. The eye follows the line, therefore, the line can draw the eye away from a less desirable area to another area.

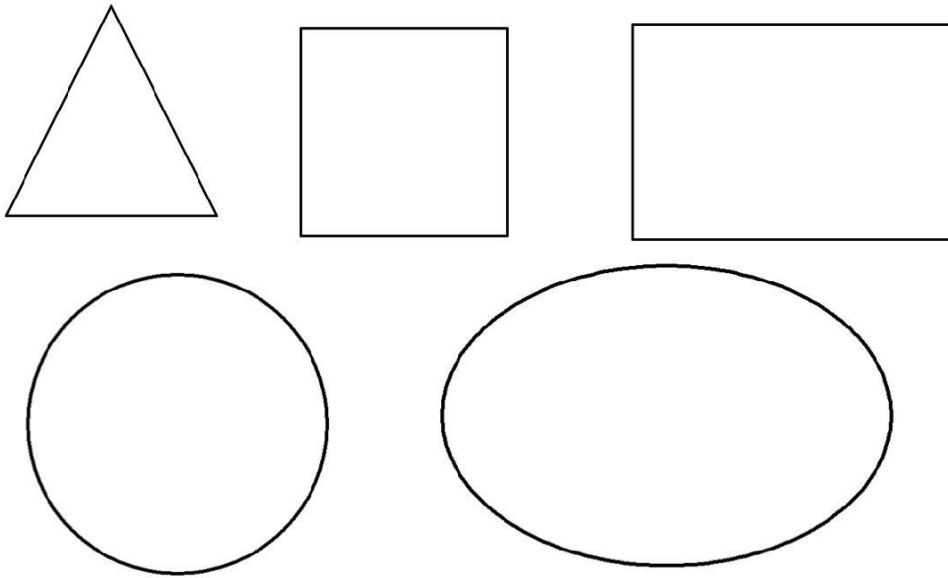


Fig application of line leather bag



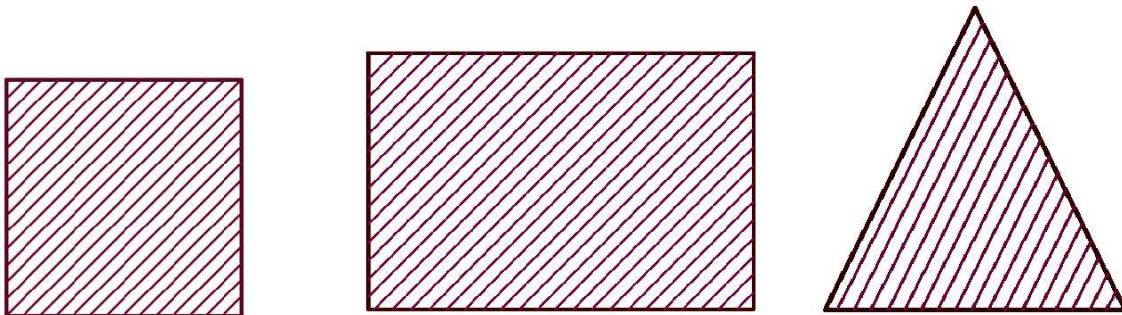
## II. Shape

Shape is a two-dimensional area that is defined by specific area either filled region or empty space.



Images of outline region

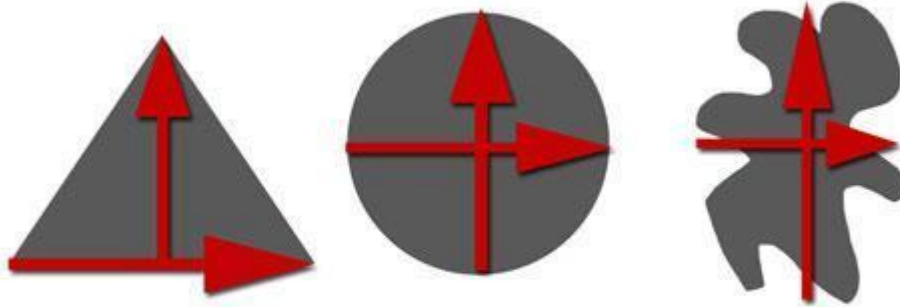
### Semi filled of Hatched shapes:





### Filled in or solid shape

All shapes are two-dimensional, meaning that they have only length and width.



All shapes will fall into one of two categories.

Geometric shapes or regular shapes are easy to recognize. Math can be used to find information about these shapes and these shapes generally have a specific name associated with them. Examples include: circle, triangle, square, and trapezoid.



Organic or freeform shapes are shapes that seem to follow no rules. Organic shapes generally do not have a name associated with them and are typically not man-made.



## The Meaning of Shapes

There are truly an endless variety of shapes and combination of shapes, each communicating its own meaning and message. Often the meaning behind shapes is cultural (a red octagon as a stop sign), particularly as shapes are combined.

### a)Circles



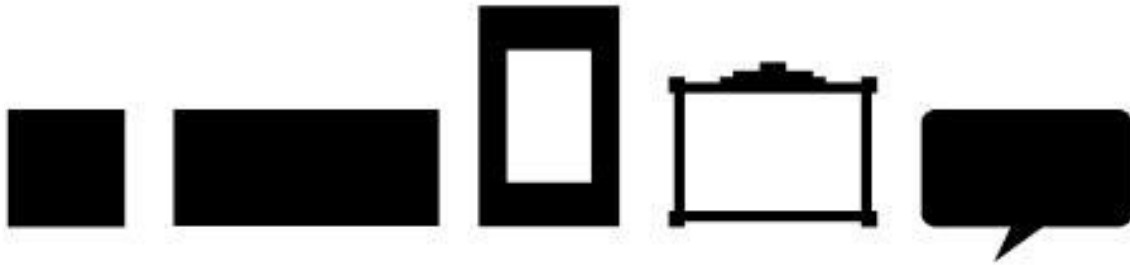
Circles have no beginning or end. They represent the eternal whole and in every culture are archetypical forms representing the sun, the earth, the moon, the universe, and other celestial objects such as wheels, balls, many kinds of fruit. They suggested well roundedness and completeness. Circles have free movement. They can roll. Shading and lines can enhance this sense of movement in circles. Circles are graceful and their curves are seen as feminine. They are warm, comforting and give a sense of sensuality and love. Their movement suggests energy and power. Their completeness suggests the infinite, unity, and harmony. Circles protect, they endure, they restrict. They confine what's things and keep things out. They offer safety and connection. Circles suggest community, integrity, and perfection. Because they are less common in design they work well to attract attention, provide emphasis, and set things apart.

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## b) Squares and Rectangles

Squares and Rectangles are stable. They're honest. They have right angles and represent order, mathematics, rationality, and formality. They are seen as earthbound. Rectangles are the most common geometric shape encountered. The majority of text we read is set in rectangles or squares. Squares and rectangles suggest conformity, peacefulness, solidity, security, and equality. Their familiarity and stability, along with their commonness can seem boring. They are generally not attention getters, but can be tilted to add an unexpected twist.



## c) Triangles

**Triangles** can be stable when sitting on their base or unstable when not. They represent dynamic tension, action, and aggression. Triangles have energy and power and their stable/unstable dynamic can suggest either conflict or steady strength. They are balanced and can be a symbol for law, science, and religion. Triangles can direct movement based which way they point. They can be used to suggest familiar themes like pyramids, arrows and pennants. Spiritually they represent the religious trinity. They can suggest self-discovery and revelation. The strength of triangles suggests masculinity.





## d)Spirals

**Spirals** are expressions of creativity. They are often found in the natural growth pattern of many organisms and suggest the process of growth and evolution. Spirals convey ideas of fertility, birth, death, expansion, and transformation. They are cycles of time, life, and the seasons are a common shape in religious and mystical symbolism. Spirals move in either direction and represent new levels of understanding. They represent trust during change, the release of energy and maintaining flexibility through transformation.



Clockwise spirals represent projection of an intention and counterclockwise spirals the fulfillment of an intention. Double spirals can be used to symbolize opposing forces.

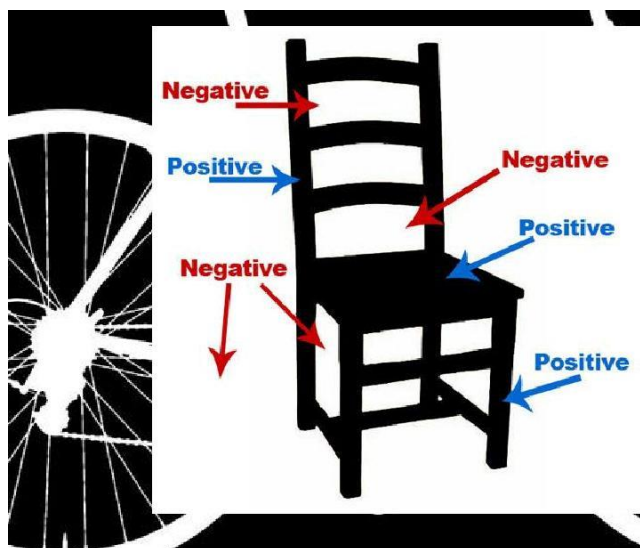
We can learn to see the world around us as shapes. Recognizing the shapes that we see will lead to improved drawing and painting.





Shapes defined by objects are positive shapes (space). Shapes defined around objects are negative shapes (space).

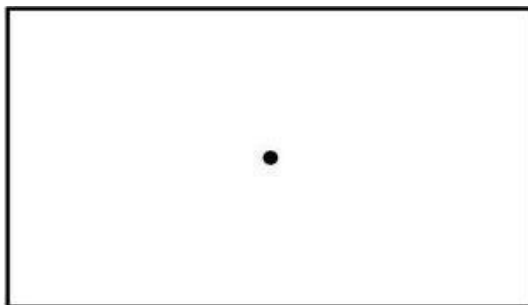
The relationships between the positive and negative shapes help the brain of our viewers understand what they are seeing. Our brains are even capable of making sense of complex relationships between positive and negative shapes



By organizing geometric and organic shapes, we can draw anything. Even complicated objects become easy to draw when we isolate basic geometric and organic shapes.

### III. Point

The point is the first and simplest element of visual design.

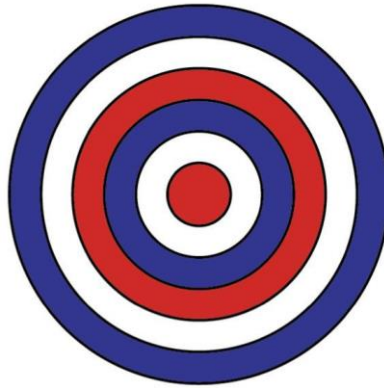




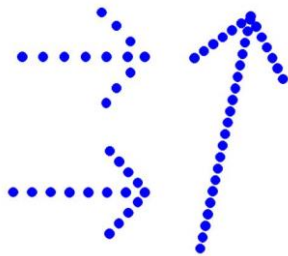
The point serves as the focus of a visual, highlighting or drawing attention to important information.

### **Bulls Eye**

Several points in combination may represent a more complicated object or idea.

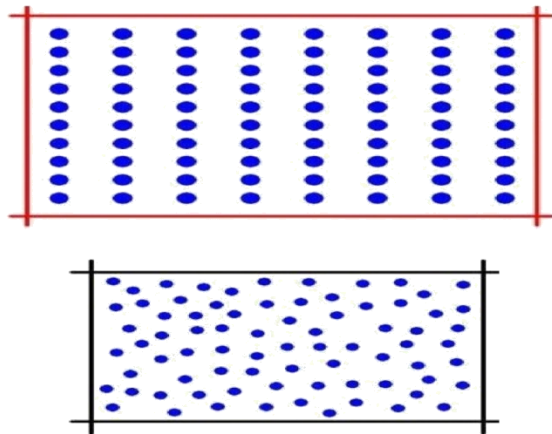
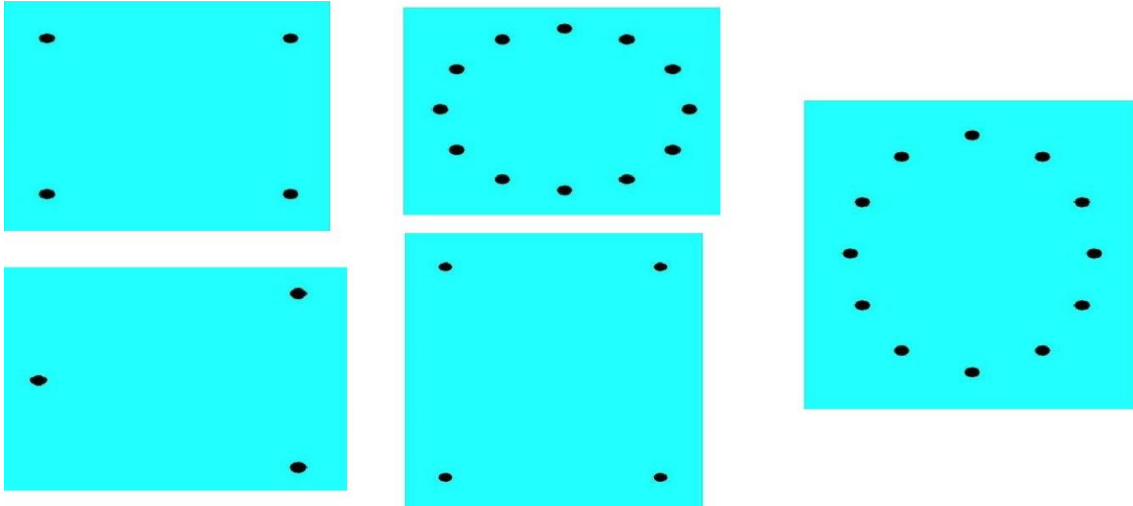


A series of points can attract attention, especially as they move closer together.





Represent a more complicated object or idea in order to keep the image clear and simple.





## IV. Form

Form refers to the three-dimensional quality of an object, which is due in part to light, and dark areas. When light from a single direction (e.g. our sun) hits an object, part of the object is in shadow. Light and dark areas within an image provide contrast that can suggest volume. Factors that can affect our feelings towards an image include the direction of the light source, from above or below, and the gentleness or abruptness of the half tones. Light coming from behind a subject can form a silhouette resulting in object that is completely black against a lighter colored background.

Silhouettes appear as two-dimensional shapes lacking form. The absence of color often enhances our perception of form for instance in black and white photographs. Light emitted from above and to the side when applied to portraits creates what is often referred to as "Rembrandt lighting". This form of lighting emphasizes edges and depth. In landscape photography oblique lighting occurs early and late in the day where it enhances the natural texture of the landscape and is often accompanied by warm or cool color.

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*Form*- an element of art, means objects that have three dimensions. I like to think of form as a 3-D.

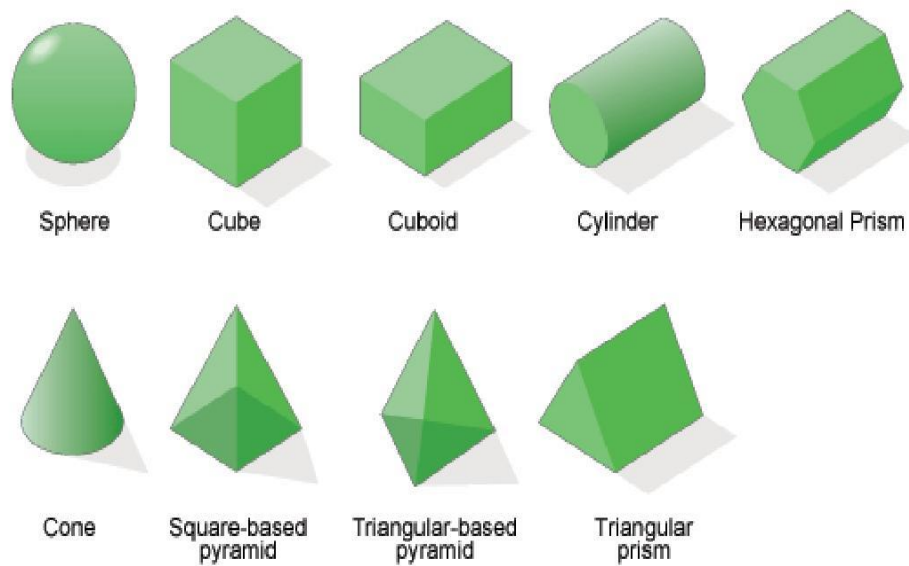
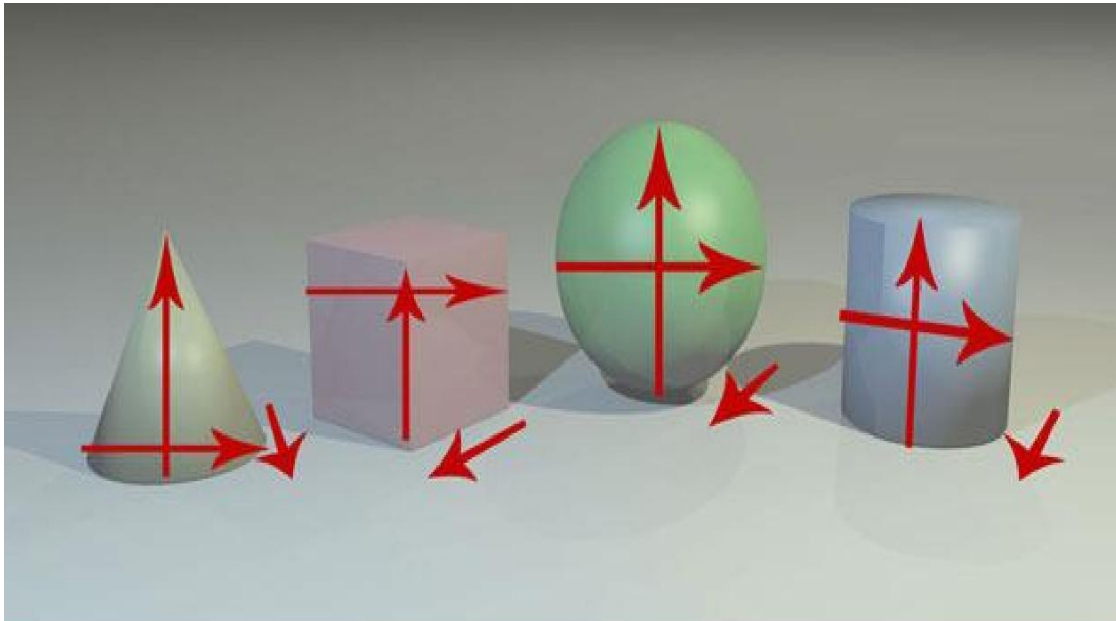
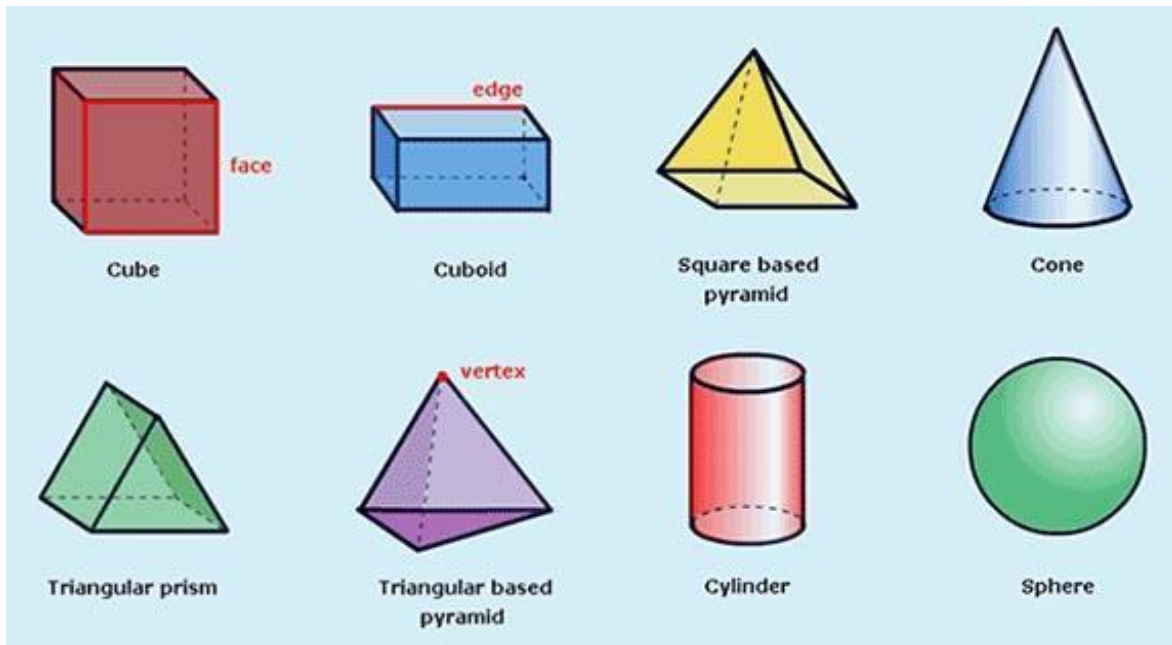


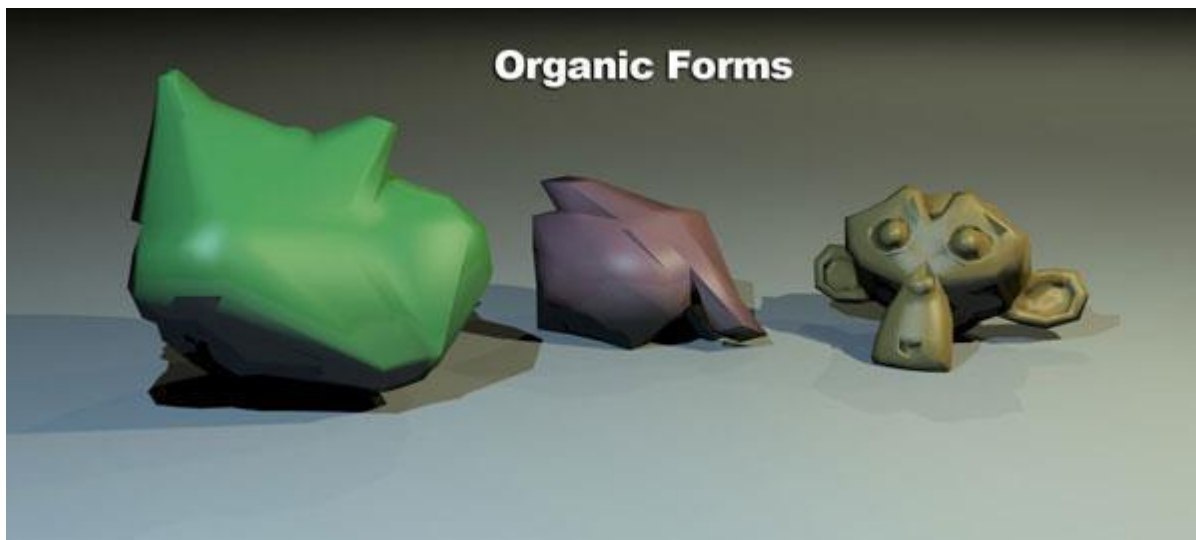
Fig.3D of an object



Geometric forms have specific names associated with them and are typically man-made.



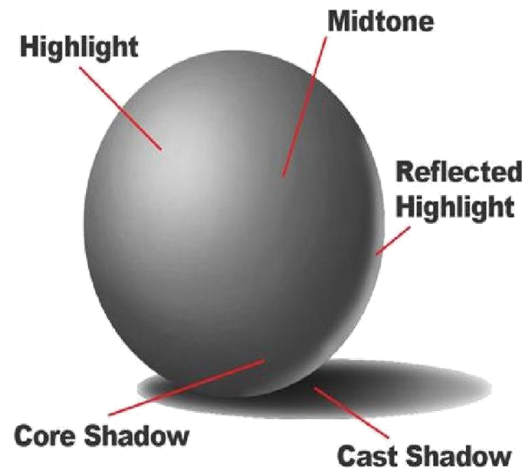
Organic forms do not have specific names associated with them and are often associated with naturally occurring forms.



When drawing representational, the goal is to create the illusion of form. We can create the illusion of form by understanding how light reacts on the object.

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Light reacts on objects and is communicated to viewers through several factors. Adjusting these areas with values of the local color will result in the illusion of form in a drawing or painting.

The **highlight** is the area where light is hitting the object directly. The **midtone** is the middle value of the local color of the object. The **core shadow** is the area(s) that is shaded on the object.

The **cast shadow** is the area(s) that is shaded on surrounding objects and surfaces because of blocked light.

The **reflected highlight** is the area on an object that is lighter because of reflected light off of surrounding object.

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## Self-Check 1

## Written Test

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

### I. Short Answer Questions (each 5 point)

- 1) What are the different types of lines? (5 points)
  
  
  
  
  
  
  
  
  
  
- 2) What are the dimensional properties of lines? (5 points)
  
  
  
  
  
  
  
  
  
  
- 3) What are different types of forms? (5 points)

### . Answer the following question!

**Note: Satisfactory rating 8 and 15 points    Unsatisfactory below 8 and 15 points**

You can ask you teacher for the copy of the correct answers.

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

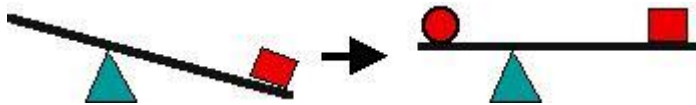


## Information Sheet 2: Interpreting and studying Basic Principle Designing and Visual Aesthetics

Interpreting and studying Basic Principle Designing and Visual Aesthetics

### 2.1 Balance

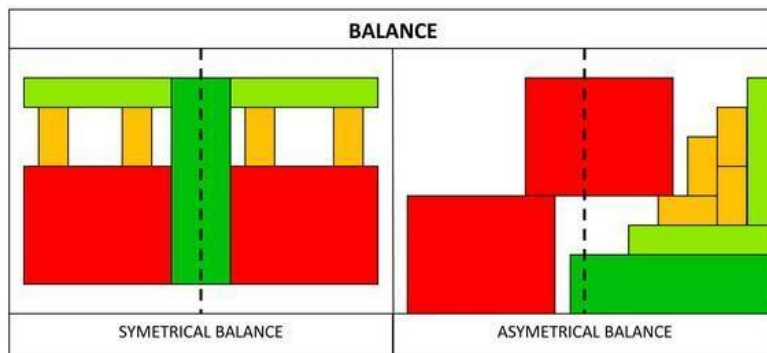
Balance is a psychological sense of equilibrium. As a design principle, balance places the parts of a visual in an aesthetically pleasing arrangement.



#### Symmetrical and Asymmetrical Balance:

There are two types of balance: *symmetrical* and *asymmetrical*. In symmetrical balance, if an imaginary line is drawn through the center of the work, both sides are exactly the same, and balanced in that way. In asymmetrical balance, the two sides are not identical, but differ from one another. However, the elements are arranged so that there is a sense of balance.

In the illustration below, both examples use the exact same objects. The one on the left, however, is symmetrical, identical on each side. The one on the right uses the same shapes in the same colors, and balances them asymmetrally. Both sides are different, yet arranged in such a way that they feel balanced.

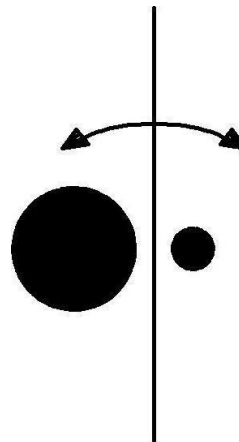
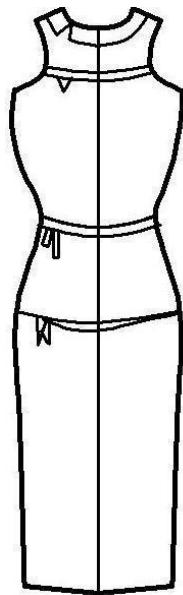
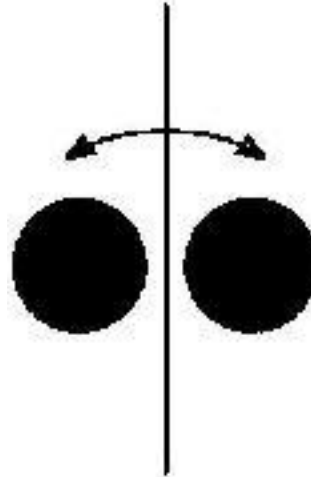
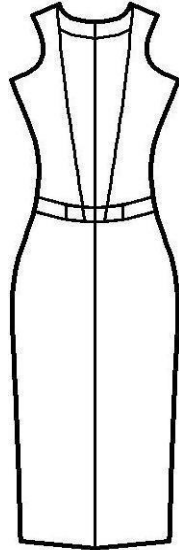




There are three main categories of balance:

### Horizontal balance:

Horizontal balance occurs when the right and left of a work have great similarities



### Horizontal Imbalance

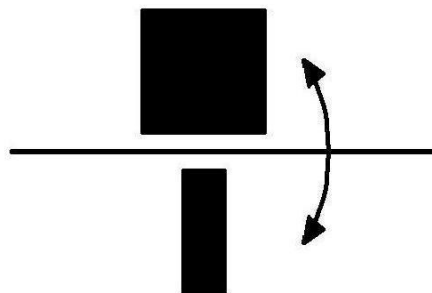
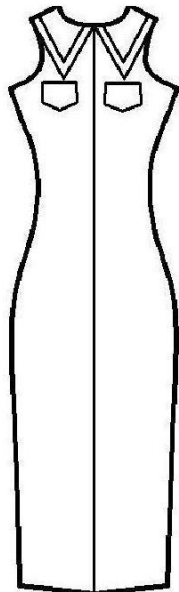
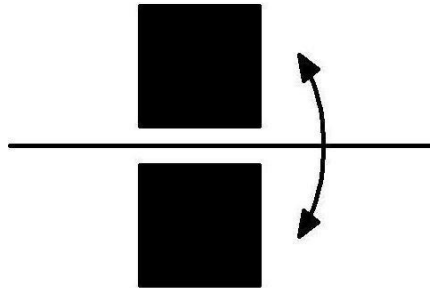
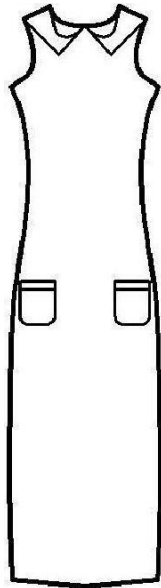
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### Vertical balance:

Vertical balance occurs when the top and bottom of a work of art have great similarities.

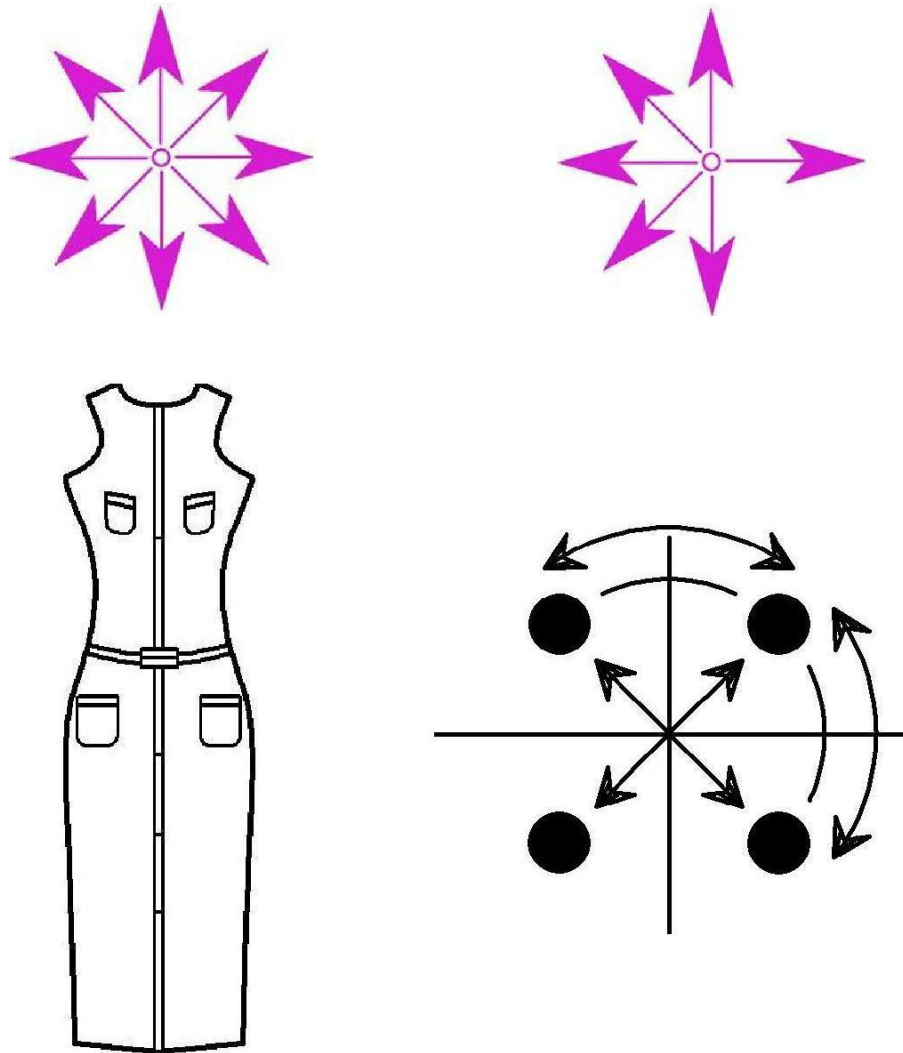
**Fig: Vertical Imbalance**



**Fig: Vertical Imbalance**

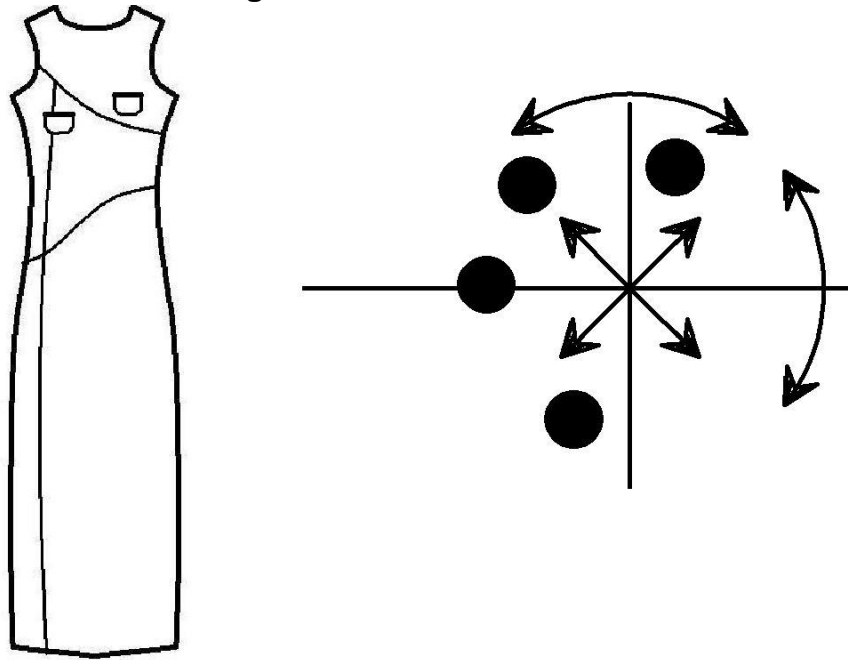
### Radial balance:

Radial balance occurs when there are similar characteristics that exist equidistant from a center point.



**Fig: Radial Balance**

**Fig: Radial Imbalance**



## 2.2 Rhythm

Rhythm refers to the regular repeating occurrence of elements in the scene just as in music it refers to the regular occurrence of certain musical notes over time. In photography the repetition of similar shapes sets up a rhythm that makes seeing easier and more enjoyable. Rhythm is soothing and our eyes beg to follow rhythmic patterns. To be effective, rhythm also requires some variability - rhythm that is too similar or perfect may be boring. Therefore when composing your images look for repetition with variation. For instance if you are photographing a fence - one that is perfect will not hold a viewer's interest for long, but one in which some of the posts are bent, broken, larger or smaller will generate more viewer interest.

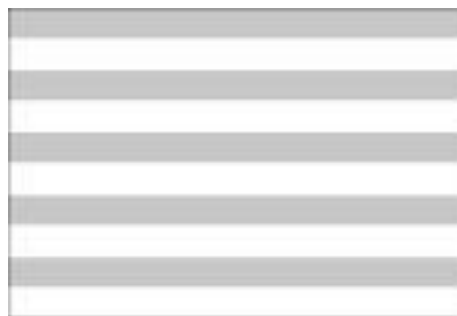




Differences in the height of the fence posts add interest to an otherwise monotonic rhythm.

The yellow marigold is balanced by the negative space of the complimentary colored blue sky.

**Regular Rhythm:** A regular rhythm occurs when the intervals between the elements and often the elements themselves, are similar in size or length



**Regular Rhythm**



**Flowing Rhythm:** A flowing rhythm gives a sense of movement, and is often more organic in nature



**Flowing Rhythm**

**Progressive Rhythm:** A progressive rhythm shows a sequence of forms through a progression of steps



**Progressive Rhythm**

## **2.3 Contrast**

Contrast means pictorial elements that stand out because they are not alike e.g. Squares and circles and triangles. Red, yellow and blue contrast as they are so dissimilar.

Contrast can be made by putting objects together and therefore make each other stand out more, than they would separately.

Contrast gives variety and makes the elements more lively.

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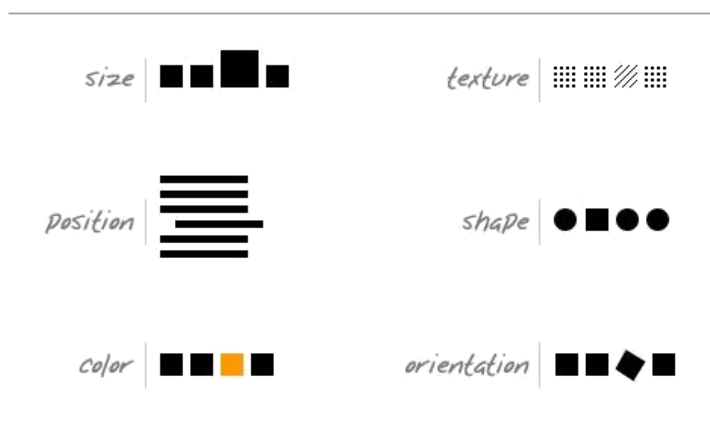


An effective use of contrast enables us to add interest to your design by highlighting specific graphic elements. This will result in a more visually striking composition. To achieve this 'contrast' is employed as a means of creating a visual hierarchy among different graphic elements. It can be applied to graphic elements, as light, dark, warm, cool, large, small; etc.

Contrast is most effective when it is strong; the focal point of a design is usually a result of contrast where the eyes will naturally be drawn. Here contrast can be used to direct the focus of a composition. When used as a device to emphasize or highlight design elements it is important to remember that an ineffective use of contrast may result in confusion.



**Fig: Using opposite color to create a contrast**



**Fig: The primary forms of contrast include size, position, color, texture, shape, and orientation**

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**Fig: Usage of contrast color in the goods to highlight a particular area.**

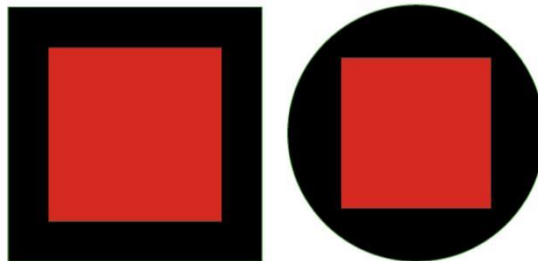


## 2.4 Harmony

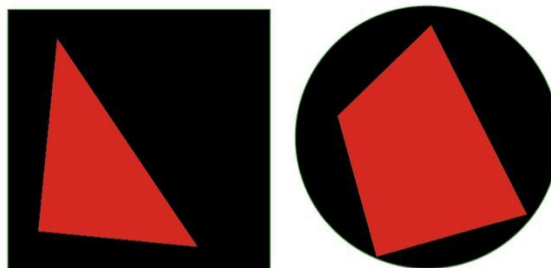
Harmony means pictorial elements of the same type. Harmony is created when all the elements in the design come together in a pleasing, harmonious visual effect. Each part of the design is important in itself but all must work together with other parts to achieve harmony.

Style lines should be consistent on every area of leather goods or accessory. There needs to be enough differences to keep from being monotonous, but there also need to be enough likenesses to keep a feeling of unity. All areas should reflect the same features. Harmony can create feelings. Similar elements can seem calm and pleasing eg. Blues and greens, rectangles and squares or groups of organic shapes, while contrasting elements create energy, vitality, tension or anger. Triangles with circles and squares.

In leather goods, avoid small differences such as the sleeve and jacket length. Stripes and plaids should match. Seam lines and trim detail should align. Harmony and unity should also exist in colors, and textures. A leather goods design needs similarity of shape, color, texture, and other features to achieve unity.



**Good Harmony**





## Self-Check 2

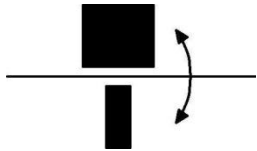
## Written Test

**Directions:** match all the questions listed below.(5 mark each):

A

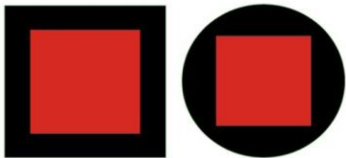
B

1.



A. Vertical imbalance

2.



B. Good harmony

3.



C. Radial balance

D. Flow

E. rhythm



## II.Short Question Answers:

1. What are the different types of balance? (5 points)

**Answer the following question!**

**Note: Satisfactory rating 9 and 17 points    Unsatisfactory below 9 and 17 points**

You can ask you teacher for the copy of the correct answers.

### Answer Sheet

Name: \_\_\_\_\_ Date\_\_\_\_\_

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

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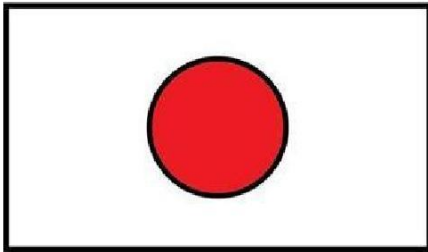




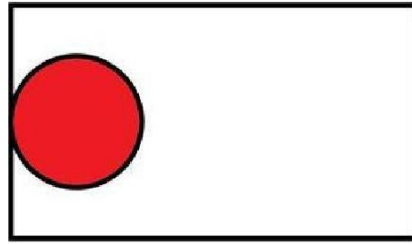
## Information Sheet 3-Developing Compositions Using Design Elements

### 2.3.1 Centered

When an object is placed exactly in the center of any frame then it is known as centered. When the object is centered within any boundary it gives visual balance to the composition.



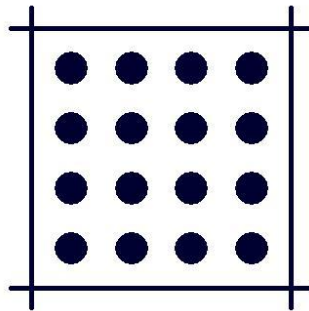
**Fig: Object centered to the frame**



**Fig: Object is not centered to the frame**

### 2.3.2 Spaced

In any composition the objects are placed in an ordered manner with equal spacing and at regular interval in any particular boundary or frame.

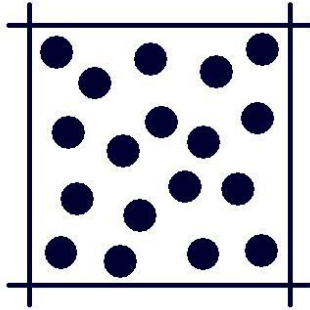


**Fig: Object evenly placed in the frame**



### 2.3.3 Shattered

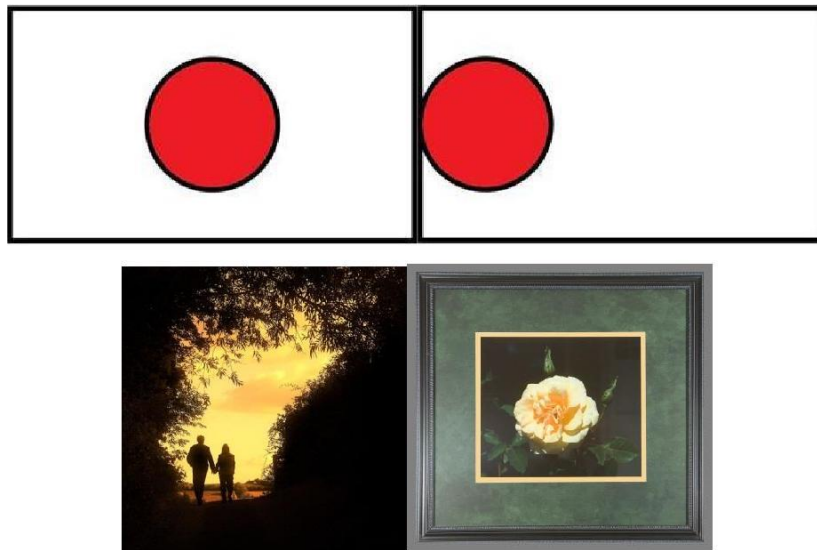
When the object placed in any boundary is not in any repetition or any structured manner then it is known as shattered composition



**Fig: Object unevenly placed in the frame**

### 2.3.4 Framed

This composition is more or less similar to the centered in which any particular object is placed within a particular boundary or Frame. For example, artist shows a slice of an entire screen, scene goes beyond the borders of the artwork





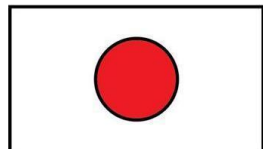
Self-Check .3	Written Test
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

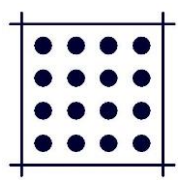
**Part II Match the following (10 points)**

A

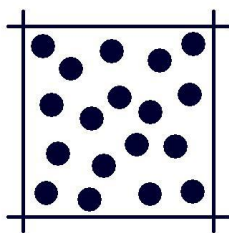
1.



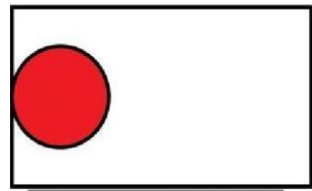
2



3



4



5



B

A. Framed

B. Object centered to the frame

C.Object is not centered to the frame

D.Object evenly placed in the frame

E.Object is unevenly placed in the frame



## Information Sheet 4-Depicting Moods through Basic Elements Of Design

To create a design of product, male and female users often look to the design for different experiences. In interior decoration, furnishing design, furniture design, in material, dress design, shoes design, bags design, accessories design, consumer product design, cosmetic product designs are formed for masculine or feminine and their uses. Designers should perhaps consider the “stereotype” and then work to develop something new and fresh.

Typically in design the stereotype for “masculine” follows with angularity, straight lines, phallic forms, squares, roughness, etc. And for the “feminine” the standard is: curvy, rounded, smooth, organic, soft, floral, flourishes, motherly, nurturing... etc. For instance, spas, beauty salons, cosmetics and jewelry are items of feminine contention. While on the other hand, gym, fitness clubs, corporate attire and sportswear logos exhibit masculine characteristics. And perhaps to properly convey femininity and masculinity is through the most fundamental forms we know.

### EXAMPLES:

- Babies, puppies and overall cuteness – Feminine
- Sports and action – Masculine
- Flowery landscapes and trees – Feminine
- Rugged landscapes and terrain – Masculine
- Food – Feminine
- Clothing and shoes – Feminine
- Gadgets and electronics – Masculine

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#### 2.4.1. Masculine

Shapes that are straight and bold depict Masculine mood. Triangle is considered to be a Masculine shape. **Sharp shapes** are lively and youthful and are seen as more masculine. As with lines **vertical shapes** are seen as strong and **horizontal shapes** are seen as peaceful. The strength of triangles suggests masculinity.



#### 2.4.2 Feminine

Curves are normally considered as a feminine in nature. Curved shapes offer rhythm and movement, happiness, pleasure and generosity. They are seen as more feminine than sharp shapes which offer energy, violence and, anger. A soft curved line is feminine and passive.



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## Self-Check 4

## Written Test

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

### Part I Match the following (10 points)

#### A

- .....1.Triangle
- .....2.Vertical shapes
- .....3.Horizontal shapes
- .....4.Curves

#### B

- A. Feminine
- B. Peaceful
- C. Strong
- D. Masculine

**Answer the following question!**

.

**Note: Satisfactory rating 7 and 12 points    Unsatisfactory below 7 and 12 points**

You can ask you teacher for the copy of the correct answers.

#### Answer Sheet

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score = \_\_\_\_\_

Rating: \_\_\_\_\_



## Operation sheet: - 1 Elements of Designs

Purpose	To acquire the trainees with elements of designs practice
Equipment ,tools and materials	<p>Supplies and equipment needed or useful include these:</p> <ul style="list-style-type: none"> <li>• Drawing board</li> <li>• Layout pad</li> <li>• cutter</li> <li>• Cutting Table</li> <li>• Pencils with HB lead</li> <li>• Eraser</li> <li>• template</li> </ul>
Conditions or situations for the operations	<ul style="list-style-type: none"> <li>• All tools, equipment's and materials should be available on time when required.</li> <li>• Appropriate table, working area/ workshop to assemble cream separator practice.</li> </ul>
Procedures	See listed below procedures
Precautions	<ul style="list-style-type: none"> <li>• Care Should Be Taken While Sketching With Drawing Table, Cutting Materials And Sharpener</li> <li>• Preparing materials, tools and equipment are according to OHS.</li> </ul>
Quality criteria	<ul style="list-style-type: none"> <li>• Did personal protective equipment worn while working with the instrument used for doing this activities</li> <li>• Did trainees do all elements of design with perfect feature required</li> <li>• The understand elements of design</li> </ul>



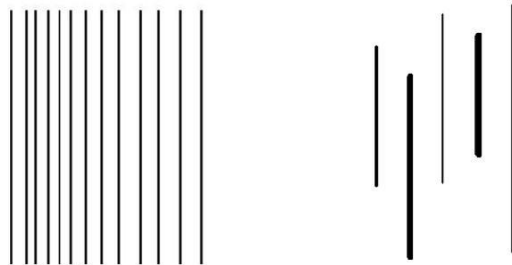
### Procedures 1 :-Draw **Vertical lines:**

Take an A4 paper and Practice the following lines.

Step 1: First start practicing the line starting from Top to Bottom.

Step 2: Now start practicing from Bottom to Top.

Step 3: Vary the thickness of line for both step 1 and step 2.



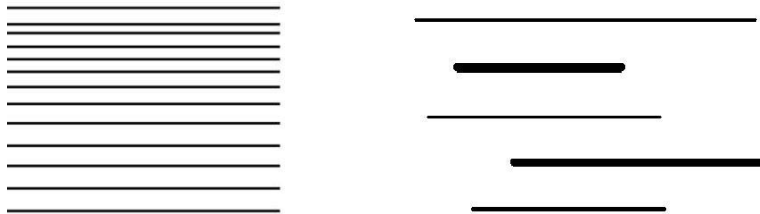
### Procedures 2:-Horizontal lines:

Take an A4 paper and Practice the following lines.

Step 1: First start practicing the line starting from left to right.

Step 2: Now start practicing from right to left.

Step 3: Vary the thickness of line for both step 1 and step 2







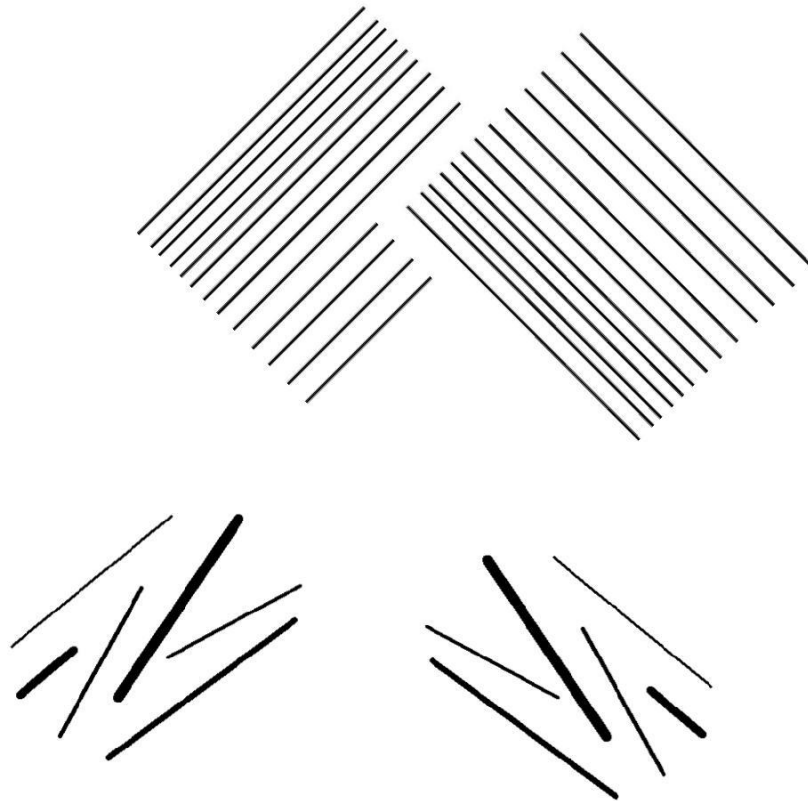
### Procedures 3: Inclined lines:

Take an A4 paper and Practice the following lines.

Step 1: First start practicing the line from Left top to Right Bottom and vice versa.

Step 2: Now start practicing from Right Top to Left Bottom and vice versa.

Step 3: Vary the thickness of line for both step 1 and step 2.



### Procedures 4: Zigzag line:

Take an A4 paper and Practice the following lines.

Step 1: First start practicing the line starting from Top to Bottom.

Step 2: Now start practicing from Bottom to Top.

Step 3: Vary the thickness of line for both step 1 and step 2.

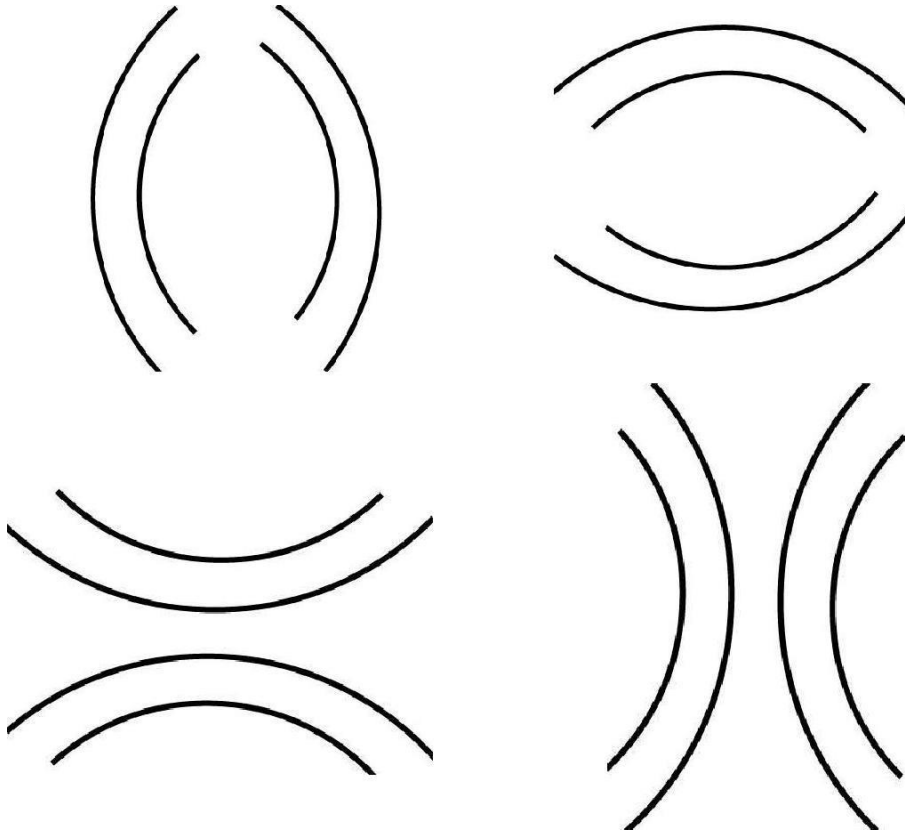


## Procedures 5:Curved Lines:

Take an A4 paper and Practice the following curves.

Step 1: First start practicing the curves and vice versa.

Step 2: Practice by varying the thickness of curves.





## Procedures 6: Goods Sketching:

Take an A4 paper and Practice the following Goods.



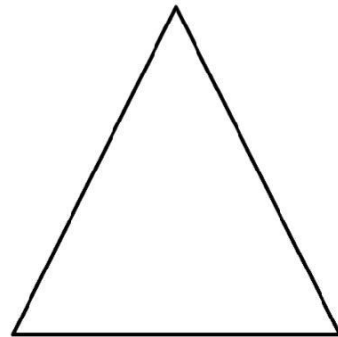
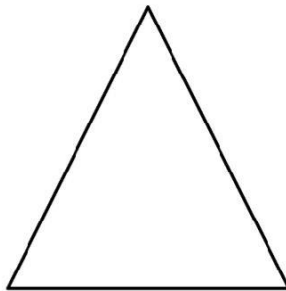
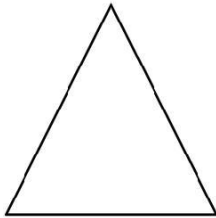


## Shape

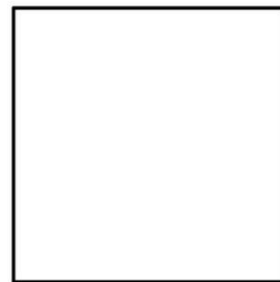
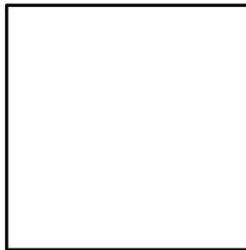
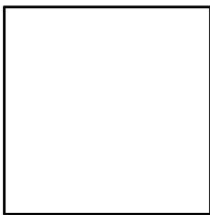
### Draw and practice different outline shapes:

Take an A4 paper and practice the following shapes.

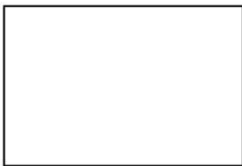
#### Shape 1: Triangle of different size.



#### Shape 2: Square of different size.

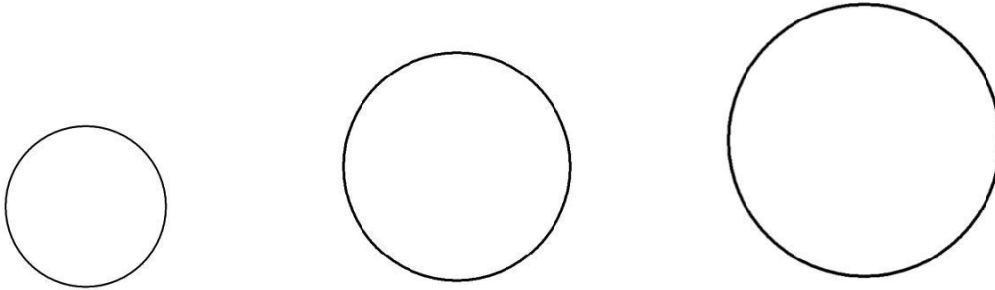


#### Shape 3: Rectangle of different sizes.

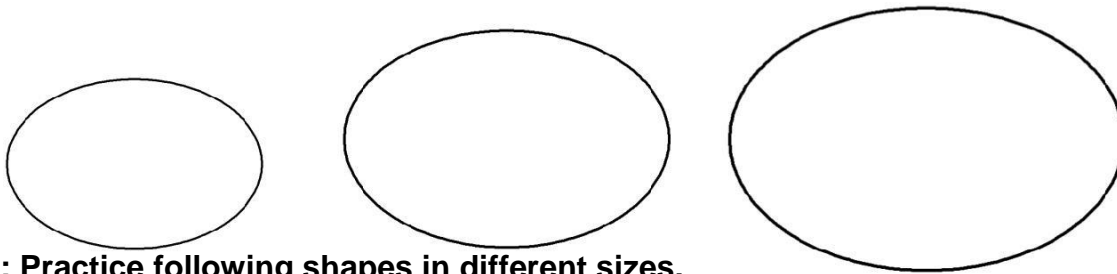




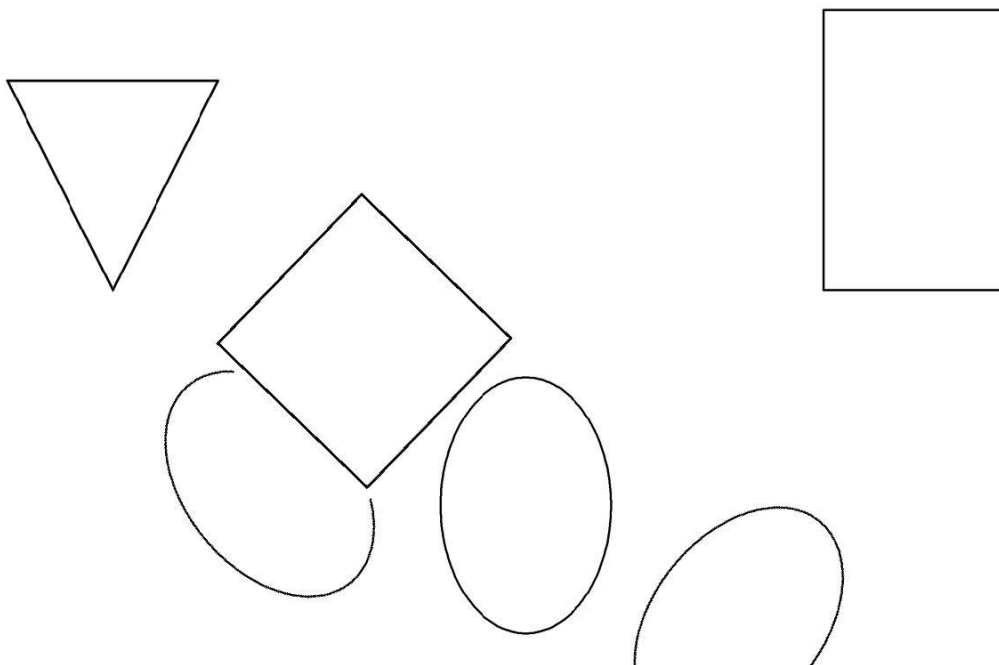
**Shape 4: Circles of different sizes.**



**Shape 4: Ellipse of different sizes.**



**Shape 4: Practice following shapes in different sizes.**

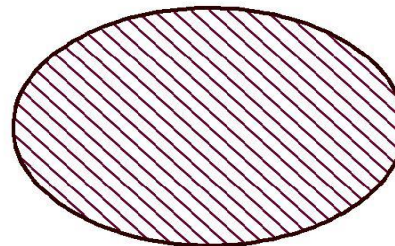
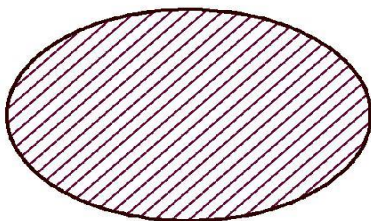
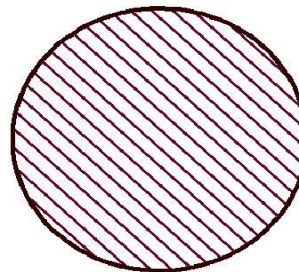
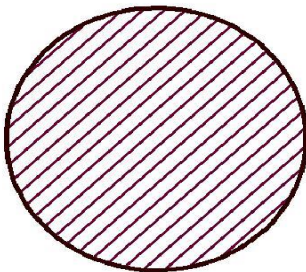
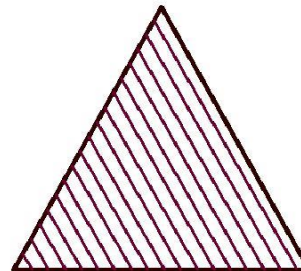
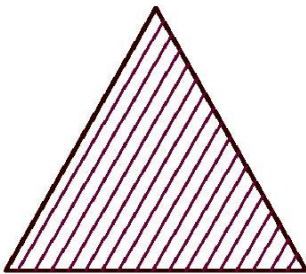
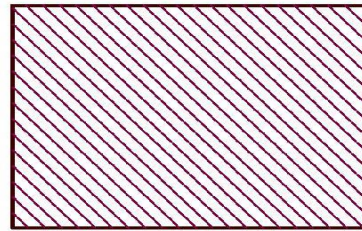
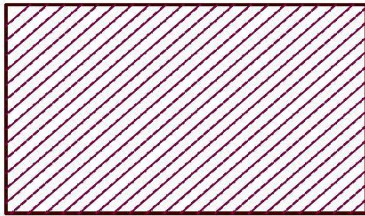
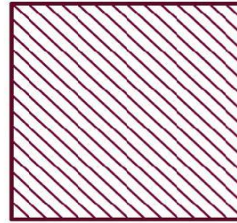
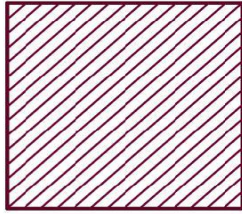






### Draw and practice different cross Hatched shapes:

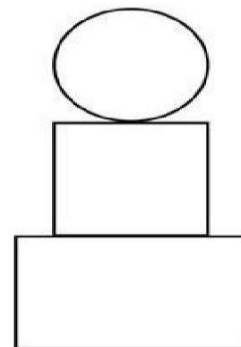
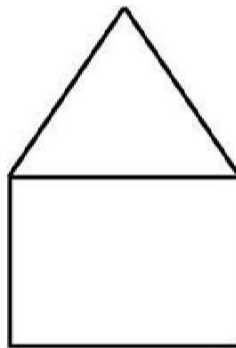
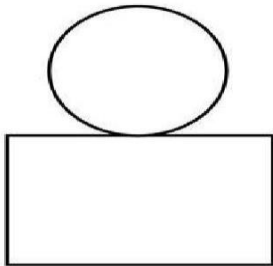
Take an A4 paper and practice the following shapes.





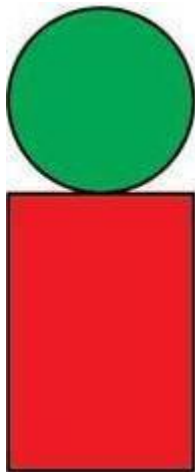
**Draw and practice different filled Geo-Metric shapes:**

Take an A4 paper and practice the following shapes.



**Draw and practice different filled shapes:**

Take an A4 paper and practice the following Geometric shapes by filling with color pencil.





Take an A4 paper and Practice the following Sketches.





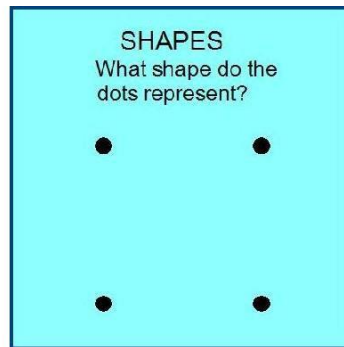
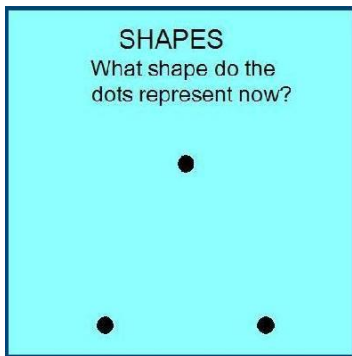


### Draw and practice different filled shapes:

Take an A4 paper and practice the following Organic shapes.

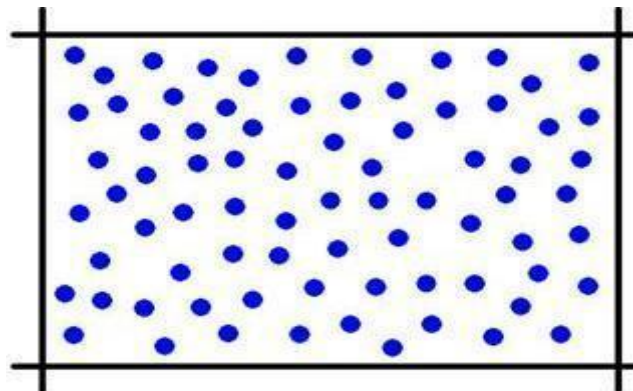


### Points



### Draw and practice different Forms:

Take an A4 paper and practice the following points as shown in figure.

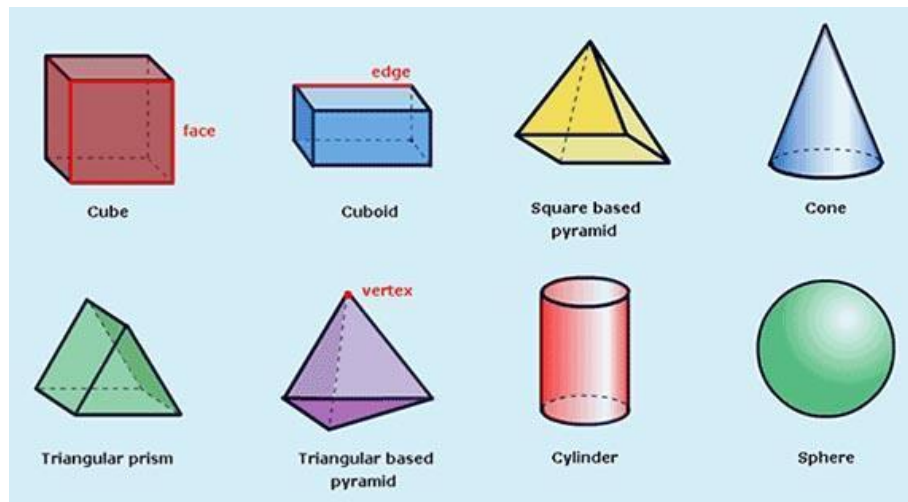




## Forms

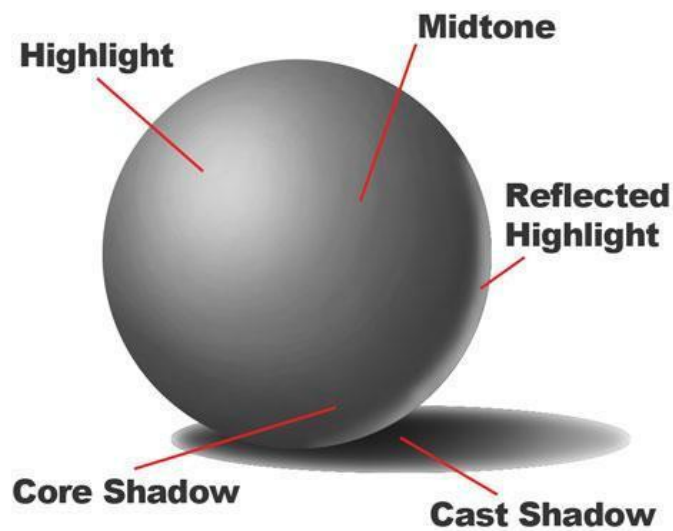
### Draw and practice different Forms:

Take an A4 paper and practice the following forms.



### Draw and practice different shading for different forms:

Take an A4 paper and practice the following forms.





Operation sheet :- 2	Basic principle of design and visual aesthetics
----------------------	---

Purpose	To acquire the trainees with Basic principle of design and visual aesthetics
Equipment ,tools and materials	Supplies and equipment needed or useful include these: <ul style="list-style-type: none"> <li>• Drawing board</li> <li>• Layout pad</li> <li>• cutter</li> <li>• Cutting Table</li> <li>• Pencils with HB lead</li> <li>• Eraser</li> <li>• template</li> </ul>
Conditions or situations for the operations	<ul style="list-style-type: none"> <li>• All tools, equipment's and materials should be available on time when required.</li> <li>• Appropriate table, working area/ workshop to assemble cream separator practice.</li> </ul>
Procedures	See listed below procedures
Precautions	<ul style="list-style-type: none"> <li>• Care Should Be Taken While Sketching With Drawing Table, Cutting Materials And Sharpener</li> <li>• Preparing materials, tools and equipment are according to OHS.</li> </ul>
Quality criteria	<ul style="list-style-type: none"> <li>• Did personal protective equipment worn while working with the instrument used for doing this activities</li> <li>• Did trainees do all elements of design with perfect feature required</li> <li>• The understand elements of design</li> </ul>

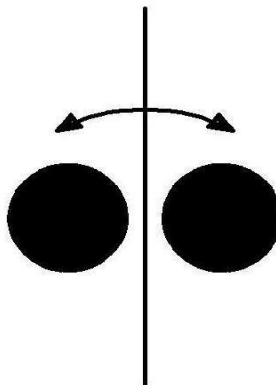
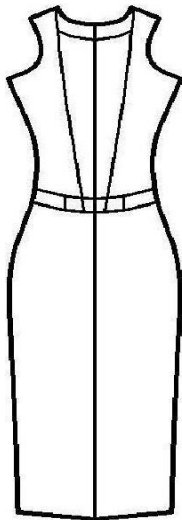
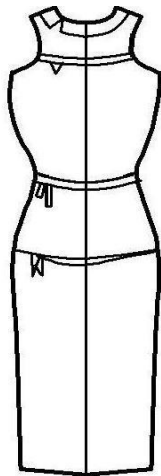


## Procedure 1

### Balance

Horizontal balance

Take an A4 paper and practice the horizontal balance.

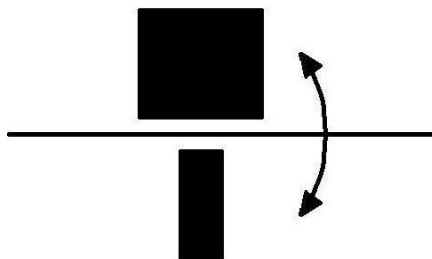
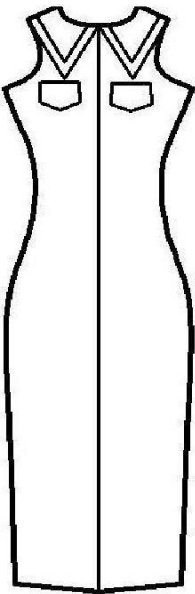
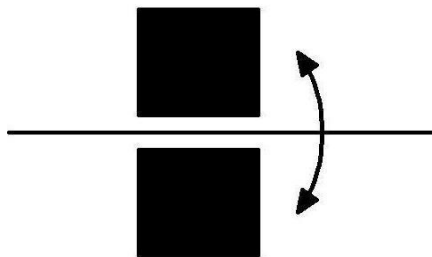
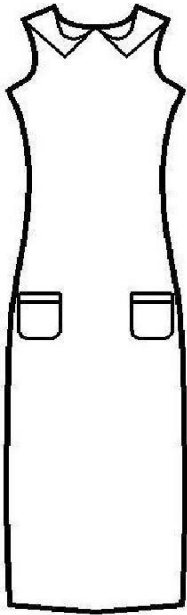




## Procedure 2

### Vertical Balance:

Take an A4 paper and practice the Vertical Balance.

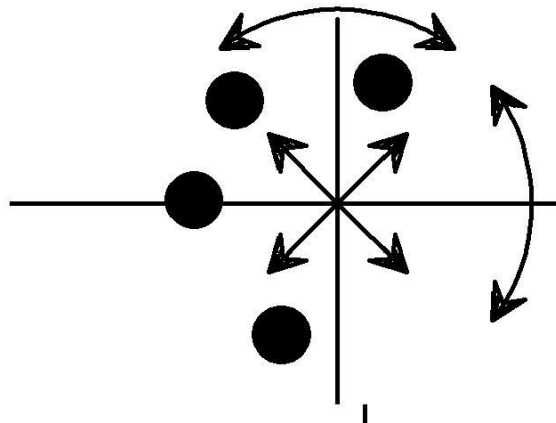
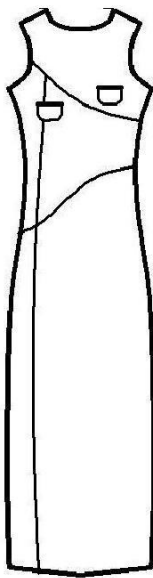
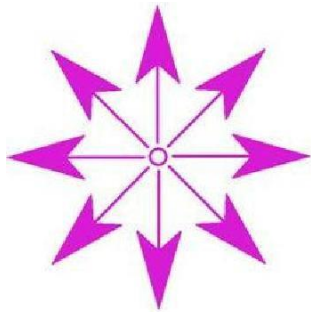




### Procedure 3

#### **Radial Balance:**

Take an A4 paper and practice the Radial Balance.



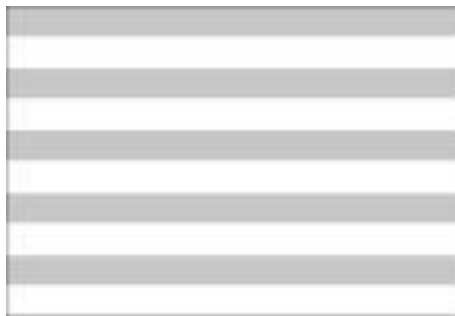


#### Procedure 4

### **Rhythm**

Take an A4 paper and practice the Rhythm.

#### **Regular Rhythm:**



#### **Flowing Rhythm:**



#### **Progressive Rhythm:**





## Procedure 4

### Contrast

Take A4 paper and practice contrast



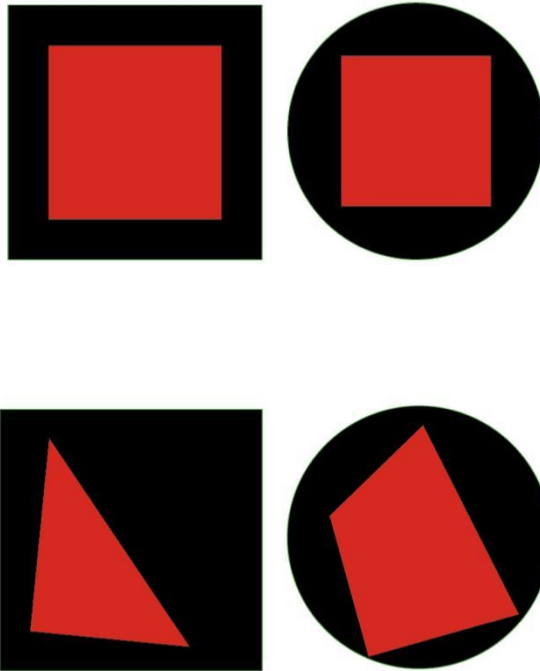




## Procedure 4

### Harmony

Take an A4 paper and practice the Harmony.





## Operation sheet 3: - developing composition using design elements

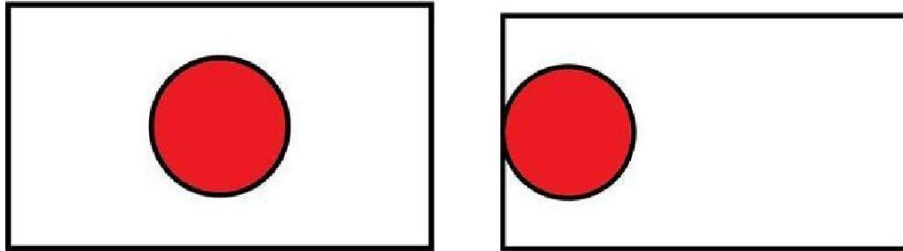
Purpose	To acquire the trainees with developing composition using design elements
Equipment ,tools and materials	Supplies and equipment needed or useful include these: <ul style="list-style-type: none"> <li>• Drawing board</li> <li>• Layout pad</li> <li>• cutter</li> <li>• Cutting Table</li> <li>• Pencils with HB lead</li> <li>• Eraser</li> <li>• template</li> </ul>
Conditions or situations for the operations	<ul style="list-style-type: none"> <li>• All tools, equipment's and materials should be available on time when required.</li> <li>• Appropriate table, working area/ workshop to assemble cream separator practice.</li> </ul>
Procedures	See listed below procedures
Precautions	<ul style="list-style-type: none"> <li>• Care Should Be Taken While Sketching With Drawing Table, Cutting Materials And Sharpener</li> <li>• Preparing materials, tools and equipment are according to OHS.</li> </ul>
Quality criteria	<ul style="list-style-type: none"> <li>• Did personal protective equipment worn while working with the instrument used for doing this activities</li> <li>• Did trainees do all elements of design with perfect feature required</li> <li>• The understand elements of design</li> </ul>



## Procedure 1

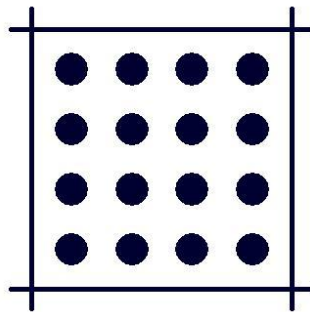
### Centered

Take an A4 paper and practice the Centered.



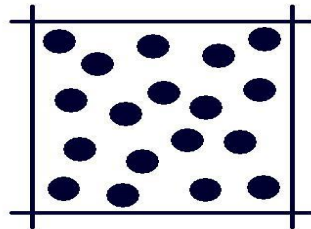
### Spaced

Take an A4 paper and practice the Spaced.



### Shattered

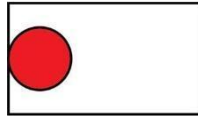
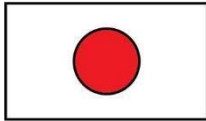
Take an A4 paper and practice the Shattered.





## Framed

Take an A4 paper and practice the framed





## Operation sheet 4: - depicting moods through basic elements of design

Purpose	To acquire the trainees with depicting moods through basic elements of design
Equipment ,tools and materials	Supplies and equipment needed or useful for this include these: <ul style="list-style-type: none"> <li>• Drawing board</li> <li>• Layout pad</li> <li>• cutter</li> <li>• Cutting Table</li> <li>• Pencils with HB lead</li> <li>• Eraser</li> <li>• template</li> </ul>
Conditions or situations for the operations	<ul style="list-style-type: none"> <li>• All tools, equipment's and materials should be available on time when required.</li> <li>• Appropriate table, working area/ workshop to assemble cream separator practice.</li> </ul>
Procedures	<ol style="list-style-type: none"> <li>1. Take an A4 paper that given for WORK practice</li> <li>2. Prepare drawing board and HB pencil with sharpener</li> <li>3. Step 2: Now start practicing the given work according to specific instruction</li> </ol>
Precautions	<ul style="list-style-type: none"> <li>• Care Should Be Taken While Sketching With Drawing Table, Cutting Materials And Sharpener</li> <li>• Preparing materials, tools and equipment are according to OHS.</li> </ul>
Quality criteria	<ul style="list-style-type: none"> <li>• Did personal protective equipment worn while working with the instrument used for doing this activities</li> <li>• Did trainees do all develop composition using elements of design with perfect feature required</li> <li>• The understand develop composition using elements of design</li> </ul>



Take an A4 paper. Draw and practice **Masculine**



Take an A4 paper. Draw and practice **Feminine**



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## LAP Test — 1

## Practical Demonstration

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Time started:** \_\_\_\_\_

**Time finished:** \_\_\_\_\_

**Instructions:** Given necessary tools, materials, and instruments you are required to perform the following tasks within 60 minutes.

1. Draw and practice line diagram of garments.
2. Draw and practice different cross Hatched shapes.
3. Draw and practice different filled Geo-Metric shapes.
4. Draw and practice different Forms
5. Draw and practice different type of Balances.



<b>LG #07</b>	<b>LO3. Identify color as an element of design</b>
<b>Instruction sheet</b>	
<p>This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:</p> <ul style="list-style-type: none"> <li>Identifying Dimensions of color</li> <li>Mixing colors to create new combinations or schemes</li> <li>Preparing Shade scale according to color mixing principles</li> <li>identifying Relationship of color theory to design process</li> </ul> <p>This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:</p> <ul style="list-style-type: none"> <li>Identify Dimensions of color</li> <li>Mix colors to create new combinations or schemes</li> <li>Prepare Shade scale according to color mixing principles</li> <li>identify Relationship of color theory to design process</li> </ul>	
<b>Learning Instructions:</b>	
<ol style="list-style-type: none"> <li>Read the specific objectives of this Learning Guide.</li> <li>Follow the instructions described below.</li> <li>Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them</li> <li>Accomplish the “Self-checks” which are placed following all information sheets.</li> <li>Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks).</li> <li>If you earned a satisfactory evaluation proceed to “Operation sheets</li> <li>Perform “the Learning activity performance test” which is placed following “Operation sheets” ,</li> <li>If your performance is satisfactory proceed to the next learning guide,</li> <li>If your performance is unsatisfactory, see your trainer for further instructions or go back to “Operation sheets”.</li> </ol>	





## Information Sheet 1. Identifying Dimensions of colour

### Identifying Dimensions of color

#### 1.1 value/tone

Value is concerned with the lightness or darkness of a color. All colors exhibit these properties. The extreme values are black and white. Some colors, like yellow, are naturally light. Some, like violet, are darker. All hues can be made in all values. Adding white paint will make any hue lighter. The resultant hue colors with white are called tints. Adding black paint will make most pigments darker and adding black to a hue results in shades. Value is the most important of the three dimensions of color.



Fig: Value from White to Black

#### 1.2 Hue

Hue is the family name or quality of a color, which distinguishes one color from the other. It is accurate description of a color. Hue is the other word used for color. Some of the hue names are red, orange, yellow, green, blue and violet, magenta, cyan etc.



Fig: Hue Contrast - strikingly different hues

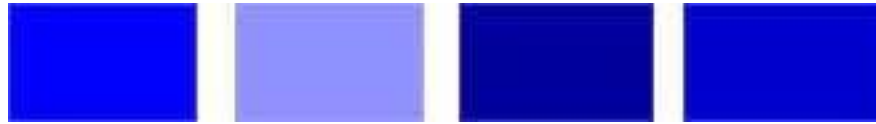


Fig: Hue Constant - different colors, same hue (blue)

### 1.3 Chroma/Intensity/Clarity

Intensity is brightness and dullness of a color. The colors on the color wheel are of full intensity. When grey or its complement color is added it becomes less intense. A color that is dull is unsaturated or low in intensity. A color without any brightness (no hue) is achromatic (black, white and/or gray). Mixing a color with black, white grey or its complement can alter the chroma of a hue. According to intensity, colors are called as very bright, bright medium, bright, bright medium, medium dull, dull or very dull. On the other hand black and white are neutrals.

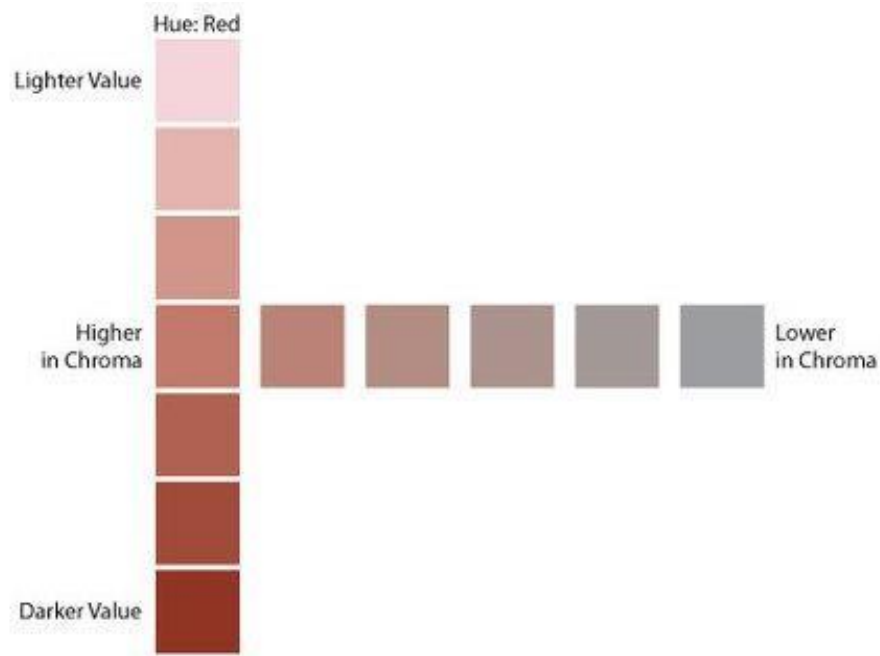


Fig: Effect of chroma on the hue.



## Self-Check 1

## Written Test

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

### Part I Short Answer Questions (each 5 point)

1. List down various dimensions of color?

2. What is Hue?

3. what is **Chroma/Intensity/Clarity**?

. Answer the following question!

**Note: Satisfactory rating 8 and 15 points Unsatisfactory below 8 and 15 points**

You can ask you teacher for the copy of the correct answers.

### Answer Sheet

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

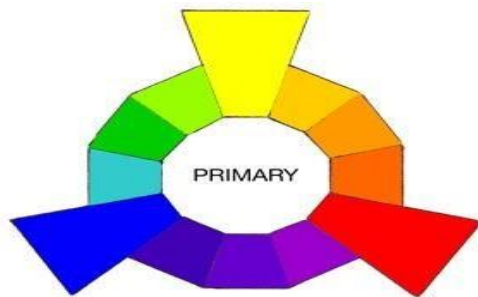


## Information Sheet-2. Mixing colors to create new combinations to schemes

### 2.1 Primary

The **Primary Colors** are the **root of every other hue** imaginable. The primary pigments used in the manufacture of paint come from the pure source element of that Hue. There are no other pigments blended in to alter the formula.

Think of the three Primaries as the Parents in the family of colors.



Primary color/Hue are:

The primary colors are red, yellow, and blue. They are called primary because they are not mixtures of other colors.

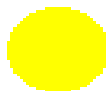
Blue



Red



Yellow

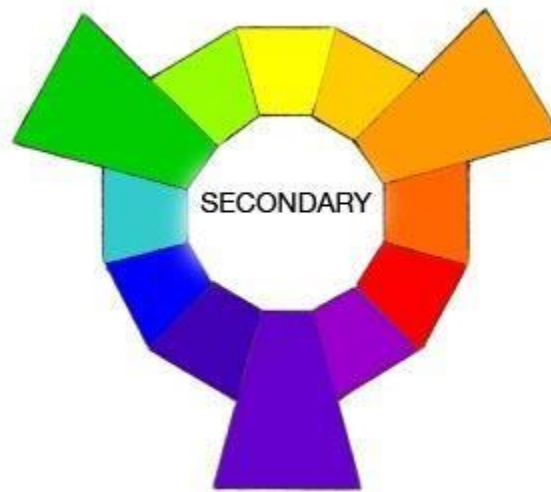




## 2.2 Secondary

When you combine any two of the Pure Primary Hues, you get three new mixtures called Secondary Colors.

Think of the three secondary as the Children in the family of colors.



Secondary color/Hue are:

Mixing any two primary colors results in a secondary color.

**Yellow + Red = ORANGE**

**Red + Blue = VIOLET or**

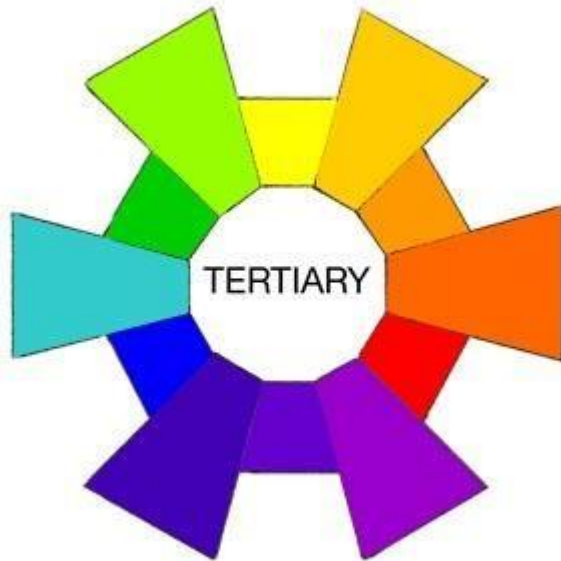
**PURPLE Blue + Yellow =**

**GREEN**





## 2.3 Tertiary Colors



When you mix a primary and its nearest Secondary on the Basic Color Wheel you create six new mixtures called Tertiary colors.

Think of the six tertiary Colors as the Grandchildren in the family of colors, since their genetic makeup combines a Primary and Secondary color.

The color wheel is created when the primary and secondary colors are placed in a circle.

**Yellow + Orange = YELLOW-ORANGE**

**Red + Orange = RED-ORANGE**

**Red + Violet = RED-VIOLET**

**Blue + Violet = BLUE-VIOLET**

**Blue + Green = BLUE-GREEN**

**Yellow + Green = YELLOW-GREEN**



## Self-Check 2

## Written Test

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

### Part II Short Answer Questions

1. What are primary colors? (2 points)
2. What are secondary colors? (4 points)
3. What are tertiary colors? (4 points)

**. Answer the following question!**

**Note: Satisfactory rating 5 and 10 points Unsatisfactory below 5 and 9 points**

You can ask you teacher for the copy of the correct answers.

### Answer Sheet

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score = \_\_\_\_\_

Rating: \_\_\_\_\_



## Information Sheet 3:- preparing Shade scale according to colour mixing principles

### Color Theories

There are two theories that explain how colors work and interact. They make you understand why some colors interact and some deceive us when worn in a dress. The two theories are the light, or additive theory, the pigment, or subtractive theory

#### A. Light Theory

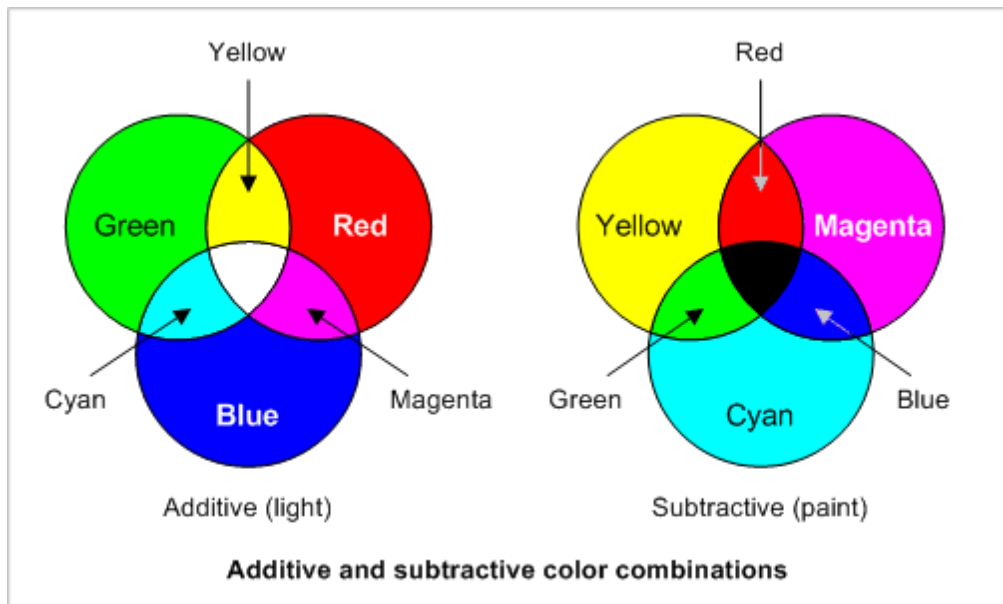
Light theory starts with black — the absence of light. Red, green and blue are primary colors. Primary colors in this theory are the starting colors. The primary colors mix to make secondary colors: red and green make yellow, red and blue make magenta and green and blue make cyan. All three together add up to make white light. So, addition of all primaries makes them lighter and 'adds up to white' and so this theory is called additive or light theory.

#### B. Pigment Theory:

Pigments behave almost the opposite to the above light theory. A colored pigment, green for instance, absorbs most of the frequencies of light that are not green, reflecting only the green light frequency. Unlike in light theory, in the pigment theory when two colors are mixed, the two hues together absorb more light waves and colors appear darker. All colors of the spectrum when combined the resultant hue is black because all light rays are absorbed and no light is reflected. Because all colors other than the pigment colors are absorbed, it is also called the subtractive color theory.

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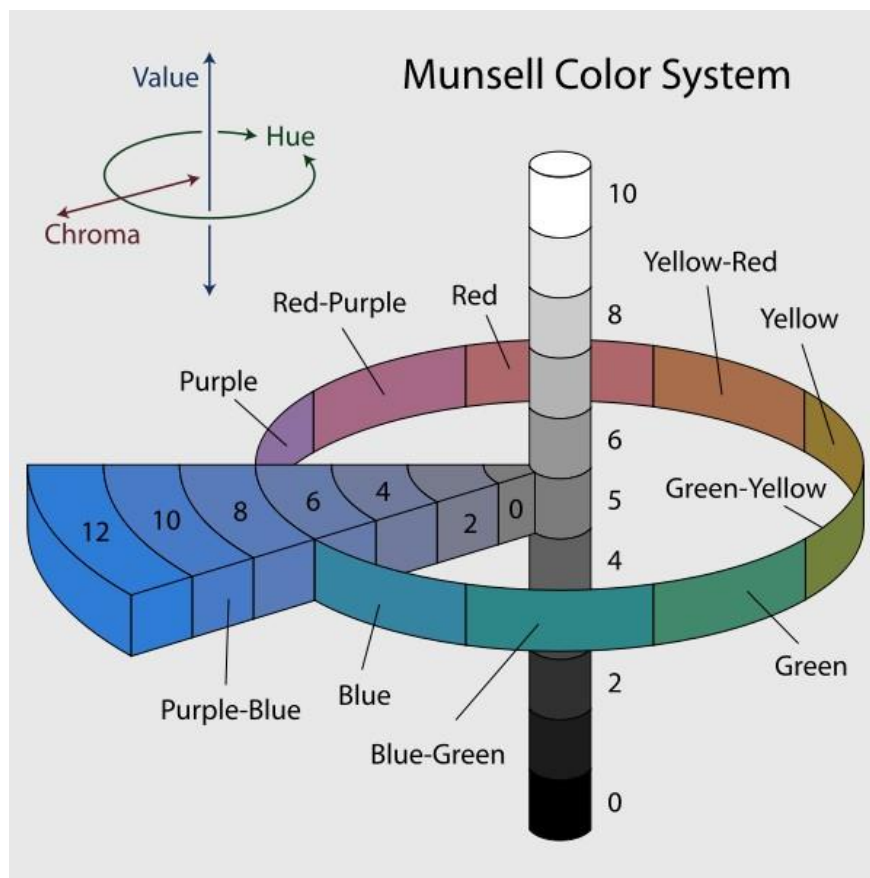


## I. Color Wheels - Color Systems:

A **Color Wheel** is a conventional arrangement of hues in a circle to demonstrate their relationships. This wheel can be used as a guide to choose and combine colors.

### A. Munsell Color System:

This system is based on a unique color-solid arrangement, which more accurately demonstrates hue, value and intensity of color. In this system, a color's hue is given a number/letter designation, which locates it on the Munsell Color Wheel. Paint, ink and colored paper and other manufacturers often use this system because its alphanumeric system of notation allows for accurate description of a color's hue, value and intensity between various remote parties. There are five primary and five secondary hues in this system. The primaries are red, purple, blue, green and yellow. Hue, value and chroma are then rated with numbers. Colors can be very accurately described using this system. A three dimensional model using Munsell's system is called a **color tree**. The color is brighter at the outer edges of the tree.



## B. Prang or Brewster:

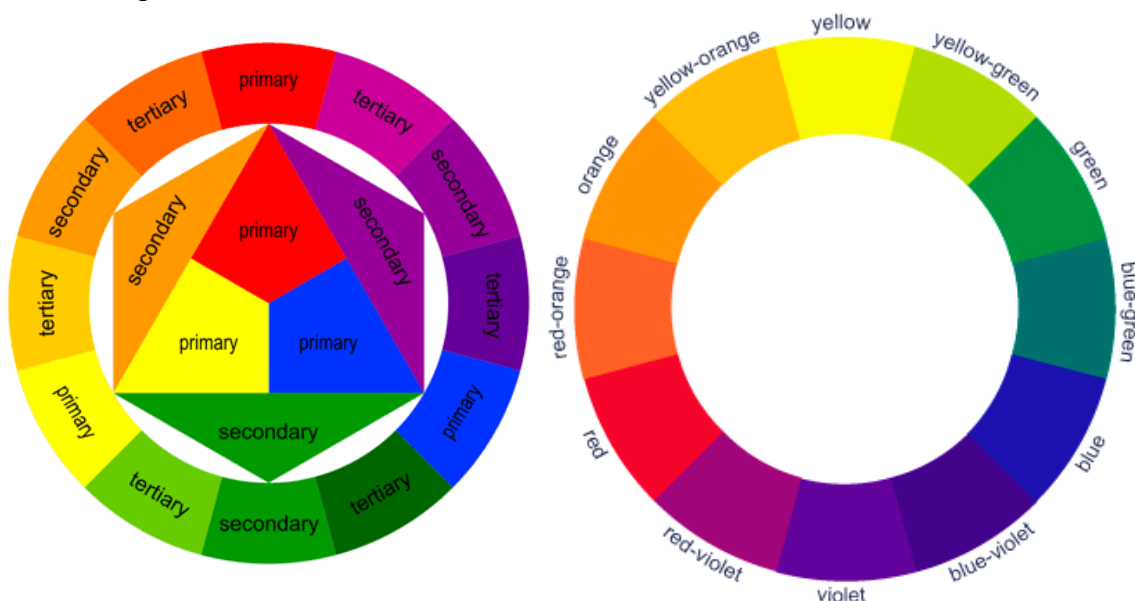
By 1831 Brewster laid the groundwork for what has become known as the Prang theory. Its structure is simple, straightforward and practical. The most common color wheel is based on the theories advanced by Louis Prang in 1876 and is commonly known as the **Prang** color wheel. In most theories the hues on the color wheel can be grouped as follows.

It is a standard 12-hue wheel with 3 primaries, 3 secondary and 6 tertiary colors. Prang value has 9 steps from white to black and 7 steps in intensity from a full primary at the tip to its full complement secondary at bottom.

**Primary Hues:** These are red, blue and yellow in the Prang color system. They are referred to as primary because they cannot be made by mixing other hues and all other colors can be made by them. The three primary hues are placed at equal distances from each other on the color wheel.

**Secondary Hues:** The three secondary hues are orange, green, and violet (purple). They are made by mixing equal amounts of two primary hues together. They are found halfway between the primary hues on the color wheel. Orange is made by mixing red and yellow. Green is made from equal amounts of blue and yellow. Violet is a combination of red and blue.

**Tertiary Hues:** Intermediate hues (sometimes called tertiary hues) result when equal amounts of adjoining primary and secondary colors are combined. When naming them, it is customary to state the name of the primary hue first e.g. red-orange is the tertiary between red and orange. Intermediate colors are blue-violet, blue-green, yellow-green, yellow-orange, red-orange, and red-violet.



**Self-Check 3****Written Test**

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

**Part II Short Answer Questions (5%)**

1. List two color theories?

2. What is a color wheel?

3. List three different types of hues?

**. Answer the following question!**

**Note: Satisfactory rating 6 and 10 points Unsatisfactory below 6 and 10 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score = \_\_\_\_\_

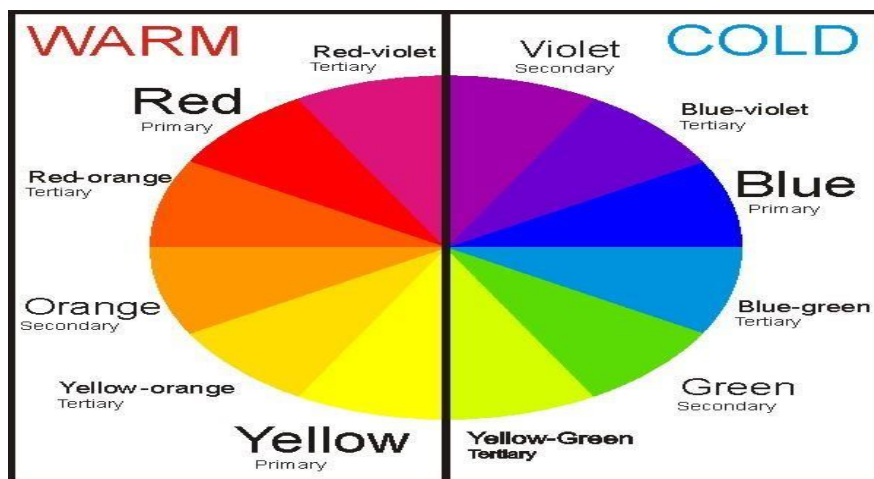
Rating: \_\_\_\_\_

## Information sheet 4 :-Relationship of color theory to design process identification

### Relationship of color theory to design process identification

Color creates a feeling of warmth and coolness when looked at. This is also followed when considering various seasonal dresses. The color wheel can be divided into warm and cool sides. The colors on the red side of the wheel are said to be warm because they are associated with warm phenomena. Warm colors are red, orange, and yellow. They appear to be hot like the sun, or like fire. Orange is the warmest color. Warm colors give a feeling of gaiety, activity, and cheerfulness. They set an outgoing and lively mood. However, if they are overdone, they can give a nervous impression. Warm colors appear to advance, or to come toward the observer. They make the body look larger. White and light colors also make objects look larger.

The green side implies cool phenomena. Cool colors are green, blue, and violet. They remind us of water or the sky. Blue is the coolest color. Cool colors give a feeling of quietness and restfulness. They suggest a subdued mood. If overdone, they can be depressing. Cool colors appear to recede, or to back away from the observer. They make the body look smaller. Designers often use cool colors for garments in large sizes so those people look smaller.



### Color scheme /Harmonies:

Colors when combined should be used at the right proportion or else they clash and give an awkward appearance rather than being beautiful. There are a number of concepts about organization of color. Color schemes are the ways that colors are used together. An understanding of well-known color schemes helps us to achieve different results by using different combinations of colors. Successful or harmonious combinations of colors are based on the location of the colors on the color wheel. The six basic color schemes are as follows:

**A) Monochromatic color scheme:** A monochromatic color scheme is a one-color plan that uses different tints, and shades. Neutrals such as black & white can be added to a monochromatic scheme for contrast and interest.

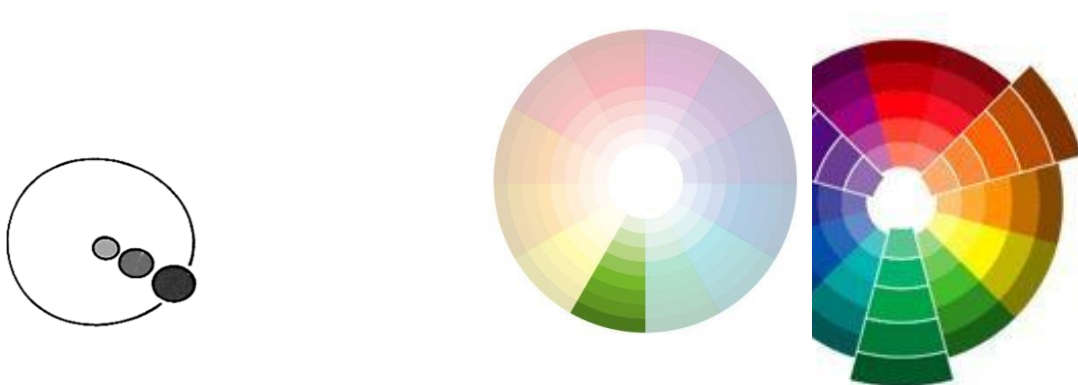


Fig: Monochromatic color scheme

**2) Analogous:** They all have one hue in common so things can't get too wild. An analogous color scheme uses neighboring, or adjacent, colors on

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the wheel. It is sometimes called a related color scheme since two or three “related” colors are used. To avoid monotony in clothing, use different values and intensities for some contrast. This means more freedom and expression potential. The combination of yellow, yellow- green, and green is an analogous scheme with three hues. In nature, the yellow, orange, and red of autumn is an analogous color scheme. Also, the blue, aqua, and green of sky, water, and grass is analogous.

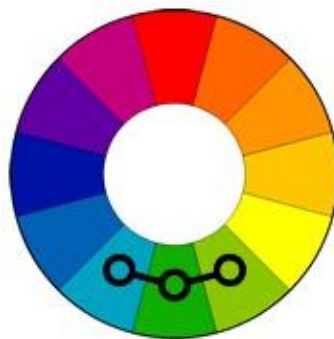


Fig: Analogous color scheme

- 4) **Complementary:** This scheme uses colors that are opposite on the color wheel (complements). Complementary colors are across from each other on the wheel. They have great contrast. In fact, the colors look even brighter when they are used side by side.
- 5) Examples of complementary color combinations are blue and orange, violet and yellow, and red and green. Worn together in full strength, these colors can give a real jolt. However, when used in tints and shades, they can be sophisticated and pleasing. A soft tint of one is usually attractive with a deep shade of the other.



Fig: Complementary color scheme

**4) Split-complementary color scheme:** A split-complementary color scheme uses three colors. It combines one color with the two colors on the sides of its complement. First choose a color and find its complement in the color wheel and then take colors on either side of the complement. For instance, blue might be used with yellow-orange and red-orange. This is also a bright color scheme, to be used with care in your apparel.

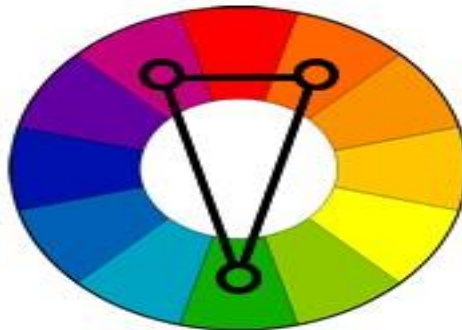


Fig: Split complementary color scheme

**5) Triad color scheme:** A triad color scheme combines three colors, which are of equidistant on the wheel. Examples are red, yellow, and blue, or purple, green, and orange. It has a great deal of contrast. To soften the contrast, one may choose to combine pleasing values and intensities. Wear a large area of one of the colors in a tint or shade and use small amounts of the other two for interest.





Fig: Traid color scheme

<b>Self-Check -1</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

**I. short answer questions. (each 2 point)**

1. List down different types of cool colors?
2. What is a color scheme?
3. What is monochromatic color scheme?
4. What is analogous color scheme?

## Operation sheet 1: - Dimensions of Color

Purpose	To acquire the trainees with dimension of color practice
Equipment ,tools and materials	Supplies and equipment needed or useful for this include these: <ul style="list-style-type: none"> <li>• Drawing board</li> <li>• Layout pad</li> <li>• cutter</li> <li>• Cutting Table</li> <li>• Pencils with HB lead</li> <li>• Eraser</li> <li>• Template</li> <li>• Color pencil</li> </ul>
Conditions or situations for the operations	<ul style="list-style-type: none"> <li>• All tools, equipment's and materials should be available on time when required.</li> <li>• Appropriate table, working area/ workshop to dimension of color</li> </ul>
Procedures	<ol style="list-style-type: none"> <li>1.Take an A4 paper that given for WORK practice</li> <li>2. Prepare drawing board and HB pencil with sharpener</li> <li>3.Step 2: Now start practicing the given work according to specific instruction</li> <li>3. draw with watercolor.</li> <li>4) With Color pencils</li> </ol>
Precautions	<ul style="list-style-type: none"> <li>• Care Should Be Taken While Sketching With Drawing Table, Cutting Materials And Sharpener</li> <li>• Preparing materials, tools and equipment are according to OHS.</li> </ul>
Quality criteria	<ul style="list-style-type: none"> <li>• Did personal protective equipment worn while working with the instrument used for doing this activities</li> <li>• Did trainees do all develop composition using dimension of color with perfect feature required</li> <li>• The understand develop composition using dimension of color</li> </ul>

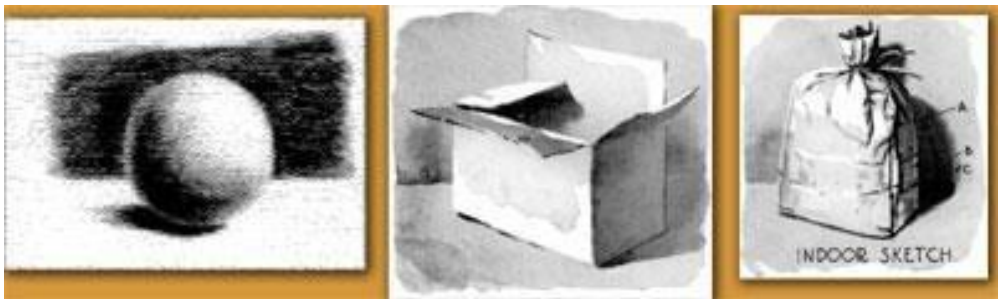
**Procedures**

**VALUE/TONE**

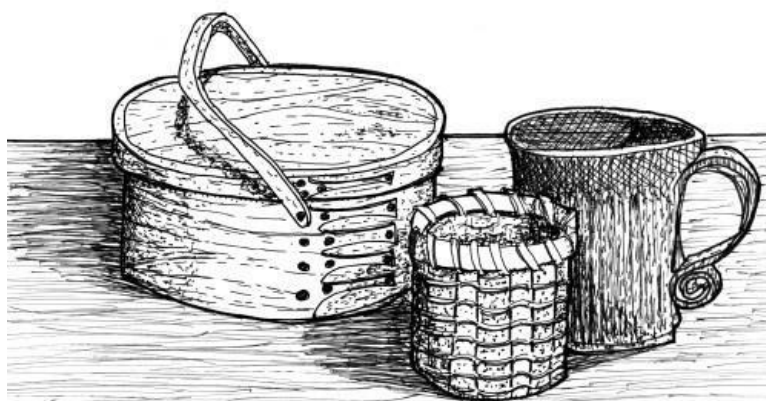
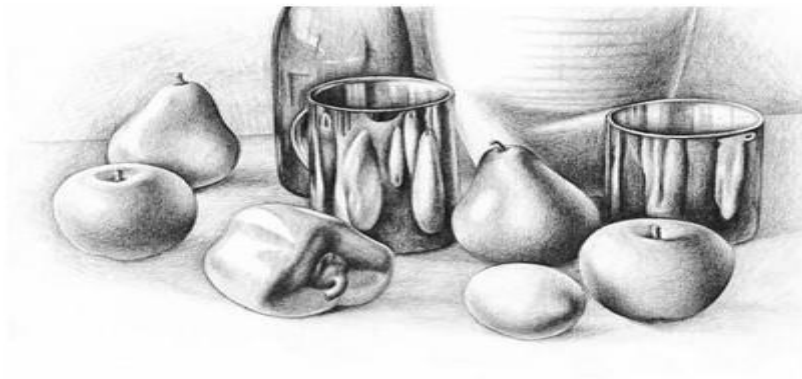
Take an A4 paper and Practice the following Values.



Take an A4 paper and Practice the following Sketches.



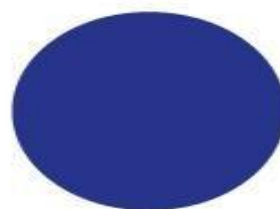
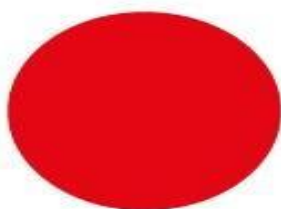
Take an A4 paper and Practice the following Sketches.



## Hue

Take an A4 paper and Practice the following Hues(Primary colors):

- 1) With watercolor.
- 2) With Color pencils



Take an A4 paper and Practice the following Hues (Secondary color):

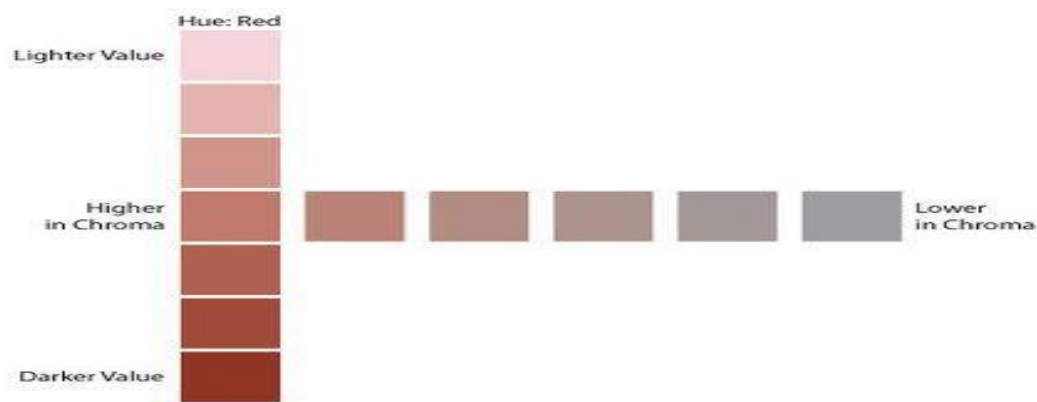
- 1) With watercolor.
- 2) With Color pencils



**Chroma/Intensity/Clarity**

Take an A4 paper and Practice the following chroma:

- 1) With watercolor.
- 2) With Color pencils



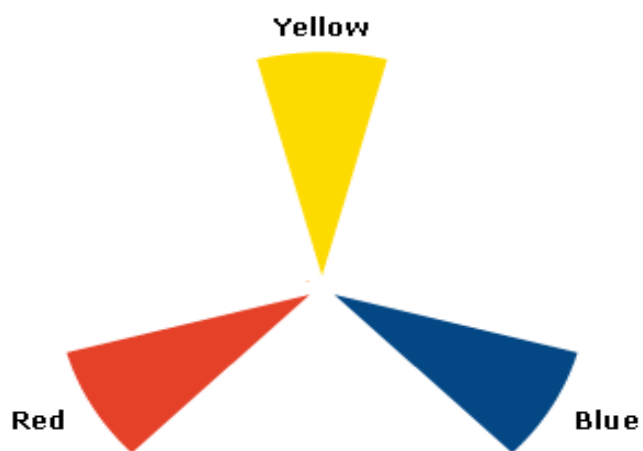
## Operation sheet 2: - Hues

Purpose	To acquire the trainees with Hues practice
Equipment ,tools and materials	Supplies and equipment needed or useful for this include these: <ul style="list-style-type: none"> <li>• Drawing board</li> <li>• Layout pad</li> <li>• cutter</li> <li>• Cutting Table</li> <li>• Pencils with HB lead</li> <li>• Eraser</li> <li>• Template</li> <li>• Color pencil</li> </ul>
Conditions or situations for the operations	<ul style="list-style-type: none"> <li>• All tools, equipment's and materials should be available on time when required.</li> <li>• Appropriate table, working area/ workshop to Hues</li> </ul>
Procedures	<p>1.Take an A4 paper that given for WORK practice</p> <p>2. Prepare drawing board and HB pencil with sharpener</p> <p>3.Step 2: Now start practicing the given work according to specific instruction</p> <p>4) draw With watercolor.</p> <p>5) draw With Color pencils</p>
Precautions	<ul style="list-style-type: none"> <li>• Care Should Be Taken While Sketching With Drawing Table, Cutting Materials And Sharpener</li> <li>• Preparing materials, tools and equipment are according to OHS.</li> </ul>
Quality criteria	<ul style="list-style-type: none"> <li>• Did personal protective equipment worn while working with the instrument used for doing this activities</li> <li>• Did trainees do all develop composition using dimension of color with perfect feature required</li> <li>• The understand develop composition using dimension of color</li> </ul>

### **procedure**

Take an A4 paper and Practice the following Hues (Primary colors):

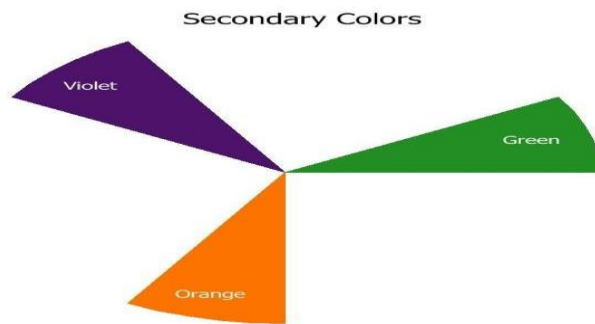
- 1) With watercolor.
- 2) With Color pencils



Take an A4 paper and Practice the following Hues(Secondary color):

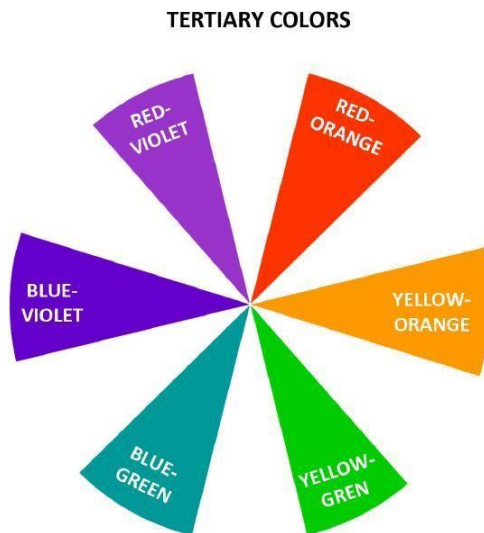
- 1) With watercolor.
- 2) With Color pencils





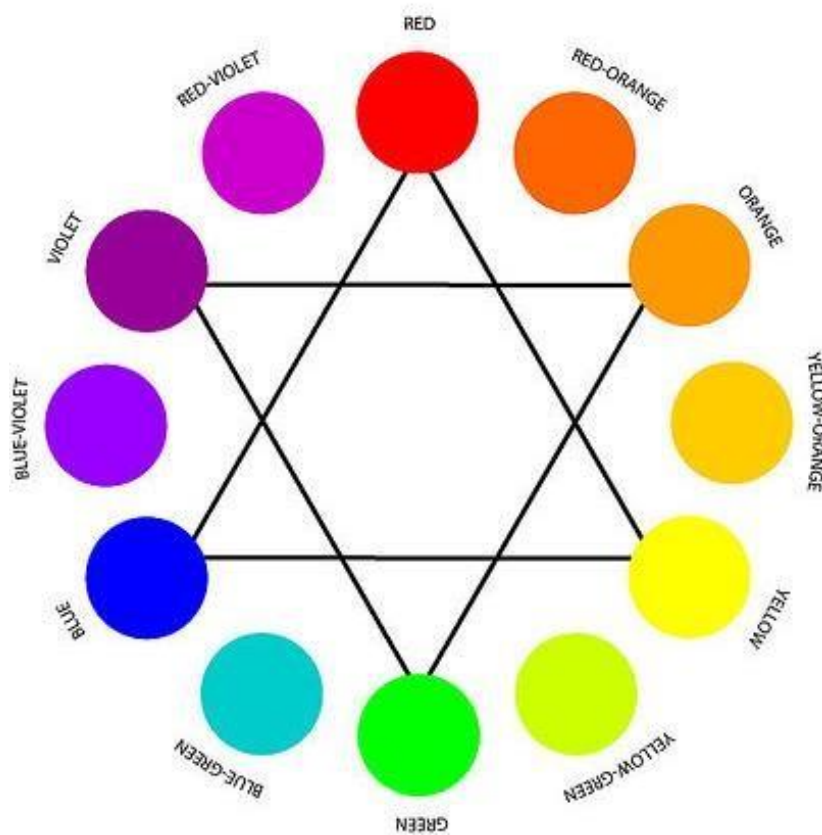
Take an A4 paper and Practice the following Hues(Tertiary color):

- 1) With watercolor.
- 2) With Color pencils



Take an A4 paper and Practice the following Color Wheel:

- 1) With watercolor.
- 2) With Color pencils



## Operation sheet 3: - shade scale preparation according to color mixing principles

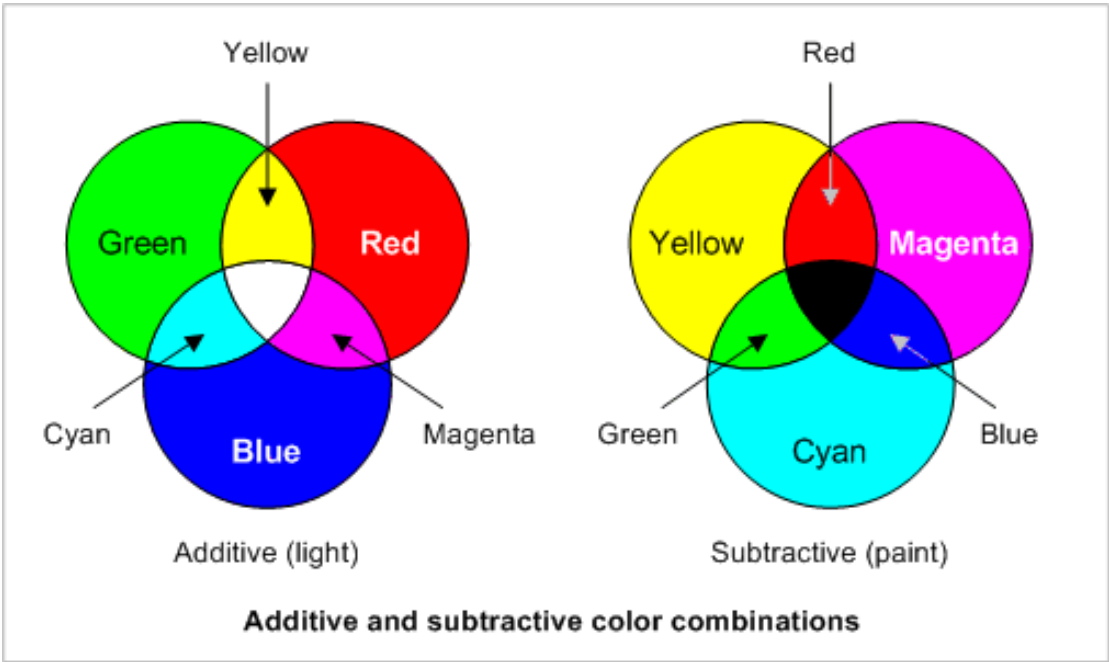
Purpose	To acquire the trainees with shade scale preparation according to color mixing principles
Equipment ,tools and materials	Supplies and equipment needed or useful for this include these: <ul style="list-style-type: none"> <li>• Drawing board</li> <li>• Layout pad</li> <li>• cutter</li> <li>• Cutting Table</li> <li>• Pencils with HB lead</li> <li>• Eraser</li> <li>• Template</li> <li>• Color pencil</li> </ul>
Conditions or situations for the operations	<ul style="list-style-type: none"> <li>• All tools, equipment's and materials should be available on time when required.</li> <li>• Appropriate table, working area/ workshop to dimension of color</li> </ul>
Procedures	<p>1.Take an A4 paper that given for WORK practice</p> <p>2. Prepare drawing board and HB pencil with sharpener c</p> <p>Color pencil</p> <p>3.Step 2: Now start practicing the given work according to specific instruction</p>
Precautions	<ul style="list-style-type: none"> <li>• Care Should Be Taken While Sketching With Drawing Table, Cutting Materials And Sharpener</li> <li>• Preparing materials, tools and equipment are according to OHS.</li> </ul>
Quality criteria	<ul style="list-style-type: none"> <li>• Did personal protective equipment worn while working with the instrument used for doing this activities</li> <li>• Did trainees do all develop composition using dimension of color with perfect feature required</li> <li>• The understand develop composition using dimension of color</li> </ul>

procedure

I. Color Theories

Take an A4 paper and Practice the following Color Theories:

- 1) With watercolor.
- 2) With Color pencils

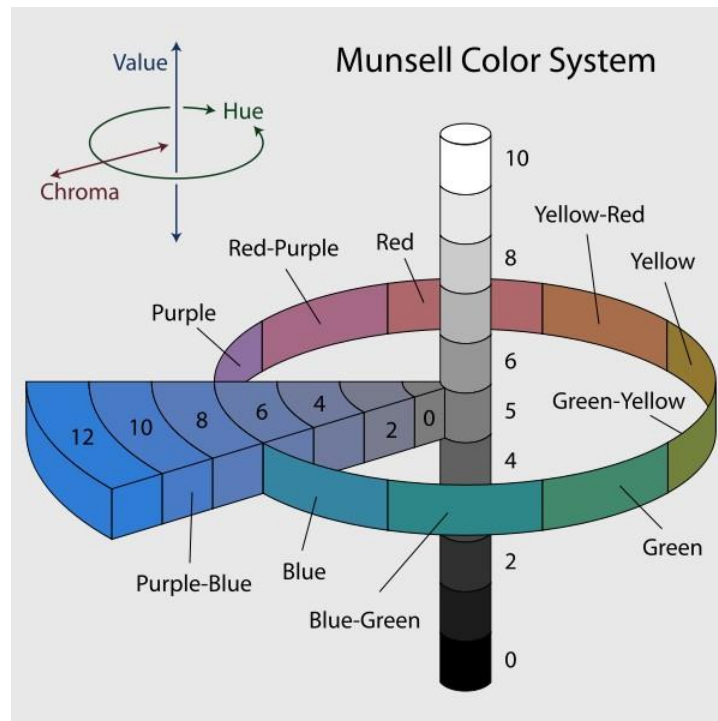


II. Colour Wheels - Colour Systems:

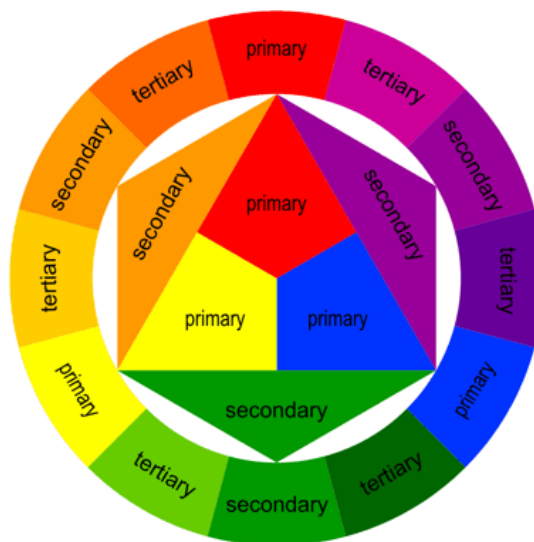
Take an A4 paper and Practice the following:

- 1) With watercolor.
- 2) With Color pencils

**A. Munsell Colour System:**



**B. Munsell Colour System:**



## Operational sheet-4 color scheme

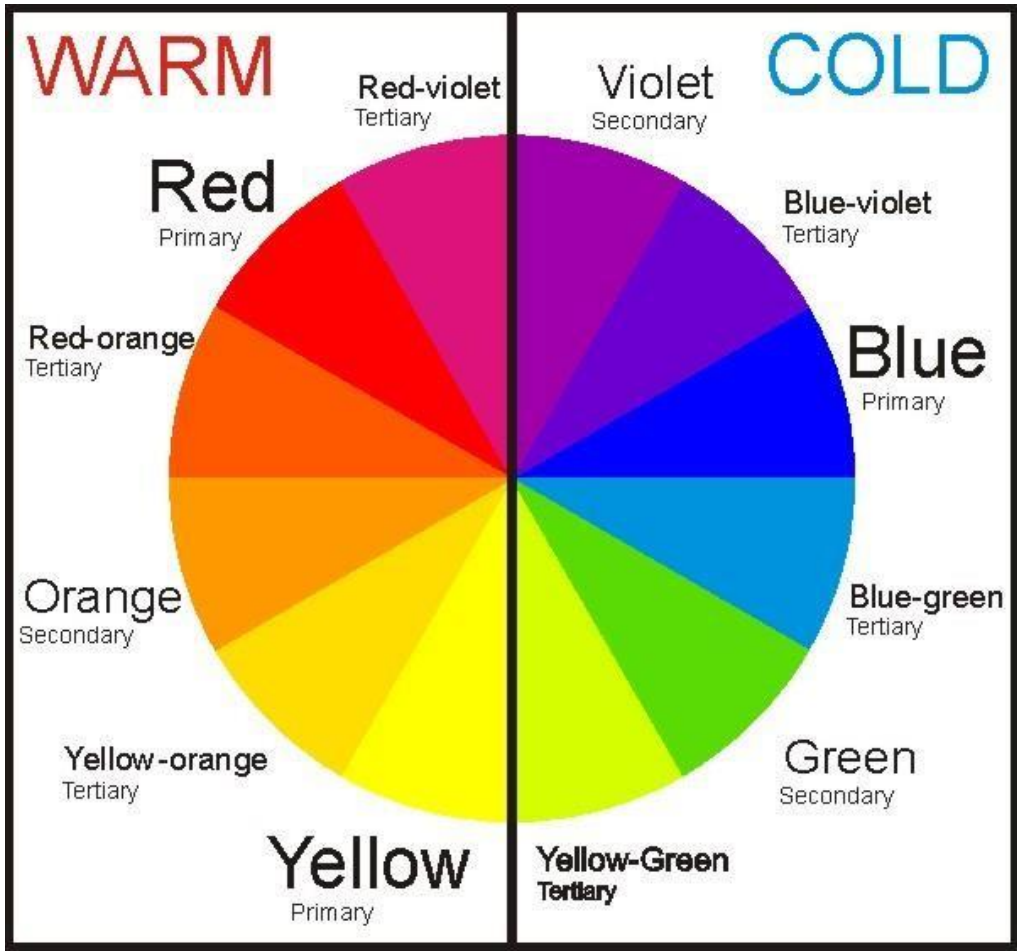
Purpose	To acquire the trainees with scheme of color practice
Equipment ,tools and materials	Supplies and equipment needed or useful for this include these: <ul style="list-style-type: none"> <li>• Drawing board</li> <li>• Layout pad</li> <li>• cutter</li> <li>• Cutting Table</li> <li>• Pencils with HB lead</li> <li>• Eraser</li> <li>• Template</li> <li>• Color pencil</li> </ul>
Conditions or situations for the operations	<ul style="list-style-type: none"> <li>• All tools, equipment's and materials should be available on time when required.</li> <li>• Appropriate table, working area/ workshop to scheme of color</li> </ul>
Procedures	<p>1.Take an A4 paper that given for WORK practice</p> <p>2. Prepare drawing board and HB pencil with sharpener</p> <p>3.Step 2: Now start practicing the given work according to specific instruction</p>
Precautions	<ul style="list-style-type: none"> <li>• Care Should Be Taken While Sketching With Drawing Table, Cutting Materials And Sharpener</li> <li>• Preparing materials, tools and equipment are according to OHS.</li> </ul>
Quality criteria	<ul style="list-style-type: none"> <li>• Did personal protective equipment worn while working with the instrument used for doing this activities</li> <li>• Did trainees do all develop composition using dimension of color with perfect feature required</li> <li>• The understand develop composition using dimension of color</li> </ul>

**procedures**

Take an A4 paper and Practice the following:

- 1) With watercolor.
- 2) With Color pencils

**Warm and Cool colors:**



Take an A4 paper and Practice the following:

1) With watercolor.

2) With Color pencils

**Color scheme /Harmonies:**

**A) Monochromatic color scheme**



**2) Analogous:**



**3) Complementary**





#### 4) Split-complementary color scheme



#### 5) Triad color scheme





## LAP TEST-1: Practical Demonstration

**Instructions:** Given necessary tools, materials, and sewing machine you are required to perform the following tasks within 60 minutes.

1. prepare the following Hues
  - a. Primary colors
  - b. Secondary colors
  - c. Tertiary colors
2. prepare Color Wheel
  - a. With watercolor
  - b. With Color pencils
3. prepare the Color Theories
  - a. With watercolor
  - b. With Color pencils
4. prepare Warm and Cool colors



<b>L #08</b>	<b>LO 4-IDENTIFY VISUAL EFFECTS OF COLOR</b>
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<b>Instruction sheet</b>
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This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Investigating and identifying Visual or optical effects of color
- Creating and presenting Fashion pictures that reflect different visual effects

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Investigate and identify Visual or optical effects of color
- Create and present fashion pictures that reflect different visual effect

<b>Learning Instructions:</b>
-------------------------------

Read the specific objectives of this Learning Guide. .

1. Follow the instructions described below.
2. Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.
3. Accomplish the “Self-checks” which are placed following all information sheets.
4. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks).
5. If you earned a satisfactory evaluation proceed to “Operation sheets
6. Perform “the Learning activity performance test” which is placed following “Operation sheets” ,
7. If your performance is satisfactory proceed to the next learning guide,
8. If your performance is unsatisfactory, see your trainer for further instructions or go back to “Operation sheets”.



## Information Sheet 1- investigating and identifying Visual or Optional Effects of Colour

### VISUAL OR OPTICAL EFFECTS OF COLOR

#### 4.1. Size

As with value, objects, shapes and areas of the same size can actually appear different in size if they are colored differently, dark, cool and dull colors make objects appear smaller than the same objects in warm, light or bright colors. For example if a dress is cut in black and also cut in bright red or purple the black version would be more slimming than the red or purple versions.

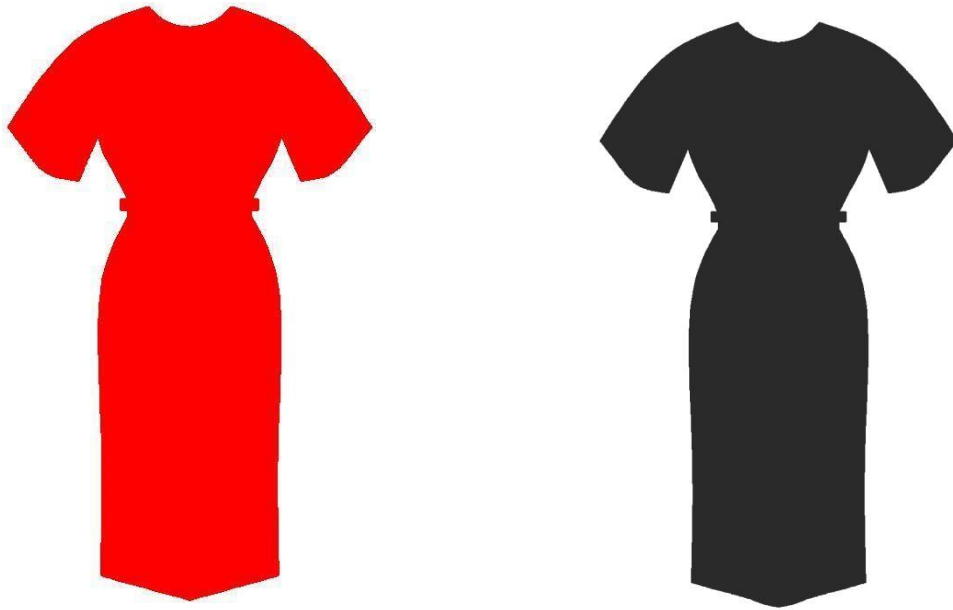


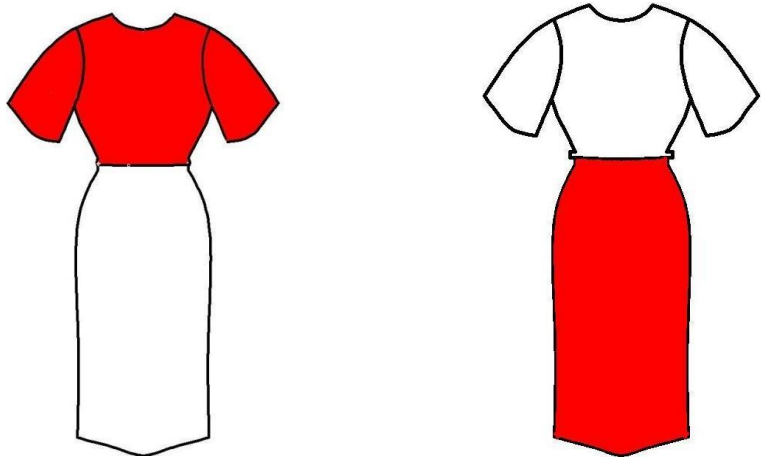
Fig: The Red dress appears larger than the black dress because warm, bright colors appear larger

#### 4.2 Density

Colors can convey a sense of visual weight, warm, dark and bright colors tend to look dense or heavy and cool, light and dull colors are visually lighter in weight. A designer should consider visual weight in the case of a two-color dress, where the bodice is one



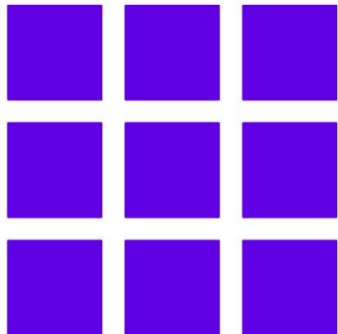
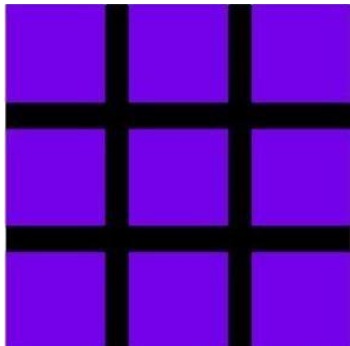
color and the skirt another color. If the colors were for example red and white, the skirt would be better in red and the top in white because the garment has in white, because the garment has better balance with the heavier red on the bottom half and the lighter white on the top.



### 4.3 Value

Visual impressions created by value are stronger than those created by hue. Because strongly contrasting values are very dramatic and demand attention, the first thing a viewer becomes aware of is dark against light. However when values are similar the hue becomes more noticeable.

When two hues of identical tone are used together, they cause visual ‘flashing’. This means the colors appear to jump around, glow and pulsate because they are both competing equally for attention. This effect is usually undesirable and can be lessened by changing the tone of one or both of the colors.





White unites and draws colors together, black separates colors. The effect black has is similar to that of a stained glass window, where the colors are contained and isolated by the dark out line.

#### 4.4 Visual Mixing

This occurs when small areas of color used close together appear to take on some of the neighboring color, and can be compared to the effect created by the impressionists and pointillists in their dot paintings. It often happens with strips, floral and prints and particularly noticeable from a distance when the colors seem to blend to create a new color. For example with red and white stripes, the white appears whiter, so that from a distance the stripes merge to look pink. Similarly, yellow and blue used together often merge to create green.



When matching plains with printed, striped or multi-colored fabrics in the one garment or coordinating accessories the effects of visual mixing must be taken into consideration and care taken to match the colors from a distance as well as close up. With the above red and white example, the choice of a pink belt and buttons may actually look better on the garment than either red or white accessories.

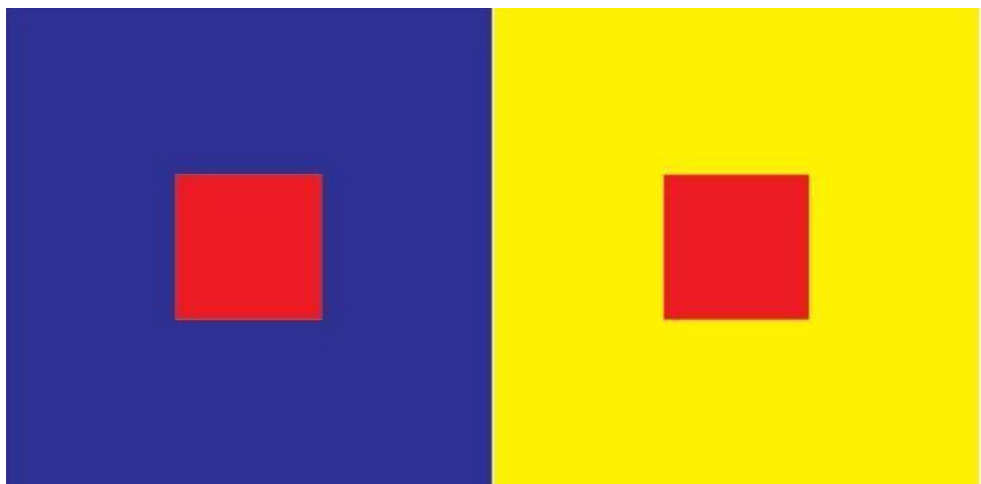
#### 4.5 Simultaneous Contrast

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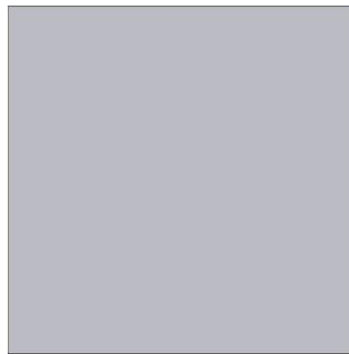
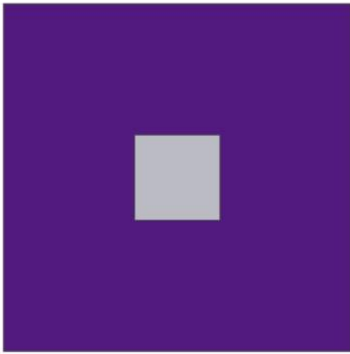


Some color combinations have the effect of exaggerating the differences between them. This effect is known as simultaneous contrast and can greatly affect the appearance of color.

For example, identical hues can appear different with different colored backgrounds because hues used together cast their complement onto each other. Red placed on a blue background will look more orange, and red placed on a yellow background will appear more purple.



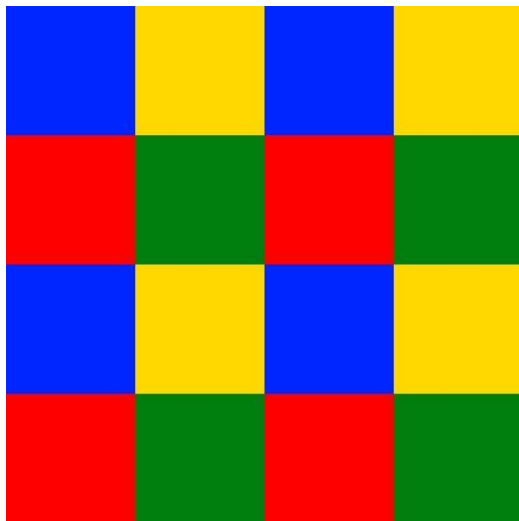
Simultaneous contrast is also evident when a strong chroma is used with a natural. The natural takes on the complementary color of its neighbor. So a grey used with a strong purple will appear slightly yellow. The way to cancel the yellow and achieve the look of a neutral grey would be to use a purplish-grey with the purple. So when using orange with grey, the grey may need to be warmer or more orange to appear natural.



Black borders act as a barrier and isolate colors, while white draws them together.

#### 4.6 Motion

Warm and cool colors with very bright chroma tend to clash and vibrate in front of the eyes when used together. This occurs because the eyes continually try to focus on both the short wave lengths of the receding cool colors and the long wavelengths of the advancing warm colors. The effect can be very disturbing and uncomfortable to look at and can be relieved by reducing the brilliance of one or more of the colors. A neutral takes on the complementary color of its neighbor – the grey surrounded by the purple.







4.7 Texture

The surface characteristics on the object affect the action of light and the degree of absorption or reflection that in turn affects the color. Shiny, smooth surfaces enhance colors and make them appear much brighter, livelier and larger than do rough, dull surfaces.

Colors may also be opaque or transparent. This is because some light passes through transparent fabric and is neither reflected nor absorbed. This color difference may become apparent when different textures are used on the same garment, and the colors do not match. It can also be problem when trying to coordinate garments or match accessories with different textures.



**Self-Check -1****Written Test**

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

**I. short answer questions. (each 2point)**

1. What is the optical effect of color on size?
2. What is the optical effect of color on density?
3. What is the optical effect of color on texture?



## Information Sheet 2- creating and presenting fashion pictures that reflect different visual effects

### Use of color in designing

Knowing about color and its use is important in achieving required appearance. If not used well or combined well, color can cause apparel to look too gaudy or very dull. Although fashion often bends these, colors in clothing are usually best used according to the following:

- Black is good for formal wear. It tends to be sophisticated.
- Brown is casual, natural and informal
- Navy looks good on almost everyone and is good for sportswear or classic styles.
- For a tailored image beige and gray are to be chosen.
- White looks good with all other colors. Off-white is better for most people than pure white.
- Red, green, and blue have many tints, shades and intensities, which make these hues suitable for almost all occasions.
- Yellow is good for casual, fun clothes, but it is not pleasing for many skin tones
- Bright colors are fun for active sportswear or as accents with neutrals.

Using a color with a neutral makes the color appear brighter. Also, white and gray look

brighter when placed beside black. Colors with medium or dark value look even darker when used next to a light area. Clothing outfits are generally more attractive if they do not have equal areas of light and dark. In most cases colors in clothes seem better balanced if light ones are used above dark ones. Colors of contrasting value are often exciting when used together. An extreme contrast makes colors look brighter. Observing the nature around is a useful exercise to understand the use of color.

### Visual effects of color in dress:

Colors react with each other and related to each other. The effects they give depend on how light, dark or strong the colors are. They also depend on how the colors are combined with other colors in a total outfit.



Colors can appear to change the size and shape of the person wearing them. Dark, cool and dull colors make objects appear smaller than the same objects in warm, light or bright colors. The receding colors which make the wearer smaller are black, navy blue, dark blue-violet, chocolate brown, dull dark green etc. on the other hand light warm and bright colors make a form seem larger due the colors advancing characteristics. Such colors are white, yellow, orange and red.

A single color for an entire outfit makes a person look thinner and taller. When combining two colors in an outfit, special precautions are needed. Sharply contrasting colors appear to shorten the body. This effect can best be used for a very tall person, dividing the top the bottom of the dress. When two hues of identical tone are used together, they cause visual 'clashing' - colors appear to jump around glow and pulsate because they both compete equally for attention. Changing the tone of one or both the colors usually reduces this effect. White unites and draws colors together while black separates colors. In most cases one should not use more than three major colors in an outfit. It is best to use one color for a large area and another color or two for smaller areas. Proper use of color in a person's clothing will enhance his or her personal coloring. Students of Apparel design need to perceive the light and dark shades of a hue that appear on garments when folded.

## **Black**

Black is the color of authority and power. It is popular in fashion because it makes people appear thinner. It is also stylish and timeless. Black also implies submission. Priests wear black to signify submission to God. Some fashion experts say a woman wearing black implies submission to men. Black outfits can also be overpowering, or make the wearer seem aloof or evil. Villains often wear black.

## **White**

Brides wear white to symbolize innocence and purity. White reflects light and is considered a summer color. White is popular in decorating and in fashion because it is light, neutral, and goes with everything. However, white shows dirt and is therefore more difficult to keep clean than other colors. Doctors and nurses wear white to imply sterility.

## **Red**

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The most emotionally intense color, red stimulates a faster heartbeat and breathing. It is also the color of love. Red clothing gets noticed and makes the wearer appear heavier. Since it is an extreme color, red clothing might not help people in negotiations or confrontations. Red cars are popular targets for thieves. In decorating, red is usually used as an accent. Decorators say that red furniture should be perfect since it will attract attention.

## **Pink**

The most romantic color, pink, is more tranquilizing. Sports teams sometimes paint the locker rooms used by opposing teams bright pink so their opponents will lose energy.

## **Blue**

The color of the sky and the ocean, blue is one of the most popular colors. It causes the opposite reaction as red. Peaceful, tranquil blue causes the body to produce calming chemicals, so it is often used in bedrooms. Blue can also be cold and depressing. Fashion consultants recommend wearing blue to job interviews because it symbolizes loyalty. People are more productive in blue rooms. Studies show weightlifters are able to handle heavier weights in blue gyms.

## **Green**

Currently the most popular decorating color, green symbolizes nature. It is the easiest color on the eye and can improve vision. It is a calming, refreshing color. People waiting to appear on TV sit in "green rooms" to relax. Hospitals often use green because it relaxes patients. Brides in the middle Ages wore green to symbolize fertility. Dark green is masculine, conservative, and implies wealth.

## **Yellow**

Cheerful sunny yellow is an attention getter. While it is considered an optimistic color, people lose their tempers more often in yellow rooms, and babies will cry more. It is the most difficult color for the eye to take in, so it can be overpowering if overused. Yellow enhances concentration, hence its use for legal pads. It also speeds metabolism.

## **Purple**

The color of royalty, purple connotes luxury, wealth, and sophistication. It is also feminine and romantic. However, because it is rare in nature, purple can appear artificial.



**Brown**

Solid, reliable brown is the color of earth and is abundant in nature. Light brown implies genuineness while dark brown is similar to wood or leather. Brown can also be sad and wistful. Men are more apt to say brown is one of their favorite colors









## Self-Check -2

### Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

#### **Short Answer Questions.** (each 2 points)

1. What does each of this color reflect

a. Blue

b. Green

c. Yellow

d. Purple

e. Brown





## Operation sheet 1: - Visual Or Optical Effects Of Colour

Purpose	To acquire the trainees with Visual Or Optical Effects Of Color practice
Equipment ,tools and materials	Supplies and equipment needed or useful include these: <ul style="list-style-type: none"> <li>• Drawing board</li> <li>• Layout pad</li> <li>• cutter</li> <li>• Cutting Table</li> <li>• Pencils with HB lead</li> <li>• Eraser</li> <li>• template</li> </ul>
Conditions or situations for the operations	<ul style="list-style-type: none"> <li>• All tools, equipment's and materials should be available on time when required.</li> <li>• Appropriate table, working area/ workshop to assemble cream separator practice.</li> </ul>
Procedures	<ol style="list-style-type: none"> <li>4. Take an A4 paper that given for WORK practice</li> <li>5. Prepare drawing board and HB pencil with sharpener</li> <li>6. Step 2: Now start practicing the given work according to specific instruction</li> </ol>
Precautions	<ul style="list-style-type: none"> <li>• Care Should Be Taken While Sketching With Drawing Table, Cutting Materials And Sharpener</li> <li>• Preparing materials, tools and equipment are according to OHS.</li> </ul>
Quality criteria	<ul style="list-style-type: none"> <li>• Did personal protective equipment worn while working with the instrument used for doing this activities</li> <li>• Did trainees do all develop composition using elements of design with perfect feature required</li> <li>• The understand develop composition using elements of design</li> </ul>

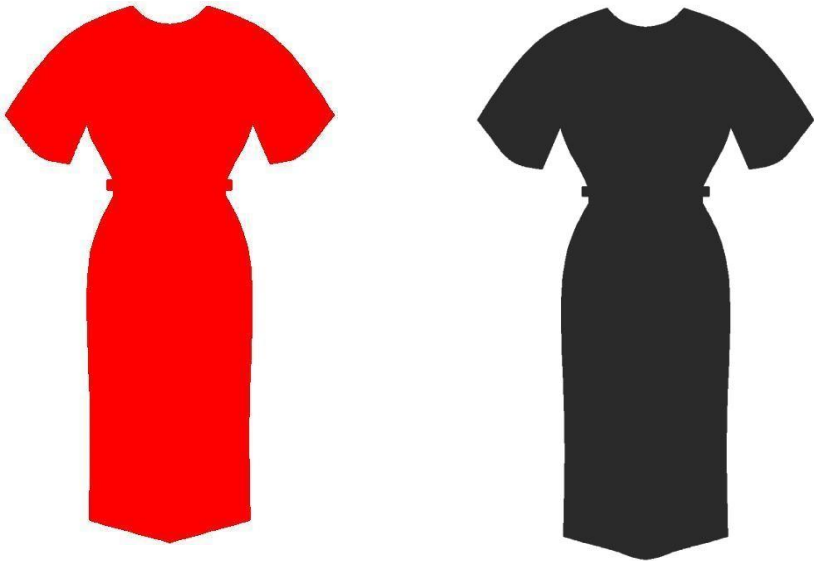


**procedure**

**Size**

Take an A4 paper and Practice the following:

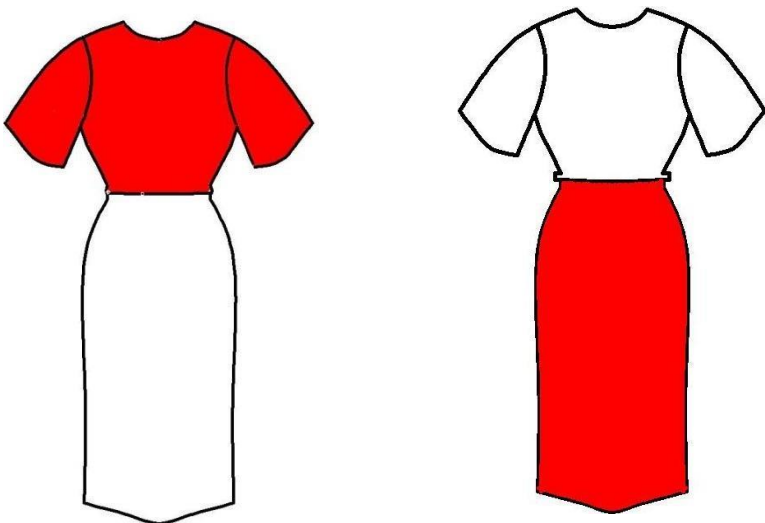
- 1) With watercolor.



**Density**

Take an A4 paper and Practice the following Hue:

- 1) With watercolor.

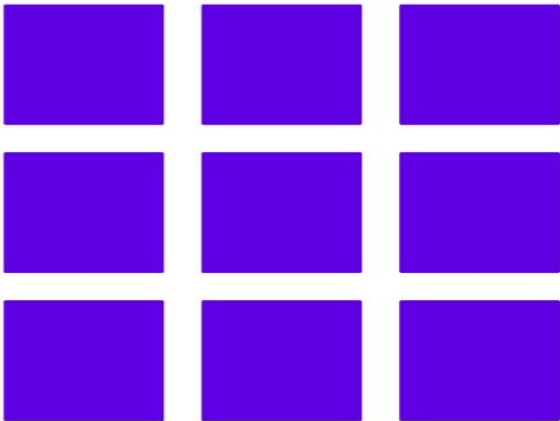
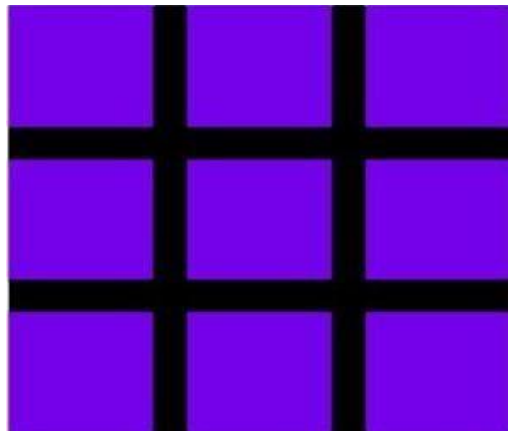




### Value

Take an A4 paper and Practice the following:

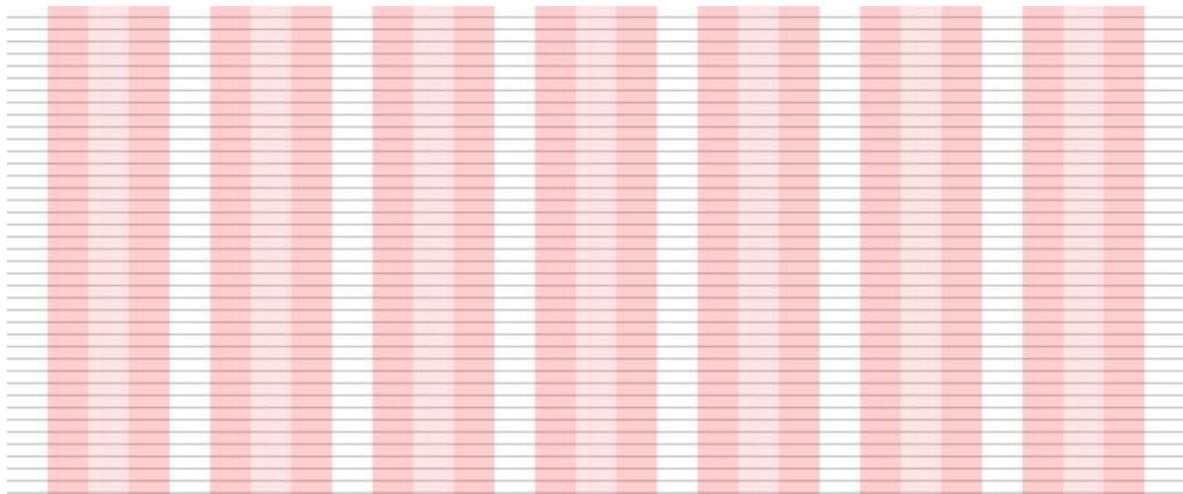
- 1) With watercolor.



### Visual Mixing

Take an A4 paper and Practice the following:

- 1) With watercolor.

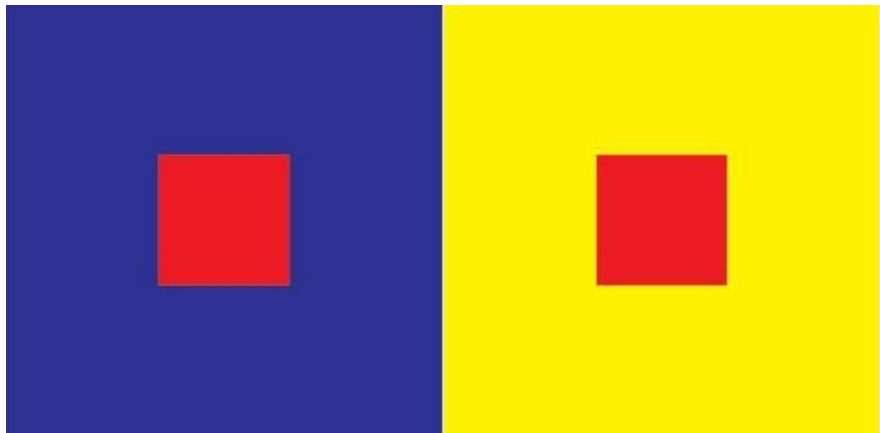




**Simultaneous Contrast**

Take an A4 paper and Practice the following:

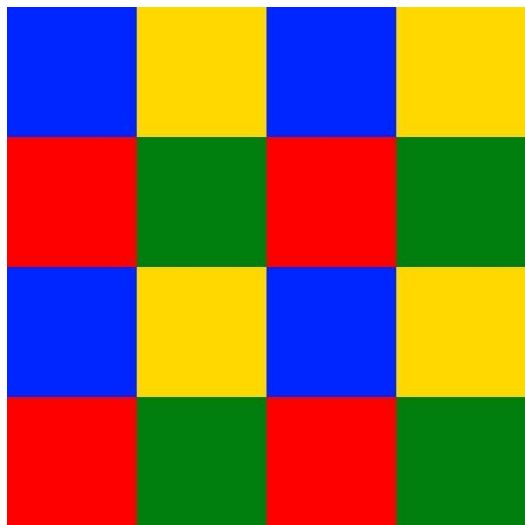
- 1) With watercolor.



**Motion**

Take an A4 paper and Practice the following:

- 1) With watercolor.

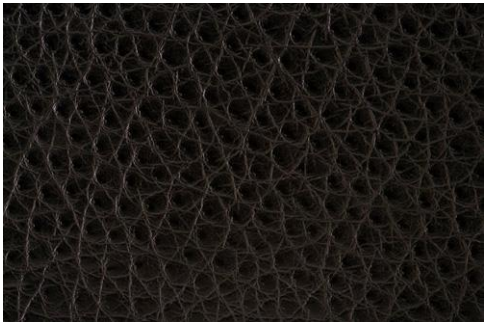


**Texture**

Take an A4 paper and Practice the following:



1) With watercolor.





## Operation sheet 2: - Creating And Presenting Fashion Pictures That Reflect Different Visual Effects

Purpose	To acquire the trainees with Creating And Presenting Fashion Pictures That Reflect Different Visual Effects practice
Equipment ,tools and materials	Supplies and equipment needed or useful include these: <ul style="list-style-type: none"> <li>• Drawing board</li> <li>• Layout pad</li> <li>• cutter</li> <li>• Cutting Table</li> <li>• Pencils with HB lead</li> <li>• Eraser</li> <li>• template</li> </ul>
Conditions or situations for the operations	<ul style="list-style-type: none"> <li>• All tools, equipment's and materials should be available on time when required.</li> <li>• Appropriate table, working area/ workshop to assemble cream separator practice.</li> </ul>
Procedures	<ol style="list-style-type: none"> <li>7. Take an A4 paper that given for WORK practice</li> <li>8. Prepare drawing board and HB pencil with sharpener</li> <li>9. Step 2: Now start practicing the given work according to specific instruction</li> </ol>
Precautions	<ul style="list-style-type: none"> <li>• Care Should Be Taken While Sketching With Drawing Table, Cutting Materials And Sharpener</li> <li>• Preparing materials, tools and equipment are according to OHS.</li> </ul>
Quality criteria	<ul style="list-style-type: none"> <li>• Did personal protective equipment worn while working with the instrument used for doing this activities</li> <li>• Did trainees do all develop composition using elements of design with perfect feature required</li> <li>• The understand develop composition using elements of design</li> </ul>





## procedure

Take an A4 paper and Practice the following:

1) With watercolor.









## LAP Test — 1

## Practical Demonstration

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Time started:** \_\_\_\_\_

**Time finished:** \_\_\_\_\_

**Instructions:** Given necessary tools and materials you are required to perform the following tasks within 60 minutes.

1. prepare the given picture with water colors for:

- a. Size
- b. Density
- c. Motion
- d. Simultaneous contrast



<b>LG #09</b>	<b>LO5. Perform Design Process</b>
<b>Instruction sheet</b>	
<p>This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:</p> <ul style="list-style-type: none"><li>• Identifying and categorizing Concept of design process</li><li>• Identifying and analyzing Structure and context building</li><li>• Identifying Influence of material for effective design process</li><li>• Producing commercial considerations in design</li></ul> <p>This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:</p> <ul style="list-style-type: none"><li>• Identify and categorize Concept of design process</li><li>• Identify and analyze Structure and context building</li><li>• Identify Influence of material for effective design process</li><li>• Produce commercial considerations in design</li></ul>	
<b>Learning Instructions:</b>	
<p>10. Read the specific objectives of this Learning Guide.</p> <p>11. Follow the instructions described below.</p> <p>12. Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them</p> <p>13. Accomplish the “Self-checks” which are placed following all information sheets.</p> <p>14. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks).</p> <p>15. If you earned a satisfactory evaluation proceed to “Operation sheets</p> <p>16. Perform “the Learning activity performance test” which is placed following “Operation sheets” ,</p> <p>17. If your performance is satisfactory proceed to the next learning guide,</p> <p>18. If your performance is unsatisfactory, see your trainer for further instructions or go back to “Operation sheets”.</p>	



## Information Sheet 1- Identifying and categorizing Concept of design process

### 5.1.1 Information Collection

Stores, malls, displays in windows, television programs, movies, videos, and historical costumes in museums are all additional ways to study fashion and get ideas. Studying nature, leaf patterns, water movement, birds, sky, architecture of buildings, etc. can inspire patterns, designs, and colors. Almost everything one comes into contact with can be a source of inspiration.

Collect out any picture that has appeal, stirs the imagination, or has a pleasing detail. Keep these clippings in a folder and refer to the folder often. Add clippings constantly.

For Leather design, swatch file will hold a collection of leather swatches. These should be labeled with leather content, source, price, and date. Feel the swatches and learn to develop your tactile sense. Try to imagine what garments the fabric could be made into. Work with one swatch and try to imagine it in other colors or patterns.

### Visits Mall





**Displays in windows**



**Museums**





## Nature



## Leaf patterns



## Birds



### 5.1.2 Analysis

The directions (principles) are flexible and should be interpreted within the client fashion or problem the designer is trying to solve. For example, the directions (principles) would apply differently for a design of a costume than for a design of a current fashion garment. The ingredients (elements) are the raw materials that must be combined. These elements can change the taste of the garment. A dress is more eye-catching in a bright color than a dull neutral, even though the design is the same.

The first step in creating a new design is to research fashion and consumer trends. Numerous excellent sources of fashion information, such as magazines, newspapers, pattern maker publications, trade publications, TV, specialty stores, and department stores help with the exploration necessary for fabricating design



and being inspired. It is also advisable to visit fabric stores or study catalogues to keep up with the new Leathers, processes, fabrics, and the latest fashion colors. Many of the same can be studied for garments, textiles, and accessories. The fashion information will show the latest garments, but the garments will also show the current Leather. The model will also be wearing accessories. It is possible to then tailor research to a specific design area.

### 5.1.3 Synthesis

- Obtain the design program (program definition)
- Collect Data of relevant conditions (inventory)
- Interpret the data of the conditions relative to the design program (analysis)
- Conceptualize the organization of spaces and circulation patterns(bubble diagram/concept
- Conceptualize functional, aesthetic and environmental uses of plants (concept plan)
- Review and refine concept drawings to greater levels of precision (final concept, detailed plan)
- Assess/Evaluate whether problems addressed and program needs met.

### 5.1.4 Conceptualization

Keeping a small sketchbook handy at all times helps preserve ideas. Fill in with quick, informative sketches, impressions, and color or fabric swatches. These may be rough and incomplete drawings, notes, descriptions, or details, as they are for reference only. This also develops the habit of sketching. Try sketching details one day, silhouettes another, and fabric patterns the next day. This can be done in the car, on the bus, or in free time. It is best not to copy a design while in the store, as they may ask you to leave. Keep these impressions (sketches) in a reference file.



A clipping folder combined with a sketchbook is a **source** of inspiration, not a **substitution** for it. Copying has little merit in the world of design - learn to change, modify, adapt, and create.





## Self-Check 1

## Written Test

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

### I) Short Answer Questions

1. List down a few places where you would get ideas about fashion. (3 points)
2. List down the steps for synthesis in fashion. (7 points)



## Information Sheet 2 Identifying and analyzing Structure and context building

### Identification And Analyzing Structure And Context Building

The focus of this area is the systematic study of the relationship between the producers (or distributors) and consumers (actual or potential recipients) of goods and services. Usually this involves many of the following concerns: consumer preferences for product features, consumer attitudes and motivation, buying habits and patterns, brand preferences, media research (including the effectiveness of advertisements and commercials), estimating demand for products or services, and the study of the economic expectations of people. Closely allied to those areas of market research which focus on personal consumption and data amassed dealing with the antecedents and correlates of consumer behavior which should be learned.

There is a skill component to be mastered upon the appropriate application of a variety of social science research methodologies (e.g., sampling theory, questionnaire and survey protocol design and execution, individual and group interviewing, stimulus scaling, and mathematical model building).

Self check 2	Written test
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**Refer Question are included in next information sheet 3 self check 3**



## Information Sheet 3 Identifying Influence of material for effective design process

### 5.3 Influence Of Material Effective Design Process

Products do not only differentiate themselves from other products in functionality, but also in the way that they please users. Users nowadays expect a product to function properly, to be easy to use, and to touch them emotionally in some way. The moment that products satisfy the consumer on issues like utility, safety, and comfort; the emphasis of the consumer will shift towards appearance, emotional attributes, and symbol. Manufacturers that develop products with these expectations have grown significantly, especially in the consumers market. They have started to realize that they need ways to get into the hearts and minds of their customers to stay in business.

Materials selection plays an essential role in the product design process. Product materials determine the range of function, durability, certain costs, user feedback, and user experience. When users interact with products, their senses are in contact with the materials of those products. Users see the colors of materials, feel the texture and weight, and hear the sounds that the materials make when the object is moved. These sensory perceptions contribute to product usability and use experiences. Product designers use materials to create these sensory perceptions. In addition, product designers select materials for products to elicit the right associations. Hodgson and Harper stated that materials considerations are pervasive in design as the substance through which product designers' intentions are embodied. Likewise, the strategic use of materials is one of the most influential ways through which product designers engender deeper, more emotive connections between their products and their users. The materials that a product is made of thus influence how users interact with the product.

The different aspects of materials can be for the most part categorized in two groups,

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namely the technical aspects and the user-interaction aspects. The technical aspects of materials define how the product will be manufactured and how it will function. The user-interaction aspects are those that influence the usability and personality of a product. For example, shininess can influence how well users can read from a display (use aspects) and colors are a very strong aspect to create a personality that influences user experience. For high quality products, product designers should select materials that are optimal or compromise in both aspects.







## Self-Check 3

## Written Test

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

### I. Short Answer Questions (10 point)

1. How does material selection play an essential role in product design process?

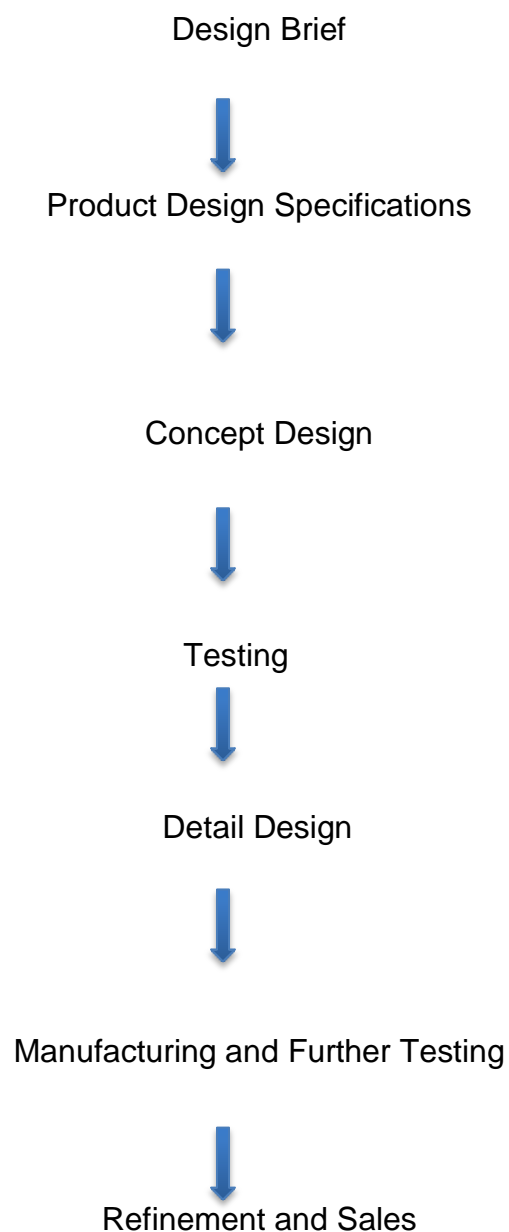


## Information Sheet - 4 Producing commercial considerations in design

### The Design Process

The design process is the transformation of an idea, needs, or wants by consumers or the marketplace at large, into a product that satisfies these needs.

Design is basically a problem solving exercise. The design of a new product consists of the following stages:







The development of a new product may also require the development of a prototype to prove that new technologies work before committing resources to full-scale manufacture. If you do desire to develop a prototype you should have the product tested by as many people or end user.

The traditional view of the design to manufacture process is that it is a sequential process; the outcome of one stage is passed on to the next stage. This tends to lead to iteration in the design (i.e.) having to go back to an earlier stage to correct mistakes. This can make products more expensive and delivered to the marketplace late. A better approach is for the designer to consider the stages following design to try and eliminate any potential problems. This means that the designer requires help from the other experts for example a manufacturing expert to help ensure that any designs the designer comes up with can be made.

So what factors might a designer have to consider in order eliminating iteration?

- **Manufacture** - Can the product be made with our facilities?
- **Sales** - Are we producing a product that the customer wants?
- **Purchasing** - Are the parts specified in stock, or do we have to order them?
- **Cost** - Is the design going to cost too much to make?
- **Transport** - Is the product the right size for the method of transporting?
- **Disposal** - How will the product be disposed at the end of its life?

## Design Brief

The design brief is typically a statement of intent. I.e. "We will design and make a Biker Leather Jacket ". Although it states the problem, it isn't enough information with which to start designing.

## Product Design Specification (PDS)

This is possibly the most important stage of the design process and yet one of the least understood stage. It is important that before you produce a 'solution' there is a true understanding of the actual problem. The PDS is a document listing the problem in detail. It is important to work with the customer and analyze the marketplace to

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produce a list of requirements necessary to produce a successful product. The designer should constantly refer back to this document to ensure designs are appropriate.

To produce the PDS it is likely that you will have to research the problem and analyze competing products and all important points and discoveries should be included in your PDS.

## **Concept Design**

Using the PDS as the basis, the designer attempts to produce an outline of a solution. A conceptual design is usually an outline of key components and their arrangement with the details of the design left for a later stage. For example, a concept design for a Biker Leather Jacket might consist of a sketch showing a basic jacket with pockets. The exact details of the components such as the size, thickness of leather are determined at the detail design stage. However, the degree of detail generated at the conceptual design stage will vary depending on the product being designed.

It is important when designing a product that you not only consider the product design specification but you also consider the activities downstream of the design stage. Downstream activities typically are manufacture, sales, transportation etc. By considering these stages early, you can eliminate problems that may occur at these stages.

This stage of the design involves drawing up a number of different viable concept designs which satisfy the requirements of the product outlined in the PDS and then evaluating them to decide on the most suitable to develop further. Hence, concept design can be seen as a two-stage process of concept generation and concept evaluation.

## **Concept generation**

Typically, designers capture their ideas by sketching them on paper. Annotation helps identify key points so that their ideas can be communicated with other members of the company.

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There are a number of techniques available to the designer to aid the development of new concepts. One of the most popular is brainstorming.

This technique involves generating ideas, typically in small groups, by saying any idea that comes into your head no matter how silly it may seem. This usually sparks ideas from other team members. By the end of a brainstorming session there will be a list of ideas, most unusable, but some may have the potential to be developed into a concept. Brainstorming works better if the members of the team have different areas of expertise.

### **Concept evaluation**

After the detail design is done the prototype is taken for pilot lot production and then analyzed for any defect.

### **Refinement and Sales**

If there is any correction in the pilot lot it is then rectified and then its taken to mass production.

Once a suitable number of concepts have been generated, it is necessary to choose the design most suitable for to fulfill the requirements set out in the PDS. The product design specification should be used as the basis of any decision being made. Ideally a multifunction design team should perform this task so that each concept can be evaluated from a number of angles or perspectives. The chosen concept will be developed in detail.

One useful technique for evaluating concepts to decide on which one is the best is to use a technique called 'matrix evaluation'

With matrix evaluation a table is produced listing important the features required from a product - usually this list is drawn up from the important features described in the product design specification. The products are listed across the table. The first concept is the benchmark concept. The quality of the other concepts are compared against the benchmark concept for the required features, to help identify if the concept is better,

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worse than, or is the same as the benchmark concept. The design with the most 'better than' is likely to be the best concept to develop further.

Most people who use the matrix technique will assign points, rather than simple, better, worse, same, so that it is easier to identify which concepts are the best. It is also likely that some features of the design will be more important than others so a weighting is used.

### **Detail design**

In this stage of the design process, the chosen concept design is designed in detailed with all the dimensions and specifications necessary to make the design specified on a detailed drawing of the design.

It may be necessary to produce prototypes to test ideas at this stage. The designer should also work closely with manufacture to ensure that the product can be made.

### **Manufacturing and Further Testing**

After the detail design is done the prototype is taken for pilot lot production and then analyzed for any defect.

### **Refinement and Sales**

If there is any correction in the pilot lot it is then rectified and then its taken to mass production.



Self-Check -4	Written Test
---------------	--------------

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

**Test: Short Answer Question**

1. List down the steps for designing a new product.
2. What are the factors a designer must have consider in order eliminating iteration.



## References

- Shape and form (Elements of design) Hardcover – December 31, 1899, by Albert W Porter (Author)
- Basic Principles of Design Textbook Binding – September 1, 1977 by Manfred Maier (Author) vol 1-4
- Faber Birren (11 September 1900 – 30 December 1988) was an American author and consultant on color and color theory.
- Published: 19 December 2017 Christopher Alexander's A Pattern Language: analyzing, mapping and classifying the critical response
- Design and Form: The Basic Course at the Bauhaus and Later, Revised Edition Revised Edition
- by Johannes Itten (Author)



## Acknowledgement

The group wishes to extend thanks and appreciation to the many representatives of business, industry, academe and government agencies who donated their time and expertise to the development of this Model Curriculum for the TVET Program Advanced Leather goods production III

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This curriculum was developed on September 2020 at Bishoftu

### The trainers who developed the Curriculum

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3	Acham Gartew	B	Garment Technology	Oromia	-	0937001358



## Answer Key for self-check

LG #5	LO #1- Prepare Workstation
-------	----------------------------

Self-Check -1	Written Test
---------------	--------------

1.fire,electricity,

2.OHS practice

3.

- Stand or sit with the work in front of you – avoid twisted postures.
- Employ smooth, rhythmical movement – avoid sudden changes of direction
- Keep things on the level to avoid vertical movements
- Avoid sudden changes of direction
- Avoid continuous repetition of movement
- Avoid stretching where possible – keep items used frequently within arm's reach

4.

- Workbenches are made up can be from many different materials including metal, wood, depending on the needs of the workbench for the specific purpose of sketching.
- The workbench consists of the bench itself, 12ft by 24 inches. Three quarter inch plywood was used for the top and the backboard.
- A comfortable height for working with provisions for seated or standing work selected
- In the workbench analyzing Compositional balance, scale and perspective depend on visual weight of material to be sketched.
- A way to fix the workbench to the surface so that it may be worked with both hands
- Provisions for accessing tools
- A variety of element of design techniques are identified for use in sketching
- Proportion, scale and stylization relevant to sketching are selected

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- The workbench has a slide for unused components can go in a box for best Utilization of material
- Drawing tools and equipment are selected and prepared
- Figure details are analyzed
- Any changes or adjustments to sketch are carried out as required
- Workbench and seating are set up according to OHS practices
- Reference source appropriate to element of design requirements is selected

5.

- Identify the hazards
- Decide who can be harmed
- Evaluate the risk
- Record significant findings
- Review and revise

Self-Check -2	Written Test
---------------	--------------

Fill the blank space.(each 1point)

1. Layout Pad
2. metric system
3. **Eraser (rubber**
4. Boards
5. Templates

**Part II True or False.(each 1point)**

1. true
2. true
3. true
4. false
5. true



LG #6

LO #2- CREATE COMPOSITIONS USING ELEMENTS AND BASIC DESIGN PRINCIPLES

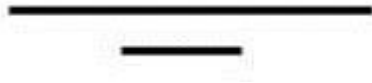
Self-Check 1

**Written Test**

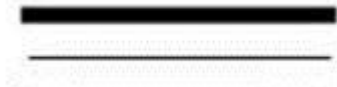
**Short Answer Questions** (each 5 point)

1. vertical, horizontal, curved line

2. Length- lines can be long or short



- Width- lines can be wide or skinny



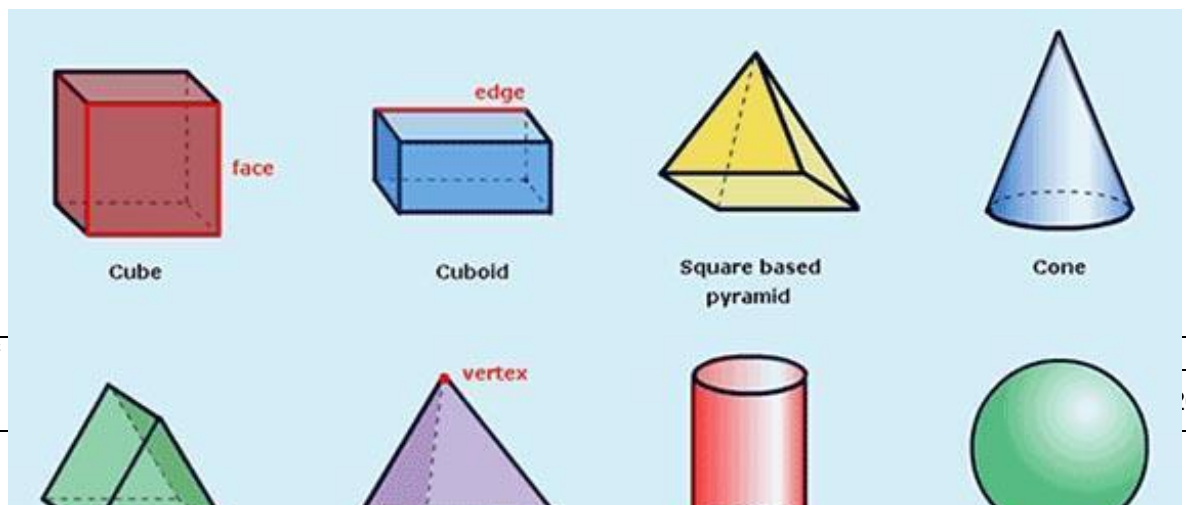
- Texture- lines can be rough or smooth



- Continuity- Lines can be continuous or dotted or dashed



3.





Self-Check 2	Written Test
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**Directions:** match all the questions listed below.(5 mark each):

1.A

2.B

3.D

## II.Short Question Answers:

1.

Horizontal balance:

Vertical balance

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Radial balance:

Self-Check .3	<b>Written Test</b>
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1 B

2 D

3 E

4 C

5 A

Self-Check 4	<b>Written Test</b>
--------------	---------------------

1 D

2 C

3 B

4 A

LG #07	LO3. Identify color as an element of design
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Self-Check 1	<b>Written Test</b>
--------------	---------------------

### Part I Short Answer Questions (each 5 point)

#### 1. value/tone, Hue, Chroma/Intensity/Clarity

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- Hue is the family name or quality of a color, which distinguishes one color from the other. It is accurate description of a color. Hue is the other word used for color.
- Intensity is brightness and dullness of a color. The colors on the color wheel are of full intensity. When grey or its complement color is added it becomes less intense. A color that is dull is unsaturated or low in intensity. A color without any brightness (no hue) is achromatic (black, white and/or gray).

Self-Check 2	<b>Written Test</b>
--------------	---------------------

- Primary Colors** are the **root of every other hue** imaginable. The primary pigments used in the manufacture of paint come from the pure source element of that Hue. There are no other pigments blended in to alter the formula.
- When you combine any two of the Pure Primary Hues, you get three new mixtures called Secondary Colors.
- When you mix a primary and its nearest Secondary on the Basic Color Wheel you create six new mixtures called Tertiary colors.

Self-Check 3	<b>Written Test</b>
--------------	---------------------

- Light Theory, Pigment Theory**
- A **Color Wheel** is a conventional arrangement of hues in a circle to demonstrate their relationships. This wheel can be used as a guide to choose and combine colors.
- Primary Hues, Secondary Hues, Tertiary Hues**

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L #08	LO 4-IDENTIFY VISUAL EFFECTS OF COLOR
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Self-Check -1	<b>Written Test</b>
---------------	---------------------

1. objects, shapes and areas of the same size can actually appear different in size if they are colored differently, dark, cool and dull colors make objects appear smaller than the same objects in warm, light or bright colors.
2. Colors can convey a sense of visual weight, warm, dark and bright colors tend to look dense or heavy and cool, light and dull colors are visually lighter in weight.
3. The surface characteristics on the object affect the action of light and the degree of absorption or reflection that in turn affects the color. Shiny, smooth surfaces enhance colors and make them appear much brighter, livelier and larger than do rough, dull surfaces.

Self-Check -2	<b>Written Test</b>
---------------	---------------------

a. blue: The color of the sky and the ocean, blue is one of the most popular colors. It causes the opposite reaction as red. Peaceful, tranquil blue causes the body to produce calming chemicals, so it is often used in bedrooms. Blue can also be cold and depressing.

b. green: Currently the most popular decorating color, green symbolizes nature. It is the easiest color on the eye and can improve vision. It is a calming, refreshing color.

c. yellow: Cheerful sunny yellow is an attention getter. While it is considered an optimistic color, people lose their tempers more often in yellow rooms, and babies will cry more.

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d. purple: The color of royalty, purple connotes luxury, wealth, and sophistication. It is also feminine and romantic. However, because it is rare in nature, purple can appear artificial.

e. brown: Solid, reliable brown is the color of earth and is abundant in nature. Light brown implies genuineness while dark brown is similar to wood or leather.

LG #09	LO5. Perform Design Process
--------	-----------------------------

Self-Check 1	<b>Written Test</b>
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### 1. Visits Mall,, Displays in windows, Museums, Nature Leaf patterns, Bird

2.

- Obtain the design program (program definition)
- Collect Data of relevant conditions (inventory)
- Interpret the data of the conditions relative to the design program (analysis)
- Conceptualize the organization of spaces and circulation patterns(bubble diagram/concept
- Conceptualize functional, aesthetic and environmental uses of plants (concept plan)
- Review and refine concept drawings to greater levels of precision (final concept, detailed plan)
- Assess/Evaluate whether problems addressed and program needs met.



Self-Check 3	<b>Written Test</b>
--------------	---------------------

1. How does material selection play an essential role in product design process?

Product materials determine the range of function, durability, certain costs, user feedback, and user experience. When users interact with products, their senses are in contact with the materials of those products. Users see the colors of materials, feel the texture and weight, and hear the sounds that the materials make when the object is moved. These sensory perceptions contribute to product usability and use experiences.

Self-Check -4	<b>Written Test</b>
---------------	---------------------

1. design brief ,concept design, product design specification, detail design, testing, manufacturing and further testing, refinement and sales

2.

- **Manufacture** - Can the product be made with our facilities?
- **Sales** - Are we producing a product that the customer wants?
- **Purchasing** - Are the parts specified in stock, or do we have to order them?
- **Cost** - Is the design going to cost too much to make?

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- **Transport** - Is the product the right size for the method of transporting?
- **Disposal** - How will the product be disposed at the end of its life?



