

## Chapter 8- Ray-Tracing

### Reflection (mirror) and Refraction (transparency)

To create a mirror, or reflective surface on an object, select that object and add a material. You can also add textures to an object and have a mirror surface. In the *Material* buttons, you will find a panel called "**Mirror**". All of the ray-mirror features are found in that panel. Check the "**Mirror**" button and experiment with the reflection settings. The **Reflect** slider controls the amount of mirror. A full slider would be a perfect mirror.

For *Transparency*, press the "**Transparency**" button to activate it. Two main adjustments are **IOR** (Index of Refraction) is used to create the Lens effect and bends light. **Fresnel** is used to control the amount of transparency. There are some other setting that you may feel free to experiment with, but these are the main settings.

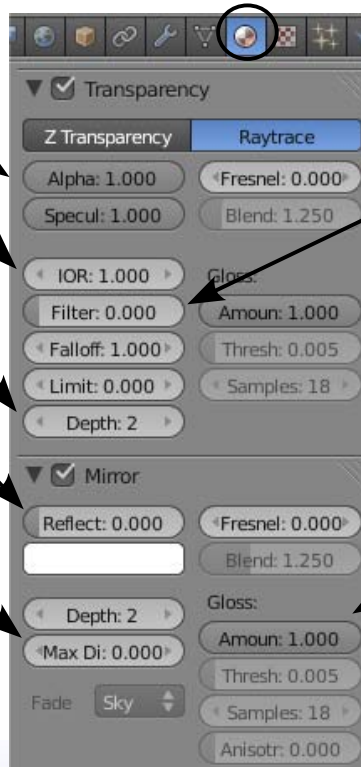
Alpha: This transparency setting can also be used with Ray Transparent.

IOR: (Index of Refraction) Controls the amount of distortion.

Depth: If you cannot see through the object properly, Depth needs to be set higher.

Reflect: Controls the amount of mirror. Full reflect will give you the effect of a real mirror or chrome.

Distance and Fade: Controls how much is actually reflected and what it should fade to when it reaches that maximum distance. 0 means no limit.

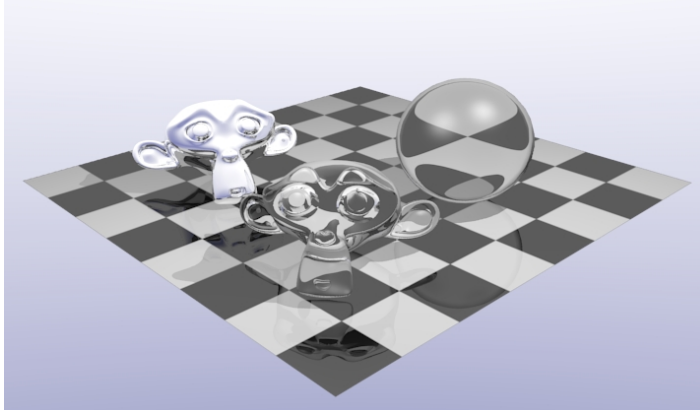


Fresnel: Controls the amount of Ray Transparency.

Filter/Falloff/Limit: These settings control additional effect with how light passes through an object.

Fresnel: In mirror, this causes a fogging effect on the surface.

Gloss: These settings control additional effects to the mirror.



The image to the left uses a small amount of ray mirror on the floor and a high ray mirror reflection on the back monkey head to simulate chrome. The front monkey head and sphere are using a high fresnel and IOR setting to simulate glass and distortion.