

## Glossary of Design Terms

### A

**Aesthetics** is the branch of philosophy that deals with the nature and expression of beauty. In relation to design, the aesthetic qualities of an object concern the extent to which its visual appearance is artistically pleasing or beautiful, taking into account its functional aspects.

**Architecture** is the name given to the design, and the process of designing, buildings. Because buildings are built to last it is possible to see many different styles of architecture from different time periods in the same town or even on the same street.

### B

**Bauhaus** is the name given to a design style that became hugely popular in Europe in the 1920s and '30s. Named after the Bauhaus School in Germany, the word Bauhaus is now used to describe 'modernist' design and architecture.

### C

**CAD**, or Computer-Aided Design, software lets designers work with exact dimensions and see their ideas in 2D or 3D form, and from any angle. CAD substantially speeds up the design process and gives designers technical information about the strength or flexibility of their design.

**Collaboration** is two or more people working together on a project. In the design world many people work collaboratively to make the most of specific skills, for instance a fashion designer and a product designer might work together to create a new object that draws on both their expertise.

**Commission.** Often designers will be 'commissioned' to design something, either by a retailer, manufacturer, or (in the case of architects) a land owner. This means that the designer is paid to design a specific object in their own style (e.g. a kettle) which will then be manufactured, or sold by the person who commissioned it.

**Construction** is the process of turning a design into an object or building. Designers have to consider the construction process at each stage of their design to avoid costly mistakes.

**Customisation** means adapting or changing an existing object to make it look or function differently.

**Cutting Edge.** The expression 'cutting edge' is used a lot in design to describe something that is really new, whether it's a designer who is changing the way people think about design, or the technology that makes it possible. When it was first invented the paperclip was pretty cutting edge.

### D

**Design challenge** is the set of objectives a designer has to meet for a specific project. They could include size, cost, environment and function.

**Design Doodles** help you to think about how you would meet a design challenge. Don't just draw what it will look like from one angle. Try to capture each side, make notes on what you would make it from and include details of any moving parts.

**Design Principles** are the cornerstones of every good piece of design. At their simplest Design Principles include proportion (the size of different elements in relation to each other), balance (the position of these elements in relation to each other), and unity (the relationship of the elements to each other).

**Design Process** is the path a designer takes from the initial brief or idea through rough sketches and design doodles to scale models and prototypes up to the final production phase. Depending on the project this can take weeks, months or years.

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**Dialogue** is what two (or more) people use to make a conversation. In the world of design a Dialogue can be a 'conversation' between an object and its surroundings, or between different elements within a design.

**Die Casting** is a production process where molten metal is injected into a mold (called a die) at high pressure. The pressure is maintained until the molten metal solidifies and then the shape is ejected from the mold. Die Casting is used for quite large production runs with a high level of detail.

**Digital** literally means any operating system that uses non-continuous values to represent information. But more often the term Digital is used to group together anything created by, for or using, computers.

**Distinctive.** Often the objects that designers create will be identifiably theirs. For example Phillip Starck's furniture follows a style that is 'distinctively' his, of this many retailers sell Phillip Starck 'style' reproductions.

**Durable** materials last a long time and can withstand heavy use. Similarly durable designs will outlast current fashions and become 'classics'

**Dynamic.** If an object is described as dynamic it usually means it is active or has moving parts. However a 'dynamic design' might include a static object which has been designed to suggest movement through its shape or form.

## E

**Ecological design** is becoming increasingly common as designers, manufacturers and consumers become aware of the impact we have on the environment. Ecological design means using recycled and recyclable materials, low impact production processes and being aware of the impact of designs on the environment.

**Edge Board** is Frank Gehry's innovative cardboard material that is strong enough to make practical furniture but lightweight and cheap to produce.

**Elastic** is the name given to any material that 'pings' back into shape when bent or stretched. In this sense, the opposite of Elastic is Plastic.

**Ergonomic.** When an object is described as Ergonomic it means it has been designed with the user in mind. This could mean that any handles or levers are shaped to fit the hand, or that furniture is designed to comfortably fit the seated body.

## F

**Flexible.** When designing an object you need to think about what properties it will need to have, and which materials hold those properties. Often flexibility is a key property as a flexible material will be able to withstand more stress. For example, shatterproof rulers bend a long way before they snap.

**Fluid** literally means a liquid but in design it is used to describe shapes that flow (again like liquid) with smooth lines and no sharp edges.

**Footprint.** Any object, but especially large objects and buildings, has a footprint. This means the amount of space it takes up on the floor (or table). A tall skinny object will have a smaller footprint than a shorter wider object.

**Form** means the way something looks. Form and function are the two main ideas in design and a successful design project will balance the two concepts.

**Function** means the purpose of an object, and how well it does its job. An object might look amazing but not work very well; this is called 'form over function'.

## G

**Graphic Design** is the creation of an image rather than an object, although these images can then be applied to objects in the case of packaging design and fashion. These days

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most graphic design is produced digitally but it doesn't have to be. If you decorate your school books or bag with doodles or graffiti is Graphic Design.

**Guggenheim Effect** is named after the Guggenheim Museum in Bilbao, Spain. The museum building was designed by Frank Gehry and transformed the landscape of this small industrial town; millions of visitors now travel to Bilbao every year to see his building. The Guggenheim Effect is used to describe new buildings that have this transforming effect on the towns or cities in which they're built.

## I

**Industrial** refers to anything to do with Industry. When used as an adjective describe a design the word 'industrial' is often applied to objects that are made from materials such as concrete and metal, or have a basic 'no-frills' shape.

**Innovation** is a new idea or development makes something new possible. For example skyscrapers were not possible until reinforced concrete and plate glass were invented.

**Innovators** are people - designers, manufacturers, computer programmers etc - who come up with a solution to a problem. They are different to inventors in that an inventor will create a totally new object (for example a hair-cutting hat), whereas an innovator will find new ways to do or make something possible or better.

**Interrogate** means to ask questions to find the answer to a specific problem. It's most often used to describe what the police do to suspects but designers also interrogate the design process, and we, as design students, interrogate examples of design.

**Intuitive.** If something is intuitive it usually means that we can understand it immediately with no prior knowledge or training. In design terms if an object is intuitive it will be easy for the user to operate and therefore more accessible.

## L

**Lifestyle** means the way we live. Different people have very different lifestyles (for example your lifestyle is very different to that of your parents and different again to that of a pop star) Objects are designed for a specific lifestyle and can become part of how that lifestyle is defined. The iPod is one of the most definitive lifestyle choices of recent years.

## M

**Manufacturing** is the use of tools and technology to produce objects for sale. The manufacturing process includes the production of prototypes and is usually only used to describe mass production.

**Mass production** is the manufacture of large quantities of identical objects. If something is mass produced the cost per unit is far lower because it is cheaper to buy materials in bulk.

**Materials.** The term 'materials' covers anything that is part of the make-up of any object. From concrete, steel and glass to the invisible thread that holds together the parts of a mobile.

**Minimalist** refers to a design style whereby the object is stripped down to its bare essentials. Minimalism became popular in the Modernist movement and is summed up by architect Mies Van der Rohe's expression 'Less is More'.

**Maquette** a small scale model of an object made as part of the pre-production process.

**Modernism** was a cultural movement that gained popularity at the beginning of the 20th Century. With big advances in technology and changing social habits there was a shift towards progress and using technology to improve the way people lived. Probably the biggest impact Modernism had was on architecture as it left a lasting mark on our landscape.

**Modifications** are the changes a designer, manufacturer, or user make to a design to improve it. This might take place as part of the initial pre-production process or could be a

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later change after the object has been in use for some time. Modifications could be to an object's form or functionality.

**Monocoque.** A structure that has no need for internal supports or pillars. The outer shell is self-supporting making the most of the inside space. An igloo is a monocoque, as are many modern sports stadiums.

**Moulded** form (whatever its material) is one that has been pressed into shape by a mould (or mold). This production technique is often used for shaping plastic.

## N

**Naturalistic** In design, naturalistic refers to an object that reminds us of something natural. It could be made from natural materials, or designed to look like something natural. It is possible for an object to be naturalistic and high tech at the same time.

## O

**Optimum.** In design, naturalistic refers to an object that reminds us of something natural. It could be made from natural materials, or designed to look like something natural. It is possible for an object to be naturalistic and high tech at the same time.

**Organic.** We've all heard of organic foods, but what about Organic design? If an object is described as organic it usually means that it is inspired by or resembles a living thing, like a shell or a leaf. If the design process is described as being organic it suggests that the idea has grown out of another object or project and the word organic refers to the natural movement from one idea to the next.

## P

**Patent.** When a designer, or manufacturer, creates something new they can apply for a patent which will protect their idea from being stolen by others.

**Plan View** is a diagram or drawing that shows a design from above. This is particularly useful in 3D-modelling and architecture.

**Plastic** has two meanings. Most commonly plastic is an artificial material that is used to make mass produced objects and packaging, but plastic also describes any material that can be molded into a non-reversible shape. For example if you heat plastic and stretch it, it will retain its new shape.

**Product.** At its simplest a 'Product' is anything that is produced, from food to waste to cars to petrol. More commonly 'product' refers to objects that are designed and produced for sale. Product Design is a major branch of the design industry.

**Production Line.** Part of the production process where the object is assembled. It can be on a huge scale in a factory or on a very small scale in a designer's studio or even around the kitchen table.

**Prototype.** A Prototype is a full sized, functioning version of an object made to test a new design. A lot of money can be spent on making a prototype as it's expensive to create a one-off so this is the very last part of the design process before an object goes into production. Ideally a Prototype proves that a specific design is a success, rather than highlighting its failings!

## R

**Resources.** A designer's resources include everything from the materials and technology they can use, to the financial backing they can secure, and the skills and experience they have. Often designers collaborate to share resources.

## S

**Sculptural** literally means 'like a sculpture'. When a object is described as sculptural it often means that the piece is beautiful enough to exist just as a sculpture, without consideration of how well it fulfils functions.

**Signature Design.** One easily recognisable as belonging to a specific designer.

**Skin.** A skin is a design can be applied to another object to change the way it looks. Design uses 'skins' to allow different websites to look different although they follow the same template and structure.

**Static.** A static object does not move, although it might have moving parts.

**Structure.** A structure is the core frame of elements within an object. A key part of the design process is establishing whether your object will be structurally sound. If it isn't you might end up with a collapsing chair, or a kettle that leaks.

## T

**Tactile** objects and materials are those that feel good to the touch. They might be soft and furry or hard but smooth. Touch is almost as important to good design as sight, and far more important than taste!

**Technique.** The processes used to make a design idea a reality. Different projects demand different techniques such as die casting or carpentry, metalwork or CAD.

**Three D (3D) modelling.** Before designers go into the final production stage they make a 3 Dimensional Model so they can see exactly how the final object will look. Depending on the object, the budget and the designer, 3D modelling might involve 3D imaging software or making a physical scale model (sometimes called a mockette.)

## U

**Ubiquitous.** Some designs are ubiquitous; this means that you see them everywhere. Bic Biro's are fairly ubiquitous and in our society so are denim jeans. Designers often try to take a ubiquitous object and add a new dimension or change one of its core elements.

**Unique** is opposite to ubiquitous and means that something is the only one that exists. It is possible to modify a mass produced object to make it unique - and far cheaper than buying a unique design from a known designer.

**Unit Cost.** The unit cost is the cost to produce one item. In mass production, when thousands of units are produced at a time, the unit cost will be relatively low. With smaller production runs the unit cost is often considerably higher.

**User.** The user is the person at the very end of the design process who actually uses the object that has been produced. Designers often have to keep the user in mind at every stage of the process to make sure that the end result is user-friendly.

## V

**Visual** means to do with the eyes. So designers 'visualise' an idea, CAD can give you a 'visual' of what the object will look like from any angle, and we look at the 'visual impact' of an object when we're studying design.