

INTRODUCTION TO CERAMICS



CERAMICS

WHAT:

THINGS MADE FROM CLAY: THE BASIC MATERIAL FOR ALL CERAMIC CREATIONS.

CLAY IS CREATED AS A RESULT OF THE DECOMPOSITION OF IGNEOUS ROCK, WHICH MAKES UP THE ENTIRE EARTH'S CRUST.

EVERYTHING YOU WILL DO WITH CLAY INVOLVES THE INTERPLAY OF THESE 3 VARIABLES:

MOISTURE

PLASTICITY

HEAT

CERAMICS FROM THE BEGINNING

OF ALL THE ARTS, CERAMICS HAS THE LONGEST HISTORY, DATING BACK TO THE PEOPLE FIRST LEARNED HOW TO CONTROL FIRE.

THEORIES:

PEOPLE FIRST BEGAN TO MODEL CLAY AS A DIVERSION. PEOPLE USED CLAY FOR PRACTICAL PURPOSES.



THE CLAY THAT YOU WORK WITH IN A STUDIO HAS BEEN PROCESSED AND PREPARED TO SOME DEGREE.

EARLY POTTERS HAD TO ACTUALLY DIG THEIR RAW MATERIALS FROM THE GROUND AND PREPARE IT.

THERE WAS SOMETIMES IMPURITIES THAT HAD TO BE TAKEN OUT.

WORKING WITH CLAY

THROUGH THIS UNIT WE WILL
DISCUSS THE FOLLOWING
CLAY PROPERTIES:

PLASTICITY

SHRINKAGE

MOISTURE

HANDLING CLAY



MOST BEGINNERS USE HIGHLY PLASTIC CLAY:

**PLASTICITY- THE QUALITY OF
CLAY THAT ALLOWS IT TO BE
MANIPULATED AND STILL
MAINTAIN ITS SHAPE WITHOUT
CRACKING OR SAGGING.**

**THERE ARE MANY FACTORS THAT CAN
MAKE CLAY MORE PLASTIC**

- + YOU CAN SPRAY IT WITH WATER**
- + YOU CAN STORE IT IN A BAG WITH
WATER.**
- + YOU CAN MIX NEW PLASTIC CLAY WITH
THE OLD.**



SHRINKAGE

ALL CLAY SHRINKS AS THEY DRY. CLAY CAN CRACK WHEN IT SHRINKS IF THE POTTER DOESN'T CAREFULLY MONITOR THE DRYING PROCESS.

IT IS FRUSTRATING TO SPEND A LOT OF TIME CREATING YOUR ARTWORK ONLY TO HAVE IT CRACK BECAUSE YOU DID NOT TAKE THE TIME TO ALLOW IT TO DRY SLOWLY.



MOISTURE

ALL CLAY CONTAINS WATER.

- ✦ YOU CAN ADD WATER TO CLAY TO MAKE IT MORE WORKABLE OR PLASTIC.
- ✦ ADD TOO MUCH WATER, HOWEVER, AND THE CLAY LOSES PLASTICITY- IT WON'T HOLD ANY SHAPE.
- ✦ CLAY BEGINS TO DEHYDRATE, OR LOSE MOISTURE WHEN IT IS EXPOSED TO AIR.
- ✦ YOU WILL OCCASIONALLY NEED TO REHYDRATE, OR PUT WATER BACK INTO THE CLAY, TO KEEP IT MOIST.

PREPARING THE CLAY

**BEFORE YOU MAKE ANYTHING WITH CLAY,
YOU NEED TO PREPARE IT.**

**ALL CLAY NEEDS TO BE DE-AIRED BEFORE
YOU BEGIN. KNEADING OR WEDGING
ELIMINATES AIR BUBBLES.**

**KNEADING PLASTIC CLAY WITH THE FINGERS
AND HEELS OF THE HANDS IN A ROCKING
SPIRAL MOTION, WHICH FORCES OUT TRAPPED
AIR POCKETS AND DEVELOPS A UNIFORM
TEXTURE.**

CLAY SAFETY: CLEAN UP

LITTLE BITS OF CLAY THAT END UP ON THE SURFACE OF YOUR TABLE ARE HARMLESS.

WHEN THE BITS ARE BRUSHED ONTO THE FLOOR THESE PIECES CRUMBLE AND BREAK DOWN INTO SMALLER PARTICLES AND SCATTER INTO THE AIR YOU BREATHE.

CAPTURE CLAY DUST WITH WATER. USE A WET SPONGE TO CLEAN TABLES, TOOLS, WHEELS, AND SINKS. BROOMS AND BRUSHES ONLY MAKE MORE DUST. .

SLIP

A FLUID SUSPENSION OF CLAY IN WATER. USED IN JOINING CLAY PIECES AND FOR SURFACE DECORATIONS IT HAS THE CONSISTENCY OF YOGURT YOU CAN PUT YOUR SCRAP PIECES IN YOUR SLIP CUP.



STAGES OF CLAY:

- ✦ PLASTIC
- ✦ LEATHER-HARD
- ✦ GREENWARE/BONE DRY
- ✦ BISQUE WARE
- ✦ GLAZEWARE



PLASTIC CLAY

- ✦ CLAY IS PLIABLE AND PLASTIC
- ✦ IT IS SOMEWHAT FORGIVING AT THIS STAGE
- ✦ IT IS AT THE “WORKABLE” CONSISTENCY FOR SLABS, COILS, AND THROWING.
- ✦ WARE CAN BE RECLAIMED AT THIS STAGE.

LEATHER-HARD CLAY

- ✦ CLAY IS DRIER THAN PLASTIC WORKABLE CLAY BUT IS SOMEWHAT STIFFER
- ✦ CLAY HAS THE CONSISTENCY OF A CHOCOLATE BAR
- ✦ POTS ARE INCISED AND TRIGGERED AT THIS STAGE
- ✦ CLAY IS A COOL TO TOUCH AND SLIGHTLY DARKER



GREENWARE / BONE DRY CLAY

- ✦ CLAY IS CHALK LOOKING, IT IS NOT NEARLY AS COOL TO THE TOUCH
- ✦ IT IS VERY FRAGILE AT THIS STAGE
- ✦ WARE CAN BE RECLAIMED AT THIS STAGE
- ✦ DO NOT TRY TO WORK CLAY AT THIS STAGE



BISQUE WARE

- ✦ FIRST FIRING OF PIECE
- ✦ AFTER FIRING THE PIECE WILL BE MUCH MORE BRITTLE AND WHITER
- ✦ WARE CAN NOT BE RECLAIMED AFTER BEING BISQUE FIRED.



GLAZEWARE

- * AFTER PIECE HAS BEEN GLAZED THE PIECE WILL BE FIRED A SECOND TIME.
- * THIS TIME THE PIECE WILL OBTAIN THE QUALITIES OF THE FIRED GLAZE.
- * MANY TIMES THIS IS A MORE GLASSY FINISH BUT NOT ALL THE TIME
- * WARE CANNOT BE RECLAIMED AFTER FIRING.

