Chapter 04

Materials and Mapping

3ds max 6
**Ambient light** is used to simulate indirect light, such as the atmospheric light that permeates outdoor scenes. It may also be used to simulate radiosity, which is the color that bounces off brightly colored objects. Ambient color controls the color of objects in areas of shadow whenever ambient light is present. Generally, you do not see any effect when you change the ambient color of a material because ambient lighting is turned off by default. To see the effect of ambient color in a scene, you must create an ambient light source. You can either create lights that are set to Ambient Only in order to create a localized effect, or use the Environment dialog to affect an entire scene.
MATERIAL: SPECULAR LEVEL + GLOSSINESS

**SPECULAR LEVEL:**
Control the intensity of Highlight

**GLOSSINESS:**
Control the size of Highlight

![Image of three spheres with highlights and interface controls](image-url)
For standard materials, a shader is an algorithm that tells 3ds max how to calculate surface rendering. Each shader has a unique set of characteristics in order to serve a particular purpose. Some are named for what they do well, such as the Metal shader. Others are named for the person who developed them, such as the Blinn and Strauss shaders. The default shader in 3ds max 7 is the Blinn Shader.

**ANISOTROPIC:**
Used for brushed glass or hair. Creates a highlight that is stretched and angled, rather than the standard circular highlight.

**BLINN:**
Has the same features as the Phong shader, but its mathematics are more accurate. **This is the default shader for Standard materials. There are flexibility of highlight which apply all kind of materials.**

**METAL:**
Used for making metals.
**MATERIAL : SHADER**

**MULTILAYER:**
Two anisotropic shaders in one. Used to make two different highlights with independent controls. Simulates materials such as a rubber, and metal that is covered with a shiny coat of wax.

**OREN-NAYAR-BLINN:**
An adaptation of the Blinn shader. It gives objects a porous, cloth, non-plastic appearance, and is suitable for surfaces like skin.

**PHONG:**
A classic shading method like a Blinn shader that was the first to enable specular highlights. Suitable for plastic surfaces.
01 Shortcut M or click

02 Select object and select assign material
01 select standard
02 select Mtl Library
03 select material
04 change size with modify command [UVWmap]
MATERIAL: map diffuse

01 maps parameter
02 diffuse color
03 select none > bitmap
04 select map from folder
01 maps parameter
02 bump
03 select none > bitmap
04 can change amount of bump 0-999
01 maps parameter
02 reflection
03 select none >new> raytrace
04 can change amount of bump 0-100
**MATERIAL : SHADER**

**STRAUSS:**
Suitable for metals. Allows you to control the degree of metallic characteristics of the material.

**TRANSLUCENT SHADER:**
Translucent shading is similar to Blinn shading, but it also lets you specify translucency. A translucent object allows light to pass through, and also scatters light within the object. You can use translucency to simulate frosted and etched glass.