**11.1: P2 – Impact of using different tools and techniques to process and manipulate digital graphics and animations in digital formats**

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| Raster Graphics - GIF (256 colours, File size, Usability) |
| Each colour is described in RGB values, with a value from 0 to 255. This doesn’t count CMYK colours. Gif can use up to 16.8 million colours but only 256 can be found in an image. This is to limit the file size whilst retaining the appearance of the picture. |
| LZW compression is a lossless compression algorithm, it uses a dictionary-based algorithm that stores each similar colour together. A limit of 256 colours makes the file size smaller. It is usually smaller than 1mb. |
| A gif is usually a graphic for a button or icon. It can also be used for animations and are useful for anything with a transparent background. |

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| Vector Graphics - AI (Coordinate data, File size, Layers, Usability) |
| illustrator image files are saved in a vector format, they can be enlarged without losing any image quality. Some third-party programs can open AI files, but they will be converted to a bitmap format. |
| Project files let you save lots of layers of images, an AI file does the same thing for vectors. |
| It’s used by graphics designers and publishers. It can be used in animation storyboards and comics. |

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| 3D Graphics - OBJ (Coordinates data, File size, Usability) |
| It is usually generated by CAD and can encode surface geometry of a 3D model and can also store colour and texture information. |
| They cannot be compressed as they only store the locations of 3d objects (as XYZ coords), faces and vertices. File size can be big as it needs to store a lot of points, sometimes thousands. |
| It is the preferred format for multi-colour 3D printing and 3d graphics applications. |

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| Animations - .MPG (Compression, Frame rate, File size, Usability) |
| Mpg stands for moving picture group. It is a standard format that stores video, audio and metadata for a video file. |
| MPEG-1 is usually at 30 fps with a resolution of 352x240. MPEG-2 is used to compress video and audio for higher quality videos to be shown on the tv. MPEG-1 compresses files to 1.5 mbit/s, it is a lossless compression. |
| Mpeg is quite outdated and now is overtaken by mp4. They are normally used to rip movies from discs and dvd’s. |