**Ambient Lights** : An ever present light glow to minimally allow object to be seen without shadows being cast – Imagine a room with perfect lighting where you don’t know where the light is coming from but you can still see everything – Mostly just shows basic background color and foreground color

**Environment Light** • Comes from a skybox, simulating the sun or moon in the skybox • Changed through Window->Rendering->Lighting Settings->Environment Lighting.

**Directional Light** • Similar to ambient light but there can be many of them and it casts shadows • A light with only a direction, no position – Light source is infinitely far away – Light rays travel in straight lines • Good for simulating sun or just generally brightening a scene from one side

**Point Light** • Light emits from a single point • Emits in a sphere in all directions around that point. • Light gets dimmer the further it is from the source • Good for simulating unconstrained light sources, like an explosion

**Spot Light** • Light emits from a single point • But comes out in a cone away from the light source • Light gets dimmer and disperses the further it is from the source • Good for constrained lights such as ceiling lights and lamps

**Emissive** • Light is emitted from the color properties of an objects material (see later slides) • Good for glowing object (e.g. neon signs)

**Material** • Meshes only specify the surface **shape** of an object • Materials specify the **detail** on the surface of the object – Colour – Texture (e.g. patterns on the surface) – How light bounces off the objects • Sperate assets in the Project Window – Attached to Renderer components on game objects in the scene • Shader – code that dictates how a material is applied to a mesh – And additional effects once it has been applied

**Normal Maps** – specifies which direction each (u,v) point is facing to determine how light will bounce off the 2D image – “Bump mapping” – Normal maps allow for bumps and grooves to be added and react naturally to lighting – Made more intense and realistic through Height Maps