



GD Izobraževanje in kultura

Program Vseživljenjsko učenje

BASICS OF CLAY MODELLING and JAPANESE RAKU FIRING TECHNIQUE



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Grundtvig



Razvojno izobraževalni
center Novo mesto

CERAMICS

- ❑ The word ceramic comes from the Greek “κεραμικός” (*keramikos*), meaning “potter’s clay, tile, pottery”.
- ❑ One of the earliest forms of expression in the history of mankind.
- ❑ Pottery is one of the oldest human crafts.
- ❑ Today the term “ceramic” means all clay-based material which is fired (from the ordinary brick to the finest porcelain)

CLAY

- ❑ The basic material for ceramics is clay, which is a kind of earth.
- ❑ Clay is soft because it absorbs water.
- ❑ Clay types differ by:
 - Colour (different oxides)
 - Workability
 - Structure
 - Type of modelling
 - Firing (earthenware, stoneware, porcelain)

Characteristics of Clay

- ❑ When clay is dried, it shrinks (10-20%)
- ❑ After the clay object has dried, it is very fragile and breakable
- ❑ After firing clay becomes firm/solid
- ❑ The fired object is still porous
- ❑ It has to be prepared properly (wedging and kneading) before the actual use



Hand built techniques

- ❑ **Pinching** – modelling of one single piece of clay with one's hands
- ❑ **Coiling** – working with coils (long pieces of clay) and putting them together
- ❑ **Slabbing and slabbing with moulds** - working with flat, rolled out pieces of clay
- ❑ **Press moulding** - modelling of clay with plaster moulds
- ❑ **Throwing and turning** - pots are hand-formed from a ball of clay rotating on a potter's wheel

Pinching

- Different shapes (from tall thin to shallow open)



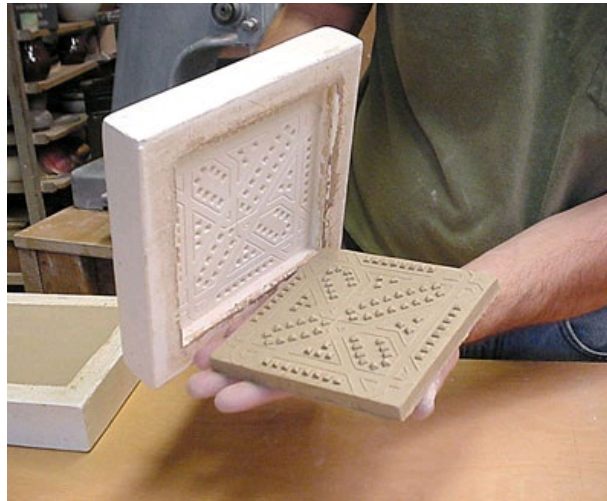
Coiling



Slabbing and slabbing with moulds



Press moulding



Throwing and turning



Hand tools

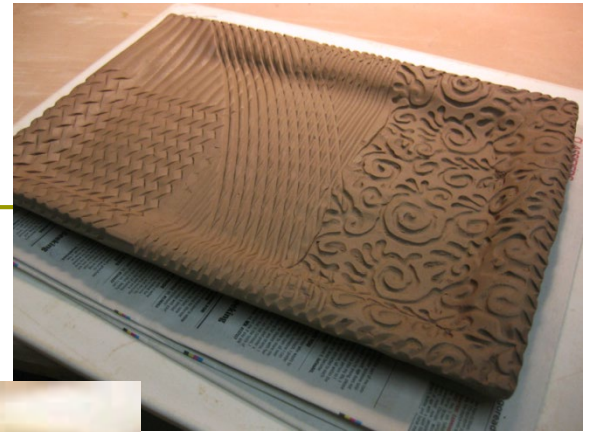
- ❑ Bamboo tools
- ❑ Craft knife
- ❑ Sponges
- ❑ Calliper
- ❑ Ribbon tools
- ❑ Throwing ribs
- ❑ Wire
- ❑ Kidneys
- ❑ Hole cutter



DECORATING THE RAW POT

- ❑ Sgraffito
- ❑ Mishima
- ❑ Fluting and faceting
- ❑ Stamping and impressing
- ❑ Inlaying
- ❑ Piercing
- ❑ Patterning with sponge
- ❑ Feathering with slip
- ❑ Burnishing
- ❑ Slip decoration and banding with oxide
- ❑ Marbling with coloured slips
- ❑ Mocha decoration
- ❑ Using paper resist
- ❑ Combing through slip
- ❑ Glazing (underglazes, glazes and painting glazes)

Impressing



Impressing



Sgraffito



Marbling with coloured slip



Combing through slip and using paper resist



Burnishing pots



FIRE and SPACE

□ Kilns:

- Electric
- Gas
- Sawdust
- Wood

□ Two firings: biscuit (980°C) and glaze firing

RAKU FIRING



- ▣ Japanese raku ceramics dates back to the 16th century.



Japanese tea ceremony- Chanoya

- ❑ Raku ware is directly connected to the tea ceremony.
- ❑ The Raku tea bowls are the most important part of this ceremony.
- ❑ At first glance, the bowls look very simple: without any ornaments and handles, moulded by hand.



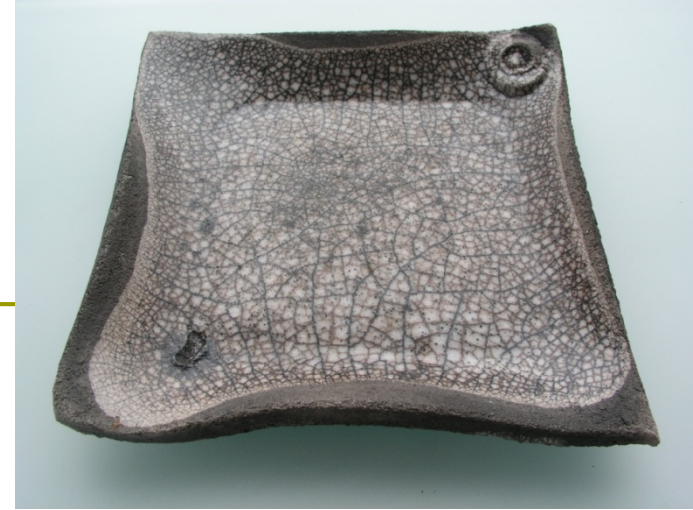
Raku

- ❑ Raku technique is characterized by the crackle glazing. Ceacks are caused by a thermal shock. The fired Raku piece is removed from the hot kiln at about 950°C and put directly into sawdust.
- ❑ The oxygen reduction takes place in the sawdust and the cracks turn black.



AMERICAN RAKU

- ❑ In Europe, the Raku firing technique was first introduced at the beginning of the 20 Century by the English potter Bernard **Leacha**.
- ❑ Later the American Paul **Soldner** began to study the technique in detail. This led to a renaissance of the Raku technique.
- ❑ In America, it soon increased in popularity, since in this way you get instant antique pottery.



NAKED RAKU

- A type of Raku technique, where at the beginning a terra sigillata glazing is poured over the object and well polished. The glazing peels away during the firing, that is why this technique is named “naked raku”.

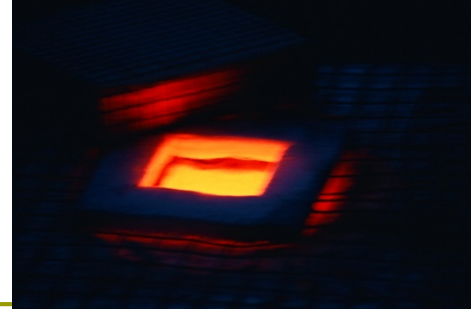


TECHNOLOGICAL PROCEDURE

- We use fireclay of min. 0,5, since the clay must be able to withstand the tremendous stresses of rapidly changing temperatures during the final firing.



Raku Firing Process



- ❑ Raku pots are fired in a gas kiln, which you can make at home with the help of a metal barrel or by making a simple brim with a metal wire. It can also be built of bricks.
- ❑ Glasswool, which is light and fireproof insulation material, is put inside the kiln.
- ❑ You should place the kiln above the ground, so that the air can circulate freely. There should be an opening at the top and the side for the inlet of air and outlet of gases.



Fuel and Firing Process

- ❑ You should heat the kiln fast and efficiently with the help of a gas burner.
- ❑ In less than an hour the kiln reaches the required temperature of ca. 950 °C .
- ❑ With pliers you take the objects out and put them into the reduction material: sawdust, dried leaves, pine tree needles etc.
- ❑ You can douse the pots with water to make additional cracks.
- ❑ Then you should cover them with the same material.



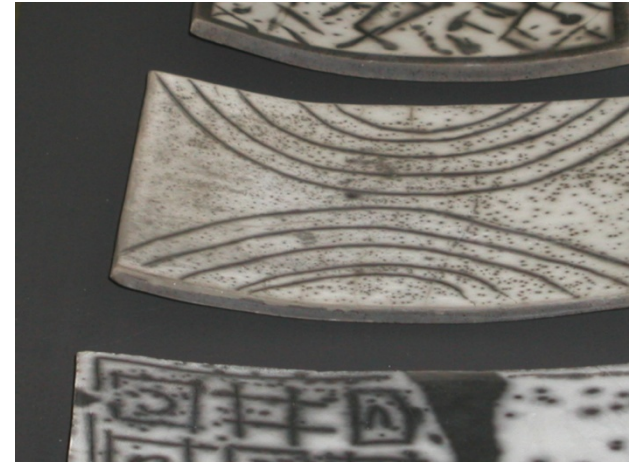
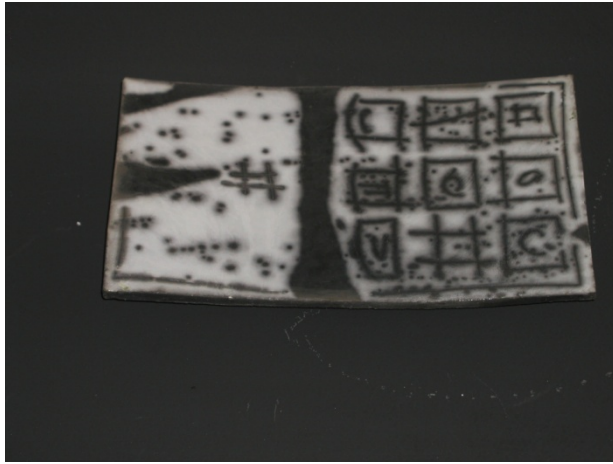


Naked Raku

- ❑ You should burry the objects for about 10 to 15 minutes. Then you place them into water to get additional cracks.

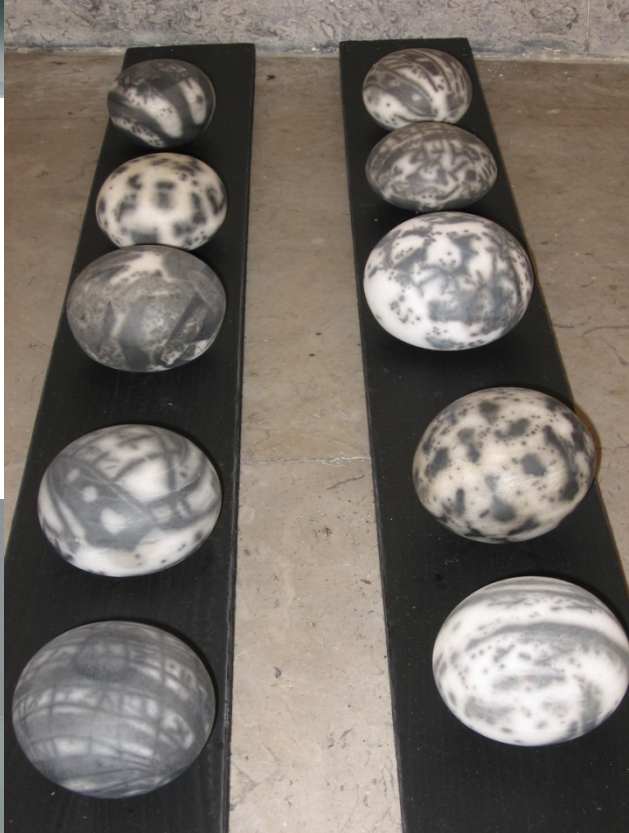


Last but not least ...











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center Novo mesto*

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