Differences between 2D and 3D:

2D

· Consists of 2 dimensions – X and Y

· Image relies on the frames (1 image consisted of 24 frames to provide fluid animation)

· Frames were created using methods such as sketching and drawing (nowadays using online rendering processes)

· Cheaper to use/make than 3D.

· Easier to learn and understand than 3D because there are fewer features to learn.

· Used for designing posters, logos etc.

· Slightly less realistic than 3D

· Has 3 stages: Pre-production, production and post-production.

· Pre-production is about designing the foundation of the animation – building the story, creating sketches of characters and recording audio for characters. It comprises different people from both sections of the team, programming and design brainstorming together to work on an idea.

· Production is where animators will use the character models and start animating the different images, generally with 24 frames per image.

· Post-production will merely enhance the animations from production, adding lighting, sound effects, and rendering the animations.

3D

· Consists of 3 dimensions – X, Y and Z

· Image relies on movements.

· Animation is created using sketching, modelling, vector representation.

· Costs more to animate than 2D.

· Harder to learn since there are more complex processes to render and texture in 3D.

· Used in the fields of mathematics and architecture.

·   Looks more realistic than 2D.

·   Has 3 stages: Modelling, layout and animation and rendering.

·   Modelling consists of creating mappings of character models using lines and curves to create a rough, final image of what the character might look like.

·   In layout and animation, models will be placed into the right places and animated, and then motion capture or keyframing will take place.

·   Rendering will finally enhance the finished images by rendering them.

Evolution of 3D modelling from 1998 to current day:

·   1963, Computer scientist from USA called Ivan Sutherland, created Sketchpad

       1964, IBM and general motors created DAC-1 together, which sped up car production rates and gave more accurate representations of cars.

·   Sketchpad allowed computers to read drawings on the screen.

·   It could also create sub-drawings from 1 main drawing.

·   1990, first version of Autodesk 3DS Max introduced – until 1990's 3D modelling was used mainly for the TV industry and ads

·   Originally used Claymation – models made out of clay were placed in positions to create several frames that would be used in one image to create a fluid animation.