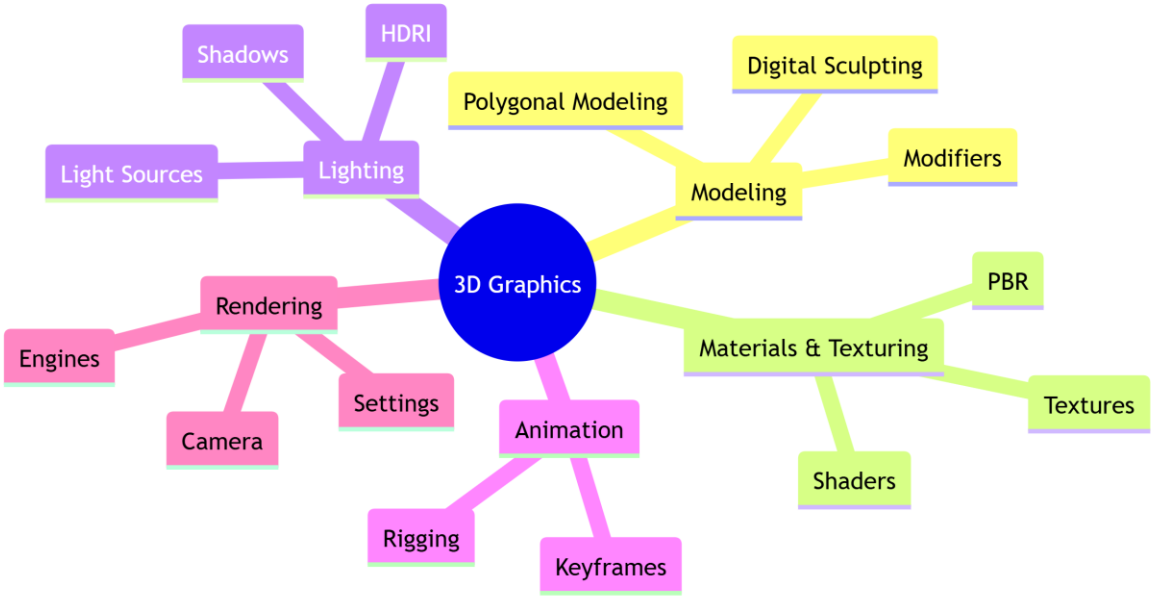

Explanations of the Concepts

1. Modeling (Creating the 3D object)
Polygonal Modeling: The most common technique. Objects are built from polygons (usually triangles or quadrilaterals). Think of it like digital clay modeling with a wireframe.
Digital Sculpting: Like sculpting real clay. Used for creating organic, high-detail models like characters or rocks.
Modifiers: Non-destructive tools that automatically affect a model (e.g., Subdivision Surface to smooth it, Mirror to symmetrically copy parts).

2. Materials & Texturing (Defining the object's surface appearance)
Textures: 2D images "wrapped" around the 3D model to give it color, patterns, and surface details (e.g., a photo of wood or metal).
Shaders: Programs that calculate how a surface reacts to light. They control color, shininess, transparency, etc.
PBR (Physically Based Rendering): A modern standard for shaders that mimics the physics of real light, making materials look much more realistic.

3. Lighting (Illuminating the scene)
Light Sources: Different types of lights (point, sun, spot) used to create mood, focus, and realism.
Shadows: Crucial for defining the relationship between objects and grounding them in the scene.
HDRI (High Dynamic Range Image): A special 360-degree image used to light the entire scene, providing realistic reflections and natural lighting.

4. Animation (Making things move)
Keyframes: The foundation of animation. You set the position/rotation/scale of an object at specific points in time, and the software creates the in-between frames.
Rigging: The process of creating a digital skeleton (rig) for a model so it can be animated. This is essential for character animation.

5. Rendering (Generating the final image or video)
Engines: The software within a 3D program that calculates the final image. Some are fast for previews (Real-Time), others are slower but photorealistic (Path-Tracing).
Camera: The virtual camera through which the scene is viewed. You control its angle, focal length, and depth of field, just like a real camera.
Settings: Parameters like resolution, quality samples, and output format that control the final look and file size of your render.