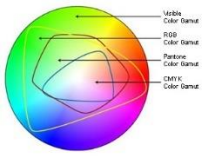
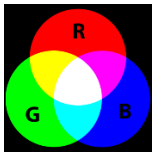
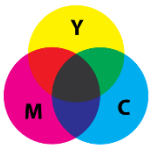
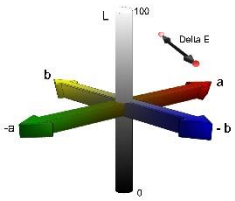
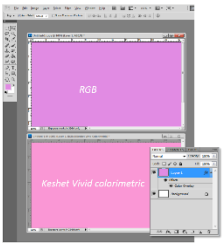
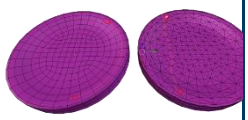
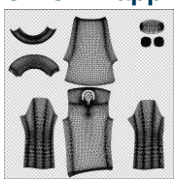
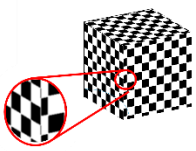
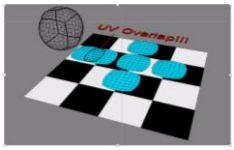
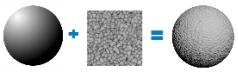
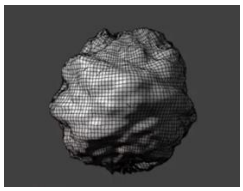
Glossary of Color Terms

Color Gamut 	The entire range of colors available on a particular device, such as a monitor or a printer. A color gamut is measured inside a color space.
RGB 	**RGB** (red, green, and blue) refers to a system for representing the colors to be used on any monitor screen, mobile phones, projectors, etc. Red, green, and blue can be combined in various proportions to (0-255, 0-255, 0-255) to look like any other visible color to the human eye.
CMYK 	The **CMYK** color model is a subtractive process where the 4 inks subtract brightness from a white base, typically paper. **CMYK** refers to the four inks used in some color printing: Cyan, Magenta, Yellow, and Key (black).
Delta E 	**Delta E** is the most common way to measure the difference between colors in the Lab color space. **1dE** = the lowest possible noticeable difference (to the human eye) between two different colors.
ICC Profile 	An **ICC profile** is a set of standardized data that describes the properties of a **color space**, the **range of colors** (gamut) that a monitor can display or a printer can output. Every device that is processing color should have its own ICC profile and when this is achieved the system is said to have an *end-to-end color-managed workflow*. With this kind of workflow, you can be sure that colors are not being lost or modified.
Pantone 	**Pantone** is a standardized color matching system, utilizing the Pantone numbering system for identifying colors. By standardizing the colors, different manufacturers in different locations can all reference a Pantone numbered color, making sure colors match without direct contact with one another.
L*a*b* 	Lab is the color space referring to the human vision. It has about 2M colors, with 1dE difference between them, Lab is the common language for all other spaces, so when translating between two color spaces (like RGB > CMYK) it goes through Lab (RGB > Lab > CMYK)

Color Matching 	**Color matching** is the process of transferring a particular color across different technologies or platforms.
Proofing 	A simulation of how the colors will look on a different device. For example, proofing RGB colors in photoshop for the J750 will show how the color will look after printing with CMYK.
3D Mesh 	**A 3D mesh** is the structural build of a 3D model consisting of polygons. **3D meshes** use reference points in X, Y and Z axes to define shapes with height, width and depth.
UV Mapping 	**UV mapping** is when a 2D image is being projected to a 3D model's surface for texture mapping. UV is a coordinates system like X and Y. The texture has a unique placement coordinates
UV Unwrapping 	**UV unwrapping** is the method of automatically or manually cutting seams on the 3d mesh to flatten it, so a 2D image can be applied to it.
Seams 	The seams define the beginning and end of a texture portion in a particular area. (for example, edges of a box).
UV Overlaps 	**UV overlaps** occur when you have 2 or more UV islands are layered on top of each other, rather than sprawled out in a single layer.

Bump Mapping 	Bump mapping is a technique for **simulating** a physical texture on the surface of an object. Bump mapping is a *surface shader*, meaning that it does not actually alter the physical geometry of an object. The shader simulates small protrusions or 'bumps' on the surface. White values represent the maximum displacement, while black values represent no displacement. This effect can be very convincing from a distance. In 3D Printing we have to displace the model based on the bump if we want to print this surface finish.
Displacement Mapping 	A greyscale image texture is applied to a surface geometry. The grayscale values of that image are then used to physically *displace* the geometry. White represent the maximum displacement, while black values represent no displacement
Colorimeter 	A **colorimeter** is a device used for measuring colors. It measures the absorbance of different wavelengths of light. This tool is essential when undertaking color matching

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