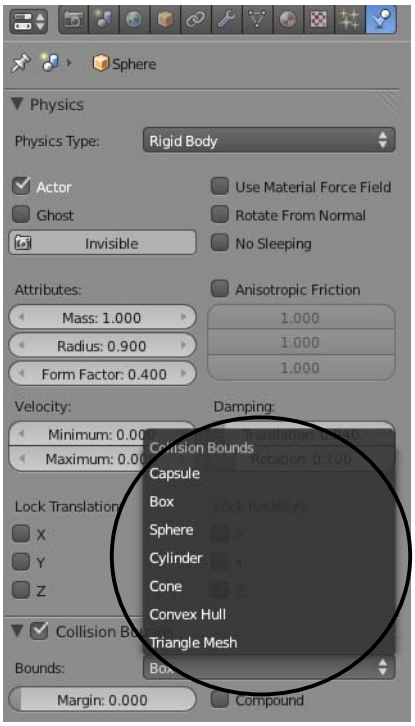
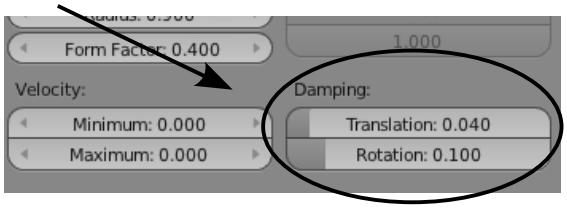
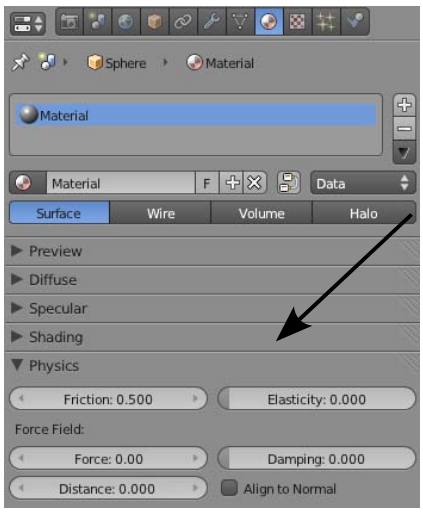


Since you are working with a sphere, you don't notice that even though we are using a rigid body, the actor physics are still calculating to the *Radius* setting in the *Attributes*. If you were to delete the sphere and use a Cube instead, it would roll off the plane like the sphere did. To fix this, you need to turn on "Collision Bounds" and choose a bounds option. "*Box*" would be good for a cube mesh while "*Convex Hull*" or "*Triangle Mesh*" would be better for a more complex shape. You would need to experiment to see which works best for your model.

As you watch your physics in action, you may notice some other reactions that seem a bit off. For example, the ball may slide a bit, or not enough. It may not bounce much or it may spin too much, or not enough. We have 2 places where we can control some of these factors. The first place is in the Physics panel. You will find a block for *Dampening*. The "*Translation*" slider controls the amount of sliding in a direction (like being on ice) while the "*Rotation*" slider controls resistance to spinning. These 2 features will be discussed more when we talk about making a game.





The second place to make changes to reactions is in the *Materials* panel. Add a material to the sphere. And find the *Physics* settings. If you want something to bounce, adjust the "*Elasticity*" slider, "*Friction*" controls slippage. You can also provide *forces* and other *dampening* here as well. *For these to work properly, you usually need materials set on both interacting objects (ex. Elasticity on both the sphere and the plane).*

Materials in the Game Engine:

Some things that work in rendering do not work in the game engine while other features do. For example, a standard image texture may display in the game engine, but many adjustments to that texture may not work. There has been a lot of development in texture work for the game engine and we will examine some of that in the UV mapping chapter. For now, just work with straight Diffuse material color. To see what things will look like in a game, change your view type from "Solid" shading to "Textured" shading. Press "**P**" and your view will reflect what will be seen in a saved game. Since the next section deals with applying game physics to an actual saved animation, texture can be handled exactly as we have in previous chapters.