NATIONAL OPEN UNIVERSITY OF NIGERIA

PED 232

Aesthetic Expressions in Primary Schoolsn

Module 3

PED 232 (Aesthetic Expressions in Primary Schools) Module 3

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Unit 1 Graphics

1.0 Introduction

Graphics is a two dimensional aspect of visual art that has developed a three-dimensional aspects as found in production of neon signs and some industrial packages. The computer has also brought in desktop publishing providing us more possibilities and improved standards in the use of graphics which has positively affected the Nigerian printing industry generally. It is important to expose the pupils at the primary school to graphics aspect of art. This will open up their inquisitiveness as to how simple items are advertised and packaged. The importance of this unit is to make you become aware of the various possibilities available in this aspect of visual arts.

2.0 Objectives

At the end of this unit, you should be able to:

- explain to pupils the purpose of graphic arts and design to their development of their society
- identify and explain the major aspects of Graphics
- identify and describe the various graphic arts materials, its tools and equipment to his or her pupils
- Improvise materials, and tools for use in remote area classrooms where the original or imported materials are not available
- Describe hoe pupils will make simple graphic designs of interest
- List and explain the elements and principles of graphic arts and designs to pupils
- Introduce computer graphics to pupils in the primary school.

3.0 Main Content

Graphics is a medium of communication between one another using visuals such as written words and images and symbols. This is why it is currently being referred to as 'visual communication'. It involves artistic writing, descriptive illustrations that includes diagrammatic representations in communications. That advertises products and expresses ideas visually etc. this design aspect of graphics is purely for functional purposes. Graphics serves man directly and indirectly via the industries. It is therefore an embodiment of design, communication and commerce as well as the production of items of purchase. It is interesting to note that the elements of graphics arts and design are involved in the production of a lead pencil that first conveys the shape of a flying aeroplane.

3.1 Graphics Materials, Tools and Equipment

To produce suitable, original and well-balanced graphics, the following materials, tools and equipment are required. It is not possible for you to buy every graphic item listed below but

the needed ones required for a particular kind of graphic work should be obtained. As a beginner, you are advised to obtain or improvise for yourself and your pupils the best and affordable material available in your local environment.

Most materials and tools being used for drawing and textiles are equally suitable for graphics. These include drawing boards, pencils, pens sets, charcoal, eraser, rulers, posters colours, pastel, drawing ink, sharpeners and sketchpads. Other materials used in graphics are drawing set, tee-square, Set Square, the protractor that is used in accurate measurements, the French curves and lettering stencils of various paints used for making irregular and complex curves and letters. Lino sheets and its cutting tools, wood metal plate cutting tools and silk-screen frame table for production. There is also the camera for photographic productions as well as computer. Note that the simple household tools materials and equipment are also of use in the art class.

3.2 Elements of Graphics Arts and Design

Certain elements that make up the organization of any type of art were listed under drawing in the unit. See (3:4). These are principally lines, space, colour, shape, texture, light and shades (tonal values) and sometimes shadows. However, in most graphic arts and design, other elements like Lettering, drawing and pictures are essential in graphics. Your knowledge of these elements will enhance your graphic production ability and its teaching to your pupils.

Line: A line is a point moving towards a direction. It varies in sizes and could be thin, thick, bold, curve, straight vertical or horizontal.

Space: Space is the illusion of distance or depth that is created by all the other elements in graphics.

Colours: Colours refers to the hues and the visual sensation produced by the rays of decomposed light. They arouse emotion, feelings and catch attentions.

Shape: Shape is simply an enclosed area that may or may not be regular. When overlapped, shapes create depth and some other illusion.

Texture: Texture refers to the surface quality often used in graphics to suggest focus, variety and unity. It is a visual element that may be seen rough or smooth but not felt in graphics.

Light and Shade: Light and shades is the variation of tonal values from colour manipulation, size contrast and perspective in graphics. It is often used to create emphasis and express feelings.

Lettering and Drawings: Lettering and drawing/pictures are very essential elements in graphics arts and design. It is therefore imperative for learner of graphic arts to acquire the techniques of using them effectively, it should be remembered again that a picture tells more than a thousand words especially in works that renders two-dimensional images.

Construction of lettering can be learnt through the use of grids that serve as guide to the proportion of such letters. The physical attributes of letters are the typefaces. However, same types come in special design and names, for example, a typeface may assume these shape:

- Italics
- Romans
- San-serif
- Arial etc.

Computer has introduced to us several varieties of lettering into graphics.

3.3 Principles of Graphics

Just like the elements of graphics, the principles of graphics are not different from other art there are forms. It is the application of these principles that guides the production and appreciation of graphics. The principles includes, balance, proportion, variety, emphasis, spacing, unity, legibility and dominance.

Balance deals with the equilibrium achieved by the arrangement of forms, colours and shapes within the space limit in an artwork. Graphic designs make use of symmetrical, asymmetrical or radial balances. Unless a specific effect is desired, your design should not be kept into a corner of your paper space.

Proportion is about the comparative size of the parts of a design. You should be very conscious that each part is related in size with the other.

Variety of components makes an artwork very exciting and thereby maintains the observer's attention. Human eye moves constantly so you should be conscious of contrasts to satisfy the eye's need for change.

Emphasis or Dominance refers to the stress laid on certain parts of your design to show the importance of the artwork at a glance and draw the observer's attention to that part of the design.

Spacing is connected with the spatial organization of your forms. You do not have to fill all available spaces. Your empty spaces contribute immensely to the easy reading and understanding of your lettering and images.

Unity or Harmony is the quality of oneness that brings all components parts of the shapes, lines, colours, etc. together as a coherent unit for easy reading and understanding.

Legibility should be considered in the selection of your lettering in graphics to avoid confusion with other elements. Letterforms with complicacies and unrelated colour works should not affect your readability.

3.4 The Major Aspects of Graphics

Activities in graphic arts and designs involve so many aspects and processes. These products processes include poster design making printmaking, photography, corporate image designs, and packaging and book design/illustrations.

Poster Designs: A Poster is design for advertisements purpose. It contains instruction and information that are deliberately designed with words and letters to communicate easily and effectively to the public at a glance. Some examples include:

- Handbills

- Billboards
- Neon light signs
- Banners etc.

An effective poster has to create attention and interest and must be instructive. It has to be simple with clear lettering and legible visuals. It must have balance, be attractive with good colour and use of emphasis makes a poster useful to both literate and illiterate persons.

Printmaking: Printmaking is a duplicating process it is an aspect of graphics involving creativity in reproduction that may be carried out through manual and mechanical methods. The methods of printing could be classified into surface or relief methods as applicable in lino cut, wood cut or the simple potato or yam tuber cut. The intaglio process describes the process of a paper forced into a depression that has been created on metals after wiping ink off the plate surface under a great pressure.

Two other methods are the lithography (planograph) method, a mechanized and fast method of transferring artworks through a screen unto a metal plate that is coated with a light sensitive emulsion before being printed on paper. The serigraphy or screen-printing method is another printing technique whereby paint is force through the screen unto paper or cloth surface with a squeegee.

Photography: Photography is essentially the production process by which pictures or images can be made from the record using light. A camera film and chemicals are involved in photographs that are often seen as an art as well as a science.

Corporate Image Designs: Corporate image designs are graphic design items. The official use involves corporate bodies to protect the image of their company. The corporate include the logo, cards and certificates, envelopes, calendar/almanac, letterhead papers, complimentary cards as well as sourvenirs like broche, purse, biro-pen, etc.

Packaging: Packages are 3-dimensional containers designed for industrial products. Graphic arts in packaging itself with commerce. Packaging is used to attract and assures the purchaser of the standard quality of the content of the products. Packages should be suitable, attractive, distinct, competitive, sizable, colourful and less bogus.

Book Designs: Book designing and illustration of books are other aspect of graphics. A book has the front cover, the spine and the back cover. Book design is essentially made to attract the attention of the buyer. Like the front cover, the spine must essentially have the title of the book, name of author or authors, and sometimes the logo or name of the publisher. The back cover may contain a brief about the book, or the author or may even be left blank. There is no specific number of colours required for a book but the number of colours often will determine the cost of printing.

To understand the content of a book and prevent boredom especially books for the children, they have to be illustrated. Illustrations illuminate and reinforce the content of the book. Photographs and sketches are essential for children and medical books and magazines.

3.5 Computer Graphics Application

Computer is an electronic device capable of accepting data and processing data to give information automatically at a very high speed. There are three types of computer – the analog, the digital and the hybrid computers.

An **analog** computer operates by accepting series of steps of instructions and they include wristwatches and IBM compatibles.

A **digital** computer represents data in terms of discrete numbers and processes data using the standard arithmetic operations by converting data to their binary equivalents before computation hence referred to as binary computer.

There are two major parts in a computer – the hardware and software.

Hardwares are equipment and include the keyboard, the monitor, the Central Processing Unit (CPU), the printer, the scanner and the diskettes.

Softwares are the invisible programs installed within this equipment. They are both system software and the application software.

Computer is now being applied in art operations for the production of complicated designs. It is now faster and easier to produce intricate and colourful graphic designs and to plot graphics. Graphics packages are applications packages that provide facilities for users to carry out various computer graphic designs, desktop publishing, engineering and architectural designs. Current graphic packages include Perfect Draw, paintbrush, Microsoft PowerPoint, AutoCAD, Harvard graphics, Corel Draw and floor plan.

4.0 Conclusion

The teaching of graphics involves the use of several tools for measurements that include ruler, Set Square, dividers, compass and other items in your mathematical sets. These may not be available in all schools especially in remote areas. This is a big challenge to you as the teacher of young pupils. You should therefore improvise for some of them as much as you can. Your school should organize excursions to selected graphic arts and design studios, printing industries and computer centers where your pupils can have practical experiences.

5.0 Summary

Graphics is essential in the social, technological and economic development of a modern society like Nigeria. The Primary school teacher of Visual Arts needs to be kept abreast of the important uses and aspects of graphics. The elements, principles and operations of graphics and computer are essential knowledge that all teachers and pupils should have. It does not however mean that pupils must be loaded with the entire content. You are encouraged to simplify the content and make them relevant to the level and experience of the pupils.

This unit lay emphasis on the essence of and the major aspects of graphics materials, tools and equipment of graphics and how to improvisation for them.

6.0 Self-Assessment Exercise

1. Explain the elements and principles of Graphic design
2. What are the major aspects of graphics that you will use in Graphic Arts and Designs production?
3. Visit graphic arts and design studio printing industries and computer center. Write a report of your visits to these places?
4. What is computer and in what ways can you use it in Graphic Arts and Design production?

7.0 References/Further Reading

Adeyanju, L.F. (1994). "Creativity in Advertising." *Journal of Educational Media and Technology.* (4) 1, pp. 603 – 608.

Aremu, G.B. & Makinde, S.A. (2004). *Cultural and Creative Arts* (Revised and Enlarged ed.). Ibadan: Akin-Johnson Press Publishers.

Okunlola, Bayo (1999). *Junior Secondary Fine Art*. Ibadan: Symphony Publisher.

Okunlola, Bayo (2003). *Graphic Arts & Computer Graphics*. Ibadan: Sea Art Publishers.

Orifa, C.O. (2002). *Graphic Design. A Vehicle for Communication*. Owerri: Nosika Press.

Unit 2 Textiles

1.0 Introduction

Textiles production techniques are clothing material involve (spinning of cotton), weaving and pattern designing. This unit examines textiles and some key terms. The explanation of the terms it l s felt will shed light on the textile materials design and its production process. Dyeing, an aspect of pattern design is an important aspect of textiles that could be used to motivate the interest of pupils in Visual Arts.

2.0 Objectives

At the end of the unit, you should be able to:

- identify and describe the processes involved in textile design and production
- list and explain the various textile materials, tools and equipment to pupils in the primary school
- identify and explain some important aspects of textile to primary school pupils
- describe how your pupils will produce simple textile designs using tie and dye technique.

3.0 Main Content

Textile is an aspect of visual art dwell on the use of fabric. The production involves spinning, weaving (manually or mechanically), and surface designing, cutting and sewing of fabrics into dressing outfits.

3.1Factors Affecting Project Planning

Before cotton is used for weaving, its fibres are spun into long strands known as threads. At the first stage, the cotton seeds are removed from the lump. This is done by extracting them manually or by rolling the cotton lump out on a flat surface with an iron rod or a straight stick. Thereafter few strands are picked, twisted and pulled. This process is repeated over and over several times until a large length of threads are obtained.

3.2 Weaving

To convert the spun cotton into fabric, it has to undergo the weaving process. The technique of cloth weaving as used in most places is developed around the basic method of weaving. This is the interlocking of two sets of fabrics. There is however a peculiarity in the arrangement of one set of thread against the other. A set is known as the wrap, this is the set of foundation thread that are stationary. While the weft thread is the thread wound round a spool or in a shuttle and passed alternately under and above the wrap threads, when plain clothes are woven.

As you demonstrate the weaving to pupils you choose to make a given pattern by alternating stripes of coloured thread among the wrap threads, or by changing the colours of the weft thread at varied intervals or given lengths. Designs can also be achieved when you use different counts for the warp before passing the weft under and over the wrap. For example, when you put two colours of weft thread are changed over the stripes of two-colour warp, it would bring a sugar patterned weaving.

3.3 Pattern Design

In textiles, pattern is an important step because it is at this stage that plain fabric is given some patterns. You will first make a paper work of the design, to determine the shapes, patterns and colours of the design meant for the fabric. After these are done, you will then use manual or mechanical process in transferring the designs on to the textile surface area. There are machines that can help you carry out this kind of function. Sometimes however, stretched meshes are used to transfer patterns onto the cloth.

3.4 Cloth Dyeing

Cloth dyeing is practiced in almost all parts of Nigeria. The basic idea behind cloth dyeing is resisting some parts of a fabric form dyestuff, while other parts are exposed to the dye. The parts that you have leaved unresisted will absorb the dyestuff when the fabric is dipped into the already prepared dye. The exposed parts will take the colour of the dye into which it has been dipped.

Dyestuff and its fastening chemicals are commonly available. You as a textile designer wishing to have the white surface reflected on surface of fabric will resist the areas where you want it to reflect. If white or the original colour of the cloth Is not required, the fabric is first immersed into the desired colour without resisting any part of it. When the dyestuff is mixed accordingly (mixing is done according to specifications), the fabric is then dipped into it. Depending on how many colours you want to dye the cloth, you will dip into different dyestuffs as many times as the number of colours you desire.

To dye a multi-coloured cloth requires that after each dyeing, you will have to resist some parts of each colour by tying or waxing the area required. Your mode of resistance could be by tying with raffia or twine some of the areas, this is called ‘tie and dye’ or using candle wax or starch paste to resist desired areas. When waxing or paste is used for resisting, it is called batik. Resistance here means not allowing dyestuff into some areas of the fabric, as such, when dyed; the resisted area retains the original colour of the fabric while the exposed area takes on the new colour.

As you have read earlier from the last paragraph, there are three main methods of dyeing:

- Tie and dye method
- Candle wax and crayon resist method
- Cassava starches resist methods.

These terms are explained further in 3.4.1, 3.4.2 and 3.4.3.

3.4.1 Tie and Dye

This is a method that involves wrapping and tying a section of the cloth with raffia and later dipped in a prepared cold dyestuff. It is then allowed to remain in the dye for not tool long and later untied to expose your design. After every dipping you may repeat the tying exercise on the same cloth to obtain several colours. However, it should be dipped into light colours first and graduate it later to darker hues.

3.4.2 Wax Resist Method

Spread your cloth on a table and apply liquid wax on them directly either with a brush or any other tools that fits your design. This can also be applied on the cloth with the aid of a stencil. Your pupils can cut out various shapes from cardboard sheets as their stencils. This will harden after cooling. Dip this in your prepare dye. You can repeat this process as many colours are involved.

3.4.3 Starch Resist Method

This method is not too different from the wax resist methods. The difference is just in the material application and its removal after dyeing. This application can be done the same way with brushes and other tools and with stencils.

3.4.4 Stitch-with-Needle Method

To use this method, you will need to stitch in pieces of material like seeds, pebbles of stone and flat wood. The stitching line will eventually form and determine the outcome design after dyeing.

4.0 Conclusion

The teacher will need to emphasize on the dyeing techniques, as mentioned in the primary school curriculum. It will interest your pupils to see their white colour cloth coming out of dye with beautiful colours and designs. The teacher should sustain learners interest by using this activities during his lessons.

5.0 Summary

Every society in Nigeria has its own textile production technique but the weaving technique is same – narrow loom and wide loom. This unit discusses the various methods of cloth production from spinning of cotton to the various stages of dyeing. There is the spinning of cotton into threads, weaving of threads to cloth that can take colour, patterns of colour are designed on the cloth with manual and mechanical processes. For pattern designs, the cloth dyeing techniques of tie-dye, wax resist, starch resist and stitch-with-needle will interest your pupils most.

6.0 Self-Assessment Exercise

- List and explain the processes you will use in textile?
- Explain how you would go about dyeing a two-colour fabric

- Visit a textile production centre or a textile industry in your area and write a comprehensive report of your visit.
- What dyeing method will you use in teaching primary school students?
- Explain the following terms: the weft, the warp, a spool thread or a shuttle.

7.0 References/Further Reading

Aremu, G.B. & Makinde, S.A. (2004). *Cultural and Creative Arts.* (Revised and Enlarged ed.). Ibadan: Akin-Johnson Press Publishers.

Leonardo, M. & Adenuga, A. (1963). *Art for Nigerian Children.* Ibadan: Western Nigeria Ministry of Education, Ohio University & A.I.D.

Unit 3 Sculpture

1.0 Introduction

Sculpture an aspect of Visual Arts involves the process of carving, modeling, casting or construction. The Primary School Curriculum encourages pupils in Nigerian primary schools to learn the skill of carving, model and construction as they grow. Young pupils will enjoy working with different materials as they apply the techniques. This unit will examine types of materials, tools and techniques of sculpture. Teachers of the young pupils in primary schools should have good knowledge of and be able to teach aspects of sculpture that will interest of the pupils.

2.0 Objectives

At the end of this unit, you should be able to:

- identify and explain the major types of sculpture
- describe to the pupils the techniques of making simple sculpture that will interest children
- identify and describe the types of sculpture materials, tools and equipment that the pupils will use in carving
- improvise materials and tools in carving where the original materials could not be obtained in their locality.

3.0 Main Content

Sculpture is another activity-based aspect of the Visual Arts that you need to know. This course content is design to equip students with materials that will assist them with the knowledge and skills of manipulating tools and equipments for material production.

3.1 Types of Sculpture

Sculpture is mostly a three dimensional art. Three dimensional objects can be viewed from all the angles, the sides, aerial, front and back. There are some sculptures that are two-dimensional. These types are produced on flat surfaces and called relief sculptures. They are considered to be two-dimensional arts because they can only be observed and appreciated from one side. To view a relief sculptures for example, one can only see it from the front, it does not continue at the back of the canvas or from its base: You will be able to view a three-dimensional sculpture in the "round". Sculptures are often placed at roundabouts, in hotels, they are also found in private places. Sculpture come in various materials like concrete cement, wood, plaster of Paris, fibre glass, clay (tettracotta) and various metals.

3.2 Sculpture Materials, Tools and Equipment

Most students will mix up the meanings of the terms – materials, tools and sculpture; this unit will provide you the correct meaning. Sculpture materials are the objects you use to

sharpen out, construct or work during the production of items. It is a substance from which items or objects can be made of.

Equipment refers to those machines that are mostly operating with oil, gas, electric, battery or solar powers. The service of energy allow for easy manipulation of materials and sometimes tools. They make the work faster than tools only are used. Examples are kiln, chainsaw, sanding machine and drilling machine. However, tools are those small handy instruments used by workers, artists or sculptors to facilitate the 'handling' of materials. They are sometimes called small-equipment as in most cases these tools do not require electric or battery to operate and also because of their small size. Examples of tools are sharpening stone, mallet, hand saw, calipers, hammer, screwdrivers, razor-blade, etc.

3.3 Techniques in Sculpture

Sculpture can be produced using different materials which can be classified based on their methods of handling during production. There are two types and they are the 'Additive' and the 'Subtractive' methods.

3.3.1 Additive Technique

The additive technique in sculpture involves the pilling or addition of more and more of the medium until the required forms and sizes are obtained. These additions may involve welding, nailing, gumming riveting as in the case metals, woods and paper Mache etc. more explicitly when you want to produce a burst with clay, you will need to add more and more pieces or lumps of clay systematically until you achieve the required design. Additive technique include clay, plaster of Paris (POP), fiberglass, cement, plasticine, wax, grass/straw and paper Mache, metal plates, etc. there are three main processes of additive technique, they are:

- Modeling
- Constructing
- Casting.

Modelling

Modeling is an attempt to represent objects or things in two or three-dimensional forms, most often on a smaller scale. You can introduce sculpture activity to pupils by asking pupils to make models of animals like snake, snails, tortoise and some other domestic objects that pupils are familiar with. The materials recommended for activities at this primary school level are paper mache, clay or plasticine; where available.

Construction

Constructions are the building up of objects in two or three dimensional forms or shapes. It is activity-based and it provides opportunities for experimentation leading to creative expressions with the use of materials. Construction can be made with cardboards, cane, raffia, clay, concrete, rubber, wood, metal plates and rods, strings, wire, etc. you may want to group the pupils or leave them to work individually but it is important to have sufficient materials that pupils will use in binding or joining the materials together. A short discussion will stimulate their thinking and they may produce fantastic ideas. As usual, since they are young learners, they need encouragement from you.

Casting

This refers to mass production process in sculpture where an already existing model or object is used as a prototype. A soft medium like wet clay, cement or plaster of Paris is impressed on the prototype. The impression created will be a negative of the original (called positive) of the prototype.

To turn the negative into original, pour or impress a soft or liquid medium into the negative. What you will have is an exact copy of the original. This simple process if introduced to pupils will provide them the basis for the understanding of how the mass production of objects are obtained. This activity may fire their imagination because it will provide them an exciting experience.

3.3.2 Subtractive Technique

Carving is the only subtractive technique of sculpture. This technique involves the cutting off, chipping off or reducing the material gradually to achieve or reveals the required image. When constructing an art work with these materials, you will have to employ the appropriate cutting tools. Wood for example will require the use adze, chisel, gouges and mallet. Other examples of such subtractive materials are ivory, stone, soap, concrete and marble. To carve a figure in any of these materials, you require patience to cut off the material until the required result is achieved.

4.0 Conclusion

Sculpture is an interesting aspect of Visual Arts, it is strictly an activity-based work. It allows pupils get exposed to the use of several materials; the materials that parents sometimes throw into waste-basket can be used. You can always ask pupils to bring materials from home. It will interest them to know that they can turn wastes into tangible creative expressions.

5.0 Summary

In this unit we have discussed the various types of sculpture. The materials, the tools and equipment being used for sculpture carving and the techniques have been provided you. You should know that sculpture does not need much expensive. The materials, tools and equipments are easily available for your practice. Simple house items can serve as tools and materials that will spur you to produce a sculpture.

6.0 Self-Assessment Exercise

1. What are the categories and techniques involved in sculpture production?
2. Why is sculpture classified as a two and three-dimensional art? Explain your stand.
3. Differentiate between 'Subtractive and Additive medium in sculpture
4. Visit a sculpture studio, and write a report of your visit?

7.0 References/Further Reading

Adeyanju L. J. (1990). "The Role and use of Art as Technology. International Society of Education through Art." *Africa and Middle East Regional Congress of INSE.* Vol. 2. No 2. pp 25-29.

Aremu, G. B. & Makinde, S. A. (2004). *Cultural and Creative Arts* (Revised and Enlarged ed.). Ibadan: Akin-Johnson Press Publishers.

Leonardo, M & Adenuga, A. (1963). *Art for Nigerian Children*. Ibadan: Western Nigeria Ministry of Education, Ohio University & A.I.D.

Oladimeji, T.A.G. (1999). *Workshop Practice in Vocational and Technical Education*. Ibadan: Ecstasy Publishers.

Unit 4 Ceramics

1.0 Introduction

In Nigeria, clay is the basic material used for ceramics. Clay is a type of earth soil, otherwise called pottery. It is perhaps the most ancient craft that is practiced in most parts of Nigeria with peculiar characteristics known with that area. Clay works not be too strange to you and the pupils but they may not know how they are produced. This unit is focused on ceramics, its material and techniques for its production.

2.0 Objectives

At the end of this unit, you should be able to:

- describe the various types of clay available for ceramic production
- describe how primary school pupils can make simple ceramic wares
- discuss the simple tools and equipment needed for ceramics production
- list and explain to pupils the various production methods of ceramic wares.

3.0 Main Content

Clay generally has very fine particles it is very sticky when touched with the fingers and it comes in several colours. Clay colour may be grey, black, yellow ochre, red and reddish brown, etc. the general properties of clay are:

- Plasticity
- Smoothness.

Ability to be stone hard when totally dry, resistance to high temperature when fired and it is also water resistant after firing.

3.1 Types of Clay

Basically, there are two types of clay, these are Primary and secondary clay.

3.1.1 Primary Clay

Primary clay is also called residual clay and it is often found at the site of parent rock where the clay is formed. This place is referred to as clay location of origin. Primary clay is usually free from impurities. Some of its characteristics are:

- less-plasticity
- it contains large particles
- it has low shrinkage in drying process
- it cannot be used purely on its own

- has to be mixed with other plastic materials.

3.1.2 Secondary Clay

Secondary clay is one that has been transported from its original place of formation to another location. The transportation may be by wind, water or ice. During the process of transportation, it gets mixed up with other elements and raw materials that colour the clay and increase its plasticity.

The characteristics features of secondary clay are:

- it is colourful
- it has other elements mixed up with it
- its plasticity and direct use
- lower firing temperature when compared with that of primary clay.

3.2 Methods of Production of Clay wares

There are two methods of producing clay wares. These are 'Throwing' and the 'Hand built' Pottery methods.

3.2.1 Throwing

Throwing involves the use of potters' wheel for the production of wares. Potters' wheel is mechanically or electronically driven. The wheel has a shaft that extends upwards, terminating with a heavy flat round disc. At the base of the shaft is a flywheel. The flywheel gives the wheel a strong propelling force when kicked or switched on it the case of the wheel that makes use of electricity to function.

3.2.2 Throwing on potters

Throwing on potters' wheel requires a lot of skills like balancing clay on the wheel, centralizing the clay and opening up the clay are some of the skills you will have to master in order to throw and form the shape of clay. However, there are limitations to the type of wares that can be produced on the potters' wheel because it revolves round. Only round cylindrical or oval shape wares can be built on it.

As the name implies, hand built pottery is done manually with hands. The methods employed in producing hand built pottery are:

- pinching Method
- stab method
- coil Method.

Pinching Method

Pinching is done by intermittently picking lumps of clay and pressing it with the thumb and the palm to form desired shapes, this action is repeated each time by adding more and more clay systematically until the expected shape is obtained. If you are using the pinching method, your clay must be plastic enough and its water content must be sufficient high to allow for it to properly stick together.

Slab Method

The slab method involves wedging that is the technique of (slamming lumps of clay on a hard flat surface so as to remove air bubbles that the clay contains. It is done so that flattening it out will produce a desired length and breadth. The slab made is then fashioned to desired shape. This method is suitable for making ceramic pots with geometric shapes like boxes, cubes, cylinders and several others.

Coil Method

You can make coils of clay by rolling lumps of clay on a flat surface. The clay form coils by applying even pressure with the palm on the lump of clay. While applying pressure, you should make attempt to simultaneously stretch out the clay so that you will have long round coils. You use clay slig, a kind of thick liquid clay to join the coils. The coil made can then be shaped as the artist intends. The coil are built up and joined together by blending them. Coil method can be used for making pots, cylinders, bowls etc.

4.0 Conclusion

Clay can be sourced from riverbeds, wells foundation-digging sites and streams. It is therefore a cheap material that can be obtained by your pupils. Ceramics is a unique activity that provides a play-way method of teaching naturally and the teacher should be involved in the production as the pupils experiment with clay.

5.0 Summary

Ceramics is very much related to sculpture except that sculpture is more elaborate, it comes in form of wood, plasticine P.O.P, metals and several other but ceramics materials is from clay. This unit examines the various materials, tools and methods used in ceramics production. The knowledge you have been given should assist you in teaching the aspect of plastic arts.

6.0 Self-Assessment Exercise

- Name the two types of clay and state their characteristics
- Describe the various techniques of ceramics production that you know.
- List and discuss the simple tools and equipment that young learner will employ for ceramics production.

7.0 References/Further Reading

Aremu, G.B. & Makinde, S.A. (2004). *Cultural and Creative Arts.* (Revised and Enlarged ed.). Ibadan: Akin-Johnson Press Publishers.

Leonardo, M & Adenuga, A. (1963). *Art for Nigerian Children.* Ibadan: Western Nigeria Ministry of Education, Ohio University & A.I.D.

Oladimeji, T.A.G. (1999). *Workshop Practice in Vocational and Technical Education*. Ibadan: Ecstasy Publishers.