3D Printing Glossary

3DP	Three Dimensional Printing. (X,Y & Z axis printing)
ABS	Acrylonitrile Butadiene Styrene - a commonly used thermoplastic.
Additive Manufacturing	Original term for 3D Printing
Axis, Axes	The reference for describing the origin and position of an object in space, displayed by intersecting straight lines. By using two axes, a plane is determined; for example, the XY plane is defined by placing the X and Y axes so that they intersect at the global centre (point of origin). Three dimensions are determined by using three axes: X, Y, and Z.
Boolean operations	A modelling technique that uses two objects that are overlapping to create a new object. There are three kinds of Boolean operations: subtraction, union and intersection. By taking the first shape and subtracting/unifying/intersecting with the second - a new shape is created.
Bounding Box	A cubic shape that exactly circumscribes a (more complex) 3D model and is used to optimize 3D space calculations.
CAD	Computer Aided Drafting (or Design); a system that lets a designer use a computer instead of a drafting table to make plans and blueprints.
Cartesian Coordinate	A mathematical representation of Euclidean space. Every point can be described by three coordinates (X, Y, Z) representing the position along the orthogonal X, Y, and Z axes. The point (0, 0, 0) is called the origin, which is the global centre of the 3D world.

Core	The powder that is deposited into the print chamber.
Cross-Section	A view of the interior of an object as it is sliced along a plane
Edge	A straight line connecting two points on a polygon.
Face	The shape made up by the bounding point making a polygon. Faces can have as many vertices as wanted
Fixing	File fixing or simply 'fixing' refers to the process used to take a standard 3D CAD model and prepare it for 3D printing. This will usually be achieved using 'Materialize Magics' software.
Map	An attribute that can be added to an object's surface to give it a certain look. Colour detailing for example.
Mesh	A polygon mesh is a collection of vertices, edges and faces that defines the shape of a polyhedral. 3D object made up from a number of triangular faces
Model	A 3D printed object.
Node	The basic graph element used to represent distinct items
Normals	'One sided' - When a polygon is created, unless otherwise set up, it has only one side
Nylon	A commonly used thermoplastic
PLA	Poly(lactic acid) or Polylactide (PLA) is a biodegradable thermoplastic aliphatic polyester derived from renewable resources such as corn starch or sugarcane.
Plane	A plane refers to a two-dimensional surface. Point Cloud

Polygon	Geometric shape in one or many planes. Polygonal modelling consists of using many faces to create the shape.
Powder Printing	One of many techniques for printing 3D artefacts. (See technology section for more information).
.STL	STereoLithography is a file format created by 3D systems
Watertight	In relation to 3DP refers to a model that is fixed, has no inverse normals, holes or unconnected (unstitched surfaces).