**WEEK SIX (6) LESSON NOTE ENDING 2ND JUNE, 2023**

**SUBJECT:** BASIC TECHNOLOGY

**CLASS:** JSS 2

**TOPIC:** PROCESSING OF CERAMICS AND GLASS

**DATE:** 29TH MAY – 2ND JUNE, 2023

**DURATION:** 45 MINUTES TIMES TWO.

**MAIN AIM:** At the end of the lesson, the students should be able to;

1. explain ceramics.

2. explain glass.

**SUBSIDIARY AIM:** By the end of this lesson, the students should be able to;

1. describe ceramics and glass

2. explain the methods and stages of making ceramics and glass

3. demonstrate how ceramics are decorated.

**PERSONAL AIM:**

The teacher should be able to explain, describe and demonstrate in a way that the students will understand.

**ASSUMPTION:**

The students already have learnt about mud, sand and have seen ceramics and glass.

**ANTICIPATED CHALLENGES:** some of the students may not have seen ceramics and glass.

**POSSIBLE SOLUTION:** The teacher should be able to give detailed explanation of the topic.

**TEACHING AIDS:** The materials used include; sand, mud and materials seen within the classroom.

**METHODOLOGY:** Explanation, description and discussion.

**PROCEDURE:**

**PRESENTATION: STEP 1**.

**CERAMICS AND GLASS**

Ceramics is the art or science of making ceramic objects. Products of clay are also referred to as ceramics. Clay is the chief raw material for making ceramics. Clay is a mineral substance made up of small crystals of silica and alumina that is ductile when moist which is the basic raw material for ceramics.

Glass is an amorphous solid, often transparent, made by melting sand (silica) with a mixture of soda, potash and lime.

**Methods of making ceramics**

Clay which is gotten naturally from the earth is pounded with a little water until it forms paste. The soft obtained is the used in the production of solid shapes. Soft mud can also be used in making bricks by shaping it with molds. The shape or the objects formed is then exposed to the sun for drying or fired in the oven or kiln to dry.

**STEP 2:**

**Stages in the production of ceramics**

1. Clay preparation: this involves sand removal, mixing with water and pounding. The pounding is to remove air bubbles that may cause cracking or even cause the article to explode when fired.

2. Clay molding: this is when the prepared clay (in paste) is put into a mold and allowed to set before removal of mold. This stage ensures that the required shape of the article is achieved.

3. Ceramic firing: firing of ceramic articles ensure that it becomes hard after molding. Open fire can be used for baking, but a more sophiscated way of heating is by using a kiln. A kiln is an oven for backing of finished articles or ceramics.

**Decoration of ceramics**

Ceramics can be painted, varnished or crafted upon before or after backing. Decoration makes the ceramic article look more attractive and increases their marketing value.

STEP 3:

**Methods of processing glass**

The raw material for making glass is silica (sand). Glass blowing is an ancient art and skill, but today, most glasses are made and processed in factories.

Glasses are made in one of the two forms; floating glass or blown glass.

Float glass produces sheets of glass; blown glass produces bottles and other glass objects.

**Stages in glass processing**

There are three stages in glass processing;

1. The preparation of the raw material in the batch house

2. Production of the glass in the hot end which has furnace, oven, and forming machine.

3. Inspection/ quality check, packaging and dispatch done at the cold end.

Glass is processed in a plastic (molten) stage. Silica melts at 16000c. Glass is made by melting together sand, some soda and limestone and courants at about 17000c. The molten glass then blown, molded of floated.

**INTERACTIVE PATTERN: TEACHER – STUDENT (T-S)**

**EVALUATION (STUDENTS)**

1. Describe ceramics and glass

2. Explain the methods of processing ceramics and glass

3. how are ceramics decorated

**EVALUATION (TEACHER)**

The teacher evaluates himself based on the response of the students in their evaluation and concludes.

**HOMEWORK**

**1. Write a short note on Isometric projection.**

**2. make a clean sketch of packet of sugar in isometrics.**