

Ceramics syllabus

Every examinable topic area in WAEC Ceramics, in one place — with how the papers are structured and answers to common questions. Compiled by waeccbt.com; not an official WAEC document.

How the papers work: Three papers, all compulsory. Papers 1 and 2 are a composite paper taken at one sitting. Paper 1: 40 multiple-choice objective questions, 50 minutes, 40 marks. Paper 2: six essay questions of which candidates answer four, 2 hours, 60 marks. Paper 3: two practical projects of which candidates execute one over five days, working six hours on each day, for 80 marks; the question paper is sent to candidates two weeks before the execution period, and the design sketches and preparatory notes made in those two weeks carry a further 20 marks, giving 100 in all. Note: the WAEC syllabus for this subject is written with Ghanaian examples (Ntonso and Pankrono pottery, Ghanaian pioneer ceramic artists such as Daniel Cobblah, W. C. Owusu, R. C. Ekem, Ofori Duodu, K. K. Broni, J. K. Amoah, Kofi Asante, J. K. Nsiah, I. K. Oteng, P. S. Kwawukume, David Tetteh, Adu Darko, A. E. Quarm and Happy Kufeh); Nigerian candidates should also be ready to cite local equivalents such as Abuja (Ladi Kwali, Michael Cardew), Ilorin, Okigwe, Suleja and Ushafa pottery. This bank practises Paper 1 and the knowledge behind Papers 2 and 3.

1. Ceramics as a vocation

- Definition and history of ceramics; career opportunities
- Types of products: bricks, tiles, vases, bowls, cooking pots, sanitary ware, insulators; utilitarian versus decorative wares; relation of products to the culture of the people
- Indigenous pottery centres: Ntonso and Pankrono (Ghana); Abuja, Suleja, Ushafa, Ilorin, Okigwe and Ikot Ekpene (Nigeria)
- Pioneer contemporary ceramic artists: Ghanaian pioneers named in the syllabus (Daniel Cobblah, W. C. Owusu, R. C. Ekem, Ofori Duodu, K. K. Broni, J. K. Amoah, Kofi Asante, J. K. Nsiah, I. K. Oteng, P. S. Kwawukume, David Tetteh, Adu Darko, A. E. Quarm, Happy Kufeh) and Nigerian figures such as Ladi Kwali and Michael Cardew

2. Raw materials: clay, glazes and other materials

- Definition of clay; formation by weathering of feldspathic rock; primary (residual) clay such as kaolin versus secondary (sedimentary) clay such as ball clay, earthenware clay and stoneware clay
- Prospecting for clay; tests: plasticity, shrinkage, firing temperature, porosity
- Preparation of clay: soaking, blunging, sieving, drying, wedging; clay bodies: plastic, rough (grogged), casting slip
- Sources of raw materials; glazes, colouring oxides (iron, copper, cobalt, manganese, chromium), stains, fluxes, silica, feldspar

3. Tools and equipment

- Hand tools and their maintenance: modelling and trimming tools, sponge, cutting wire, callipers, knives, scraper, kidney, dipper, rolling pin, needle, rib
- Equipment and maintenance: kilns, kiln furniture (shelves, props, stilts, saggars), potter's wheel, blunger, pug mill, jaw crusher, filter press, ball mill, dehumidifier, spraying booth and machine, sackboard
- Design and construction of improvised tools and equipment: forming and modelling tools, cutting wire, dipper, sackboard, rolling pin, kiln design and construction

4. Forming techniques

- Drawing and designing: idea development, sketching, dimension planning, computer-aided design
- Hand building: pinching, coiling, slabbing; wheel work: throwing and turning
- Casting (slip casting, press moulding), pressing and extrusion

5. Decoration and finishing

- Decorative processes: stamping, inlaying, incision, embossing, sgraffito, slip trailing, glazing, sprigging, spraying, painting, printing, burnishing
- Drying and firing: open (bonfire) firing, kiln firing, bisque firing, glaze firing
- Glazing: preparation, application, firing and defects (crawling, crazing, pinholing, blistering, running)

6. Small-scale ceramic industry

- Establishment: site finding, financing, branding, registration, licensing, labour, quality control
- Entrepreneurial skills and managing a ceramic enterprise
- Costing, pricing, packaging and marketing: market survey, valuing, labour cost, transportation

7. Exhibition

- Definition and types of exhibition; planning and organising an exhibition

8. Ceramics and sustainable environment

- Energy conservation in firing; afforestation to replace fuel wood; land reclamation of clay pits; waste management

9. Professional practices and ethics

- Healthy studio practices: dust control, ventilation, protective clothing, kiln safety
- Building a portfolio; developing a business plan; brochure and business card

10. Museums and galleries

- Definition, history and development of the museum; functions and socio-economic importance
- Administrative structure of the museum; authenticity and neutrality; examples of museums and their activities

Frequently asked questions

How is WAEC Ceramics examined?

Three compulsory papers. Paper 1 is 40 objective questions in 50 minutes (40 marks); Paper 2 is six essays of which you answer four in 2 hours (60 marks); Paper 3 is a practical project executed over five days of six hours each (80 marks) plus preparatory sketches and notes made in the two weeks before (20 marks).

What is the difference between primary and secondary clay?

Primary (residual) clay such as kaolin is found where it formed from the parent rock and is pure, white-firing and not very plastic. Secondary (sedimentary) clay such as ball clay, earthenware and stoneware clay has been carried by water, picks up impurities and is more plastic and darker-firing.

Which forming techniques are examined?

Hand building by pinching, coiling and slabbing; wheel work by throwing and turning; and moulding by slip casting, press moulding and extrusion, together with idea development by sketching and computer-aided design.

What are the stages of firing?

Drying (to bone dry), bisque firing (the first firing that makes the ware hard and porous, about 900–1000 °C), glazing, and glost firing (the second firing that melts the glaze, about 1050–1100 °C for earthenware and 1200–1300 °C for stoneware). Open or bonfire firing is the traditional method.

Which glaze defects should I know?

Crawling (glaze pulling away from the body), crazing (fine cracks in the glaze), pinholing, blistering, running and dunting (cracking on cooling), with their causes and remedies.

Does the syllabus name particular artists and pottery centres?

Yes. The WAEC syllabus names Ghanaian centres (Ntonso, Pankrono) and Ghanaian pioneer ceramists (Daniel Cobblah, W. C. Owusu, R. C. Ekem, Ofori Duodu, K. K. Broni, J. K. Amoah, Kofi Asante, J. K. Nsiah, I. K. Oteng, P. S. Kwawukume, David Tetteh, Adu Darko, A. E. Quarm, Happy Kufeh). Nigerian candidates should also know Ladi Kwali, Michael Cardew and the Abuja, Suleja, Ushafa and Ilorin traditions.

What business and professional topics come up?

Setting up a small-scale ceramic industry (site, finance, branding, registration, licensing, quality control), costing and pricing, packaging and marketing, exhibitions, portfolios, business plans, brochures and business cards, plus sustainability (energy conservation, afforestation, land reclamation) and the functions and administration of museums.

Practise this syllabus free — timed CBT papers with instant marking:
waeccbt.com/practice.html?subject=ceramics