9.2 Animations

In this unit you will discover how professionals create 3D animations using the industry-standard software package, Blender. By completing this unit you will gain a greater understanding of how this important creative field is used to make the media products that we consume.

Term	Definition
Animation	The process of giving the illusion of movement to drawings, models, or inanimate objects.
3D animation	Animating 3D models made in 3D software.
Frame	Still images that appear as a moving image when they are shown one after another at high speed. The frame rate determines the speed of an animation
Keyframe	Keyframe animation only requires you to pick the important locations, the keyframes and the computer works out the rest (called tweening) e.g. Pixar films.
Stop Motion	Stop motion means you have to manually animate every frame of the animation e.g. Shaun the Sheep.
Vector	An image stored as mathematical instructions for how to do draw it. This means its width and height can be increased without the loss of quality.
Composition	The composition of an animation refers to the animation of the properties of an object or multiple objects
Knife tool	The knife tool in Blender can be used to interactively subdivide geometry by drawing lines or closed loops to create holes.
Face	A surface made up of three or more sides, often referred to as a polygon.
Vertex	A point where one or more edges meet.
Edge	A line connecting two vertices.
Scale	Scaling means changing proportions of objects.
Rotate	Rotation is also known as a spin, twist, orbit, pivot, revolve, or roll and involves changing the orientation of elements (vertices, edges, faces, objects, etc.) around one or more axes or the Pivot Point.
Parenting	Used to attach objects to each other.

Stop Frame Animation

Stop frame animations – create the beginning and ending frames, as well as all the frame in-between. For a bouncing ball the key frames for the lowest and highest bounce points, as well as the frames in-between would have to be created.

The Basic Blender Buttons:
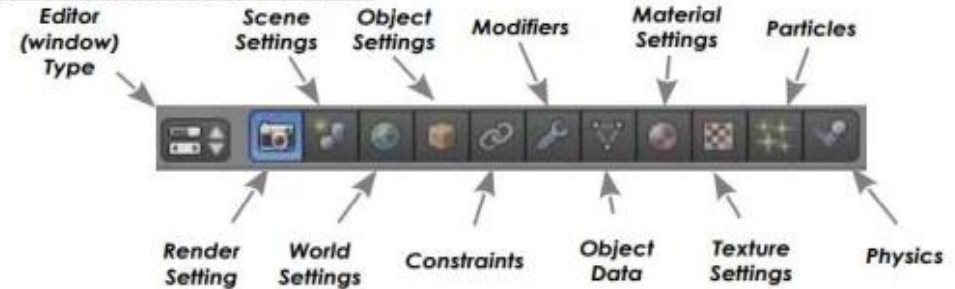
Bitmap vs Vector Images

Bitmap
Bitmap graphics are made from pixels.
Resizing will cause loss of quality.
NOT to be used in animations.

Vector
Vector graphics are made from shapes .
Resized without any loss of quality.
Colours of individual shapes can be changed.
Used to create clean, smooth animations.