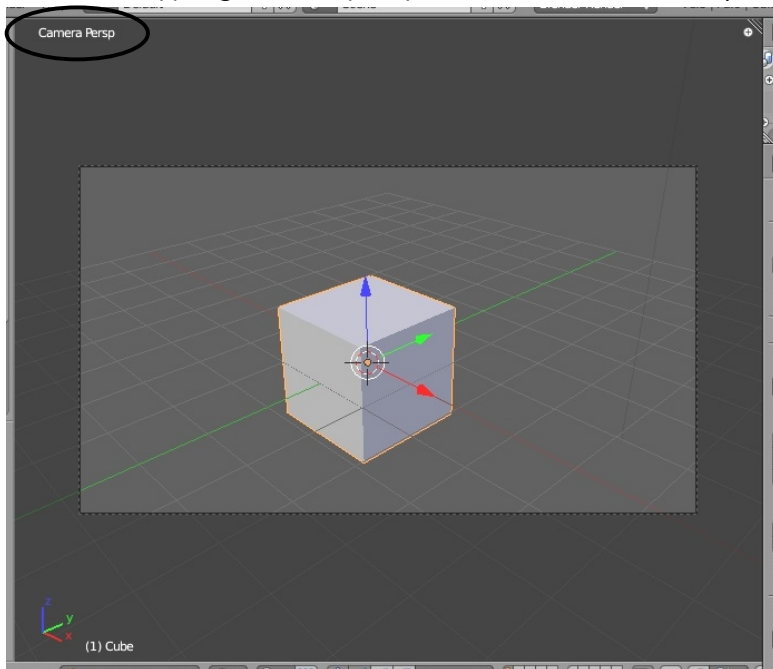


## Chapter 2- Working with Viewports (windows)

### Moving Around in 3D Space

In a 3D program, not only do you have to worry about where you are in 2 dimensions (height and width), but you also need to consider depth (how close or far away). Before you can work in 3D space, you should have some skills in 2D drawing and layout.

**Moving around in the 3D window is controlled by the mouse and the keyboard number pad (NOT the numbers across the top of the keyboard- these change layers).** Think of a standard 3-view orthographic drawing- top, front and right side views. These views match up with the number pad **7,1 and 3 keys** (look at their arrangement on the keyboard- just like the views). Put your cursor in the 3D window and try typing those numbers. Typing "0" will put you into camera view (what the camera sees).



By default, the camera is represented by a single line, representing the edge of what is rendered and shaded to the outside. You also have the option of turning on an additional dashed line box to represent a *Title Safe* box (helpful in planning). Changing these settings will be discussed in a later chapter. You will also notice a small note in the upper-left corner of the viewport telling you the view name and if it is orthographic or perspective.

The number pad 5 key will always toggle you between perspective and orthographic views. The number pad arrow keys (2,4,6,8) will rotate you around in 3D space. The "+" and "-" keys on the number pad will zoom in and out. The number pad "." (period) key will center your view up on the selected object on your screen. **"Ctrl" and 7,1, or 3 will give the opposite view.**

The mouse serves a number of functions. The Left Mouse Button (LMB) will move the 3D cursor around on the screen and for dragging windows for selecting objects. *Wherever the 3D cursor is located is where the next item you create will be placed.* The 3D cursor serves other purposes that we will discuss later. The Right Mouse Button (RMB) is used to select object or vertices (in edit mode). The mouse wheel serves 2 purposes. Scrolling the wheel zooms in and out (like the + and - keys). Holding down the mouse wheel will let you rotate the view. Holding down Shift and Mouse Wheel will let you pan around on the screen.



#### **RoboDude Says:**

*Practice using these controls before moving on to other lessons. Without getting a grasp on working in 3D space, you will have a difficult time creating and modifying objects.*