

FACTFILE: GCE ART AND DESIGN

3D DESIGN VOCABULARY



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ABUTMENT

In architecture, a solid block placed to work against the sideways thrust of a vault or an arch

ADDITIVE

A process where one thing or material is added to another

AESTHETICS

The study of what is beautiful

ALLOY

A metal that is made from one or more metallic elements, such as bronze (combining copper and tin), to create a stronger material

ANTHROPOMETRICS

The study of measurements from humans. Used to inform ergonomics.

APPLIED ARTS

Arts associated with craft and design that are not considered 'fine arts' e.g. ceramics, jewellery, furniture etc

APPLIED PLASTER

Applying layers of wet plaster to an armature to create a sculpture

ARCHITECTONIC

Relating to architecture or expressing the spatial and other qualities peculiar to architecture

ARMATURE

A frame made of wire or other materials used to support a modelled sculpture.

ASSEMBLAGE

A form of sculpture created from a combination of objects that are put together, or assembled, to create a work of art

ATRIUM

An inner courtyard open to the sky but covered by a roof

AUTOMATION	A system of production that does not require human skill as part of the process – machine or computer controlled manufacture
AVANT GARDE	Literally, the vanguard, or those in advance or ahead of their time – or thought to be so
AXIS	An imaginary straight line passing centrally through a figure or composition, a facade or a ground plan, so as to give the impression of balance
BANDING WHEEL	A revolving wheel head turned by hand used for decorating pottery
BAS-RELIEF	Or low relief. A sculpture in which images are built out from a flat surface, but do not project more than half their depth from the background.
BATCH PRODUCTION	A process of production resulting in a low volume of goods
BAY	The unit of space between the supporting columns of a building
BISQUE	(or bisque firing) The first firing of clay before a glaze is applied
BRIEF	Instructions provided to an individual or design team prior to the commencement of a project
BRISE-SOLEIL	A permanent sun shield covering the windows of a building
BRUTALISM	A term describing the style of the architect Le Corbusier's use of exposed concrete and harsh, colliding elements
BUTTRESS	A projecting support built against a wall to give additional strength (also Flying Buttress)
CAD	Computer-aided design
CAM	Computer-aided manufacture
CMF	Colour, material, finish
CANTILEVER	A horizontal projection from a wall (a beam or a balcony) that is supported at one end only, by a downward force

CERAMICS	Products made using clay
CHASING	The working of a metal surface by denting or hammering to create patterns, textures or other effects
CHEESE HARD	The first stage of drying in ceramics
COIL	A length of clay rolled out to resemble a rope. A coil pot is one constructed from coils.
COLUMN	A circular upright support for building or other structure
COMPONENT	A part or discrete element within a product
CONCEPT	An early-stage design
CORBEL	An ancient Roman invention. Revived in late 18th century France, it was much developed from the mid-19th century onwards and its use (especially as FERROCONCRETE) has radically influenced the form of much modern architecture.
CURTAIN WALL	A non-load-bearing wall applied to the exterior of a building
DESIGN THINKING	An approach to problem solving based on the methodology used by designers
DETAILING	Documenting all aspects of a design
DURABILITY	The ability to last a long time
ECLECTIC	A term applied to works of art or design combining elements from two or more historical styles
ECO DESIGN	(Also known as Green Design) Design that gives consideration to environmental concerns
ELEVATION	An external face of a building, or a drawing of one
EMBELLISHMENT	The decoration or adornment of an object in order to improve its aesthetic qualities
ENGAGED COLUMN	One that is attached to or sunk into a wall or pier
ERGONOMICS	The application of principles that give consideration to the effective, safe and comfortable use of a design by humans

EVALUATION	Making judgements about a design as you go along
EXPLODED VIEW	A visual representation of an object that shows some or all of the components separately so the viewer can see the various parts and how they relate to each other
FAÇADE	The architecturally emphasised front or face of a building
FENESTRATION	The arrangement of windows in a building
FERROCONCRETE	Also called REINFORCED CONCRETE . Concrete reinforced by the insertion of steel mesh or rods.
FINDINGS	Ready-made parts used in jewellery making e.g. clasps, backs of earrings etc
FIRE	The process of heating clay in a kiln
FLEXIBILITY	The ability of a material to change shape without breaking
FORM	The 3D shape of an object
FORM STUDY	A prototype used to determine the external form of an object such as the clay models used in automotive design
FRAME CONSTRUCTION	A type of construction with walls and roof supported on a rigid framework of wooden or metal beams.
FUNCTION	The task or job an object is designed to do
FUNCTIONALISM	The theory that a building, piece of furniture or other object should be designed primarily to fulfil its purpose and use and that its outer form should be determined exclusively by its function.
GABLE	A basically triangular portion of a wall at the end of a pitched roof
GLAZE	A thin coating of glass used to colour or decorate clay
GLAZE FIRING	The process of heating clay coated with glaze in a kiln
GOTHIC	A mediaeval European architectural style that sought to glorify God through design
GROG	A sand-like substance added to clay to give it strength and body

HAND BUILDING	Creating a clay structure by hand without the use of a potter's wheel
HIGH-TECH	High technology architecture using industrial materials such as steel and glass and often imitating the style of industry
HIGH-TENSILE	A structure that demonstrates strength and resistance to breaking when stretched or drawn out
HIPPED ROOF	A roof with all its surfaces sloped, as distinct from a pitched or gable roof which has vertical walls on its two sides
HISTORICISM	The 19 th century revival of historical styles, as opposed to earlier revivals (e.g. Greek Revival)
INDUSTRIAL DESIGN	(also known as Product Design) The design of industrially produced goods
INSTALLATION	A work of art that is created for a specific location, either indoor (such as in a gallery) or outdoor
INTERFACE	The elements of a product through which the user can input or receive information such as the touch screen of a tablet
INTERNATIONAL STYLE	(also known as Modern Movement) A style in design and architecture named after an exhibition of that name in the New York Museum of Modern Art (MOMA) in 1932
KILN	A furnace (electrical or otherwise) used for firing clay
KITSCH	From the German term for trash. A term associated with poor taste and popular culture such as tourist souvenirs
IRON	A metal derived from ores found in many parts of the world. It can be wrought, hammered into form or cast
JIGGER/JOLLYING	Techniques where clay is pressed against a mould to make a series of pieces virtually identical in form
LANTERN	A circular structure of open construction on the roof or dome of a building e.g. the Pantheon in Rome
LEATHER HARD	Clay which is in a state between plastic and dry. At this stage, clay can be formed into e.g. slab pots or handles can be applied to vessels
LINTEL	A horizontal beam or stone bridging an opening and supporting the structure above

LOST WAX PROCESS	(also known as Cire Perdu) A process for casting bronze, where the form is first created from wax, which melts and leaves a cavity into which molten bronze is poured
LOW-TENSILE	The opposite of high-tensile. Where a structure is weak and likely to break if drawn out or stretched
LUSTER	Applied over the top of a glaze in ceramics to create a shimmering or iridescent finish
MAJOLICA	A low-fire glazing technique
MAQUETTE	A small-scale model used in 3D design to help to visualise the final design
MASONRY	The use of stone in building
MASS	The three-dimensional bulk of an object
MASS PRODUCTION	A process of production leading to a high volume of products
MECHANISATION	In design, the use of machines for production, as opposed to hand production
MODEL	The visualisation of a product – can be a 3D model or one created using computer software
MODELLING	The creation of 3D form in a sculpture through the addition of materials such as clay, plaster or wax
MEZZANINE	A low storey between two higher ones
MODERNISM	Relating to the ideas of 20th century art critic Clement Greenberg – Modernism) or relating to modern thought that breaks with the past (modernism),
MODERN MOVEMENT	An architectural term relating to undecorated, angular buildings using modern materials and embracing functionalism. Also known as the International Style.
MODULAR	A system composed of standardised units or sections for easy construction or flexible arrangement
MODULE	A unit of measurement used to regulate the proportions of a building.
MOOD BOARD	A collection of images put together at the start of a project to inspire the designer or convey the designer's ideas to a client

MULLION	A vertical post dividing an opening, often a window, into sections
ONE-OFF	A single, often hand-made object
ORDERS	In classical architecture, buildings belong to one of 5 orders – Doric, Tuscan, Ionic, Corinthian or Composite, each having its own features.
ORGANIC	Soft, irregular forms such as those occurring in nature.
ORTHOGRAPHIC PROJECTION	A form of technical drawing often used in product design which represents an object from three different viewpoints – a front, side and plan view
PATINA	The effect produced, either naturally or artificially, on bronze by oxidation; also lacquering applied to give a shiny brown or green surface to bronze.
PERIPHERALS	Extra devices that can be added to a computer
PILLAR	A free-standing upright member, distinct from a column in that it need not be cylindrical nor conform with any orders.
PILOTI	The French term for the thin columns that raise a building off the ground, as used by Le Corbusier
PINCH	A process where a hollow shape can be created from clay in the palm of your hand
PLAN	The horizontal arrangement of a building, or part of a building, or a diagram showing such an arrangement, seen from above
PLINTH	A flat slab beneath the base of a column, or the projecting base of any building
POP DESIGN	Design arising from the Pop Art movement of the 1960s
PORCELAIN	A type of fine, white clay
POST MODERN	A term describing a move away from the ideologies of Modernism in the 20th century, often resulting in a playful combination of different styles. Originally referred just to architecture but now used to describe any area of the arts.
PRACTITIONER	An individual who produces art, craft or design

PRAIRIE STYLE	A style of American architecture epitomised by the work of Frank Lloyd Wright, with long, low buildings with a horizontal emphasis, and low pitched roofs and over-hanging eaves.
PRE-FABRICATION	A construction process where elements are manufacture in advance and put together on site
PREPARATORY WORK	The work done in advance of producing a final outcome
PROPOSAL	The response to a brief or stated ideas for a project
PROTOTYPE	A working model for a product or object. Also a first version of a product or object. Used to test if a design works.
RAKU	A ceramic technique where a piece is fired at a low temperature before being covered in a thick glaze
RENDERING	An image of a design created either by hand (such as using markers on paper) or using 2D software or 3D modelling software
RIB	A projecting band on a ceiling or vault, usually structural but sometimes decorative, used to carry the in-filled panels of a vault
RIBBON WINDOWS	A continuous strip of windows in a building
QUOIN	Corner stones used at the angles of buildings to visually indicate strength
SALT GLAZE	A glaze derived from the introduction of salt into the kiln atmosphere
SCALE	A drawing or model not made to full size
SECTION	A diagrammatic drawing of a vertical plane cut through a building.
SKETCH	A rough drawing
SLAB	A rolled or pressed section of clay
SLAB ROOF	A flat roof composed of either single slabs stretching from one side of an enclosed space to another, or one of concrete which has the appearance of a thick slab.
SLIP	A mixture of clay and water that can be used to join clay or for casting. Can also be coloured and used for decorating clay.

SMART MATERIALS	Materials that have more than one property and that can be altered by the application of external stimuli such as temperature
SOFT SCULPTURE	Sculpture made from soft materials such as textiles or other non-rigid materials
STEEL	An alloy of iron and carbon.
STUCCO	A durable, slow-setting plaster composed of gypsum, lime and Sand
STYLUS	Either a metal stool with a small pointed end using for incising OR a tool used to draw with a graphics tablet or on a tablet Screen
SUBTRACTIVE	A technique for creating a sculpture where materials are reduced or removed, such as in carving
SUSTAINABILITY	The plan of a building is said to be symmetrical when it has rooms of corresponding size, shape and disposition on either side of the centre, so that one half is the mirror image of the other. Symmetry is often no more than approximate. The term asymmetrical signifies a complete absence of symmetry.
TEMPLATE	A paper or card pattern for the shape of an object
TENSION PILES	Large upright posts that are driven deep into the ground to support a structure placed on top
THROWING	A process of creating shapes on a potter's wheel
TRABEATED	Construction based mainly on upright members supporting horizontals. Also called post and lintel.
TRUSS	A number of wooden or metal beams forming a rigid framework.
UNIVERSAL DESIGN	Design accessible to as many people as possible
VAULTING	A masonry roof or ceiling constructed on the principle of the arch
WEDGING	Working clay in order to remove any trapped air

Sources (adapted from)

Fleming, J., Pevsner, N and Honour, H. (1999) *The Penguin Dictionary of Architecture and Landscape Architecture: Fifth Edition* (Dictionary, Penguin). 5th edn. London: Penguin

Huntsman, P. (2015) *Thinking About Art: A Thematic Guide to Art History*. United States: John Wiley and Sons

Murray, P. and Murray L. (eds) (1984) *Dictionary of Art and Artists, The Penguin* (Dictionary, Penguin) 5th edn. New York, Penguin Books

Woodham, J.M., (2006) *A Dictionary of Modern Design*: New York: Oxford University Press, USA

