**TUTORIAL #1 - INTRODUCTION**

**INTERFACE**

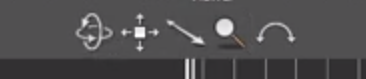
* Open MoBuilder
* Click File >> open
  + Leave at Default for the moment
    - Select “Open”
* Click Layout
  + Click on the “Scripting”
  + Multiple layouts methods
* Along the Bottom
  + Scene Builder
  + Key controls
    - Create keys
    - Determine type of keys
    - Animate things
  + Resources
    - Characters
    - Templates
    - Asset Browser
    - Filters
    - Pose controls
* Center
  + Timeline controls

**USER SETTINGS**

* “Settings”
  + Interaction Tools
    - Switch between familiar programs to make the interactions easier to manage
  + Preferences
    - Animation
      * Use “Active” keying group
    - Fcurve
      * Use anti-aliasing
      * Show many tangents
  + Fields and Values
    - Accuracy of digits and decimal values
  + OpenGL
  + Recording options
    - Framerates
  + Shading
    - How to shade things while they’re in the viewport
  + Saving
    - Use for saving backup files
    - Save every few minutes
  + View cube
    - “Show” view cube

**NAVIGATING IN MOTIONBUILDER**

* Go to “Layout”
  + Ctrl+Shift+3
    - Preview
    - Alt+Enter
      * Full Screen
* View >> Perspective
  + Create Camera (under the View drop down menu)
* View >> Orthographic
  + Ctrl-F for Front/Back
  + Ctrl-R for Right/Left
* View >> Viewer Layout
  + Single Pane (ctrl 1)
  + Two Panes (ctrl 2)
  + Three panes (ctrl 3)



* Navigation tools are along the top of the window

**TRANSFORMING OBJECTS**

* Select objects

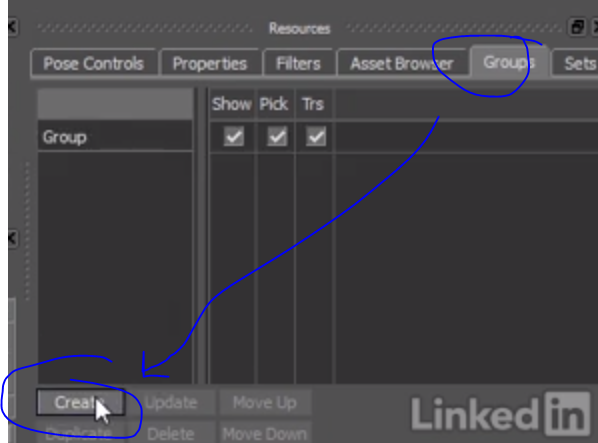


* + Left click on the Object
    - In the Navigator
      * Objects are arranged in a hierarchy
  + Shift-select exists for multiple objects
* “Shift+D” will empty the selection set
* Along the right side
  + Move (M) , Rotate (R) , and Scale (S)
* Global and Local transform
  + Global
    - Aligned to XYZ of the scene
  + Local
    - Aligned to the XYZ of the object
* “+” or “-“ keys on the numpad
  + Will change the size of the controllers
* Scaling
  + Scale volumetric
    - Maintains the volume of the object
* Menu-sets will change the association of shortcuts

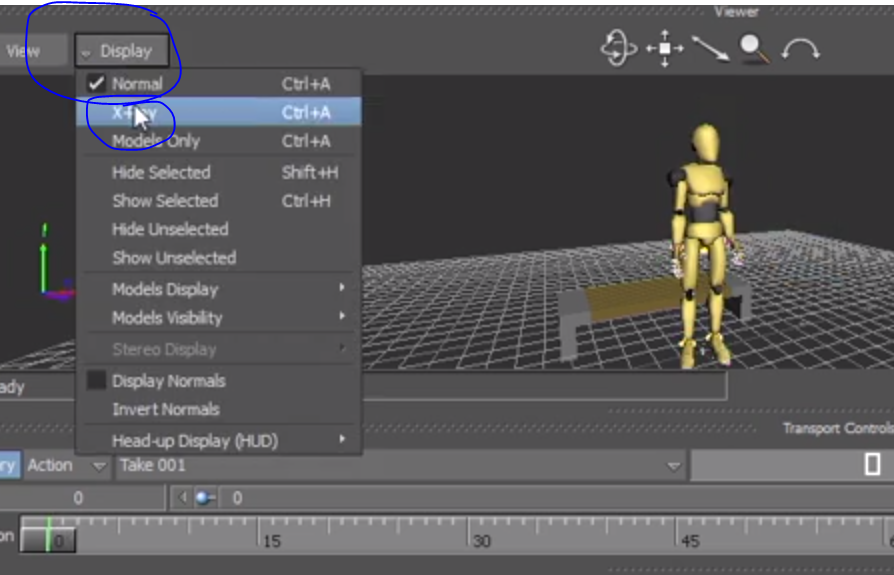
**HIERARCHIES**

* Use the Navigator to create Hierarchies
  + Select the object and drag it onto the other object
    - It will open a menu
      * Parent
      * Align
      * Rendering Assets
    - Select “Parent”
      * Object will become a “Child” of the parent object
  + To “UnParent”
    - Right click on the object in the scene
      * Select “UnParent”

**GROUPS**



* Pick your objects within the scene
  + Go to Groups (bottom right)
    - Click on “Create”
* Options within the Group
  + Show
    - Show the Object
  + Pick
    - Allow “selectability”
  + TRS
    - Allow: Translate / Rotate / Scale
    - Locks in place
* Display
  + Xray

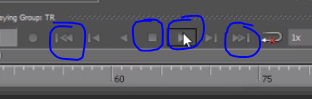


* + - Shows the rig
* USE GROUPS!!

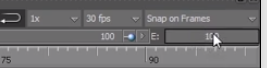
**TUTORIAL #2 – ANIMATING IN MOTIONBUILDER**

**TRANSPORT CONTROLS**

* Change to Layout >> Preview
  + Press the “Play” button along the timeline
  + Click the “Play” button again to stop



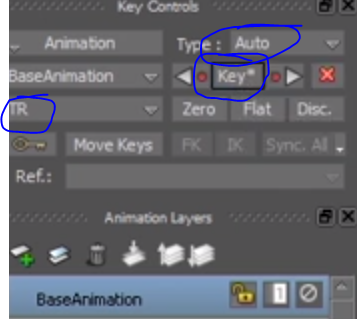
* + - Or hit the “Stop” Button
  + Ability to play the scene in reverse
  + Ability to loop the frames
  + ***Record Button*** 
    - ***Used for MOCAP***
* On the bottom right drop down near the FPS
  + No Snap
    - Fine control of frames
  + Snap on Frames
    - Will play fractional frames
  + Play on Frames
    - Will only play the actual frame
* There’s the ability to control the framerate
  + Right next to the FPS…
    - Control the amount of frames being played
      * ¼ speed, ½ speed, 2x speed, etc.



* Control the Start/End frames via the (S: E:)
  + Blue dots also allow you to control the view

of specific frames

* If you happen to select an animated object…



* + Animation keys will show up in the timeline
  + Click and move the key frames to edit the timing
* There’s a dropdown menu of the different objects
  + T – translate
  + R – Rotate
  + S – Scale
* Move the timeline and the object as necessary
  + Hit the “Key” button
    - Depending on your T / R / S settings
    - Auto key (directly underneath the TSR setting

**ANIMATING WITH KEYS**

* Selecting a key “type”
  + Linear / auto / spline / clamped / step / etc.
* Delete a key by
  + Selecting it on the timeline
    - Right click on the timeline and hit Delete

**DOPESHEET**

* Left-click and drag over the timeline to Marquee select
  + Drag within the green to move all at once
  + Click-drag on beginning / end key to expand/shrink the key selection set
* Bottom left
  + DOPESHEET
    - Brings up detailed view of your animation
    - Shows the T / S / R of all of your keys
    - Can either select the specific keys
      * Or select the Object / Transformation properties to adjust all at once

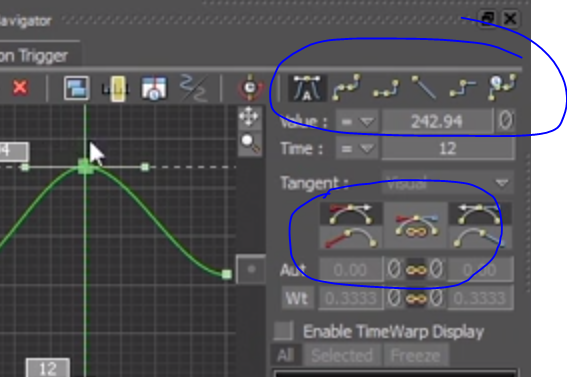
**ANIMATION CURVES**



* FCurves (Bottom left)
  + Can frame the area via these buttons >>>>
* Marquee select the frames you want
  + Use the selection (image) for the different

interpolation options

* Option in the center is to break/un-break tangents
  + Example in photo >>>



**CREATING TAKES**

* Click on the take…
  + And select a “New” take
* Copy the data from the old to the new



* + Select the object you want to animate
  + Use the Navigation tools as necessary

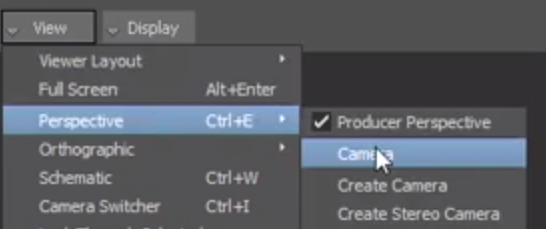
to make the changes for the existing anim.

* Go into the DOPESHEET to delete keys
* Anytime that you select a “new” take…
  + It will select from the current take and make

a new template.

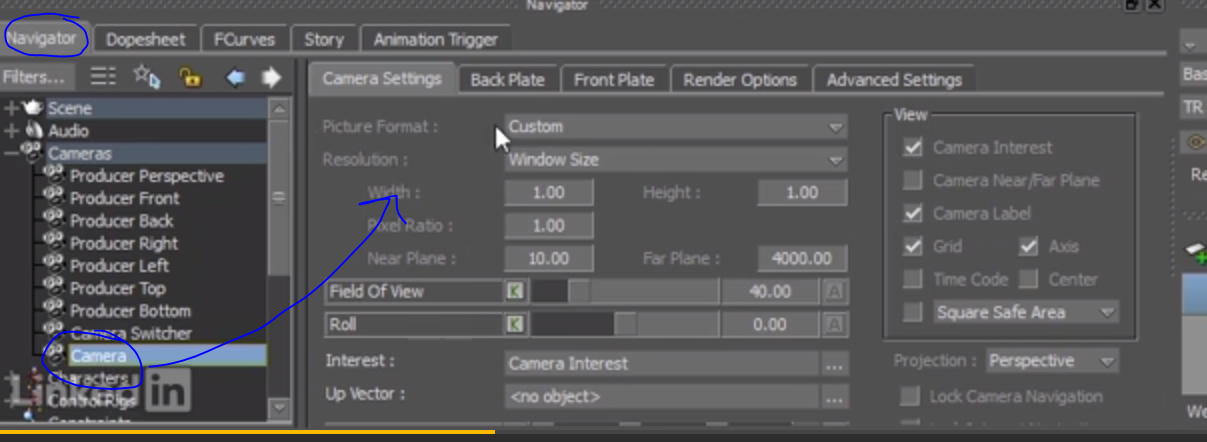
* Keys will only affect the certain “Take” you’re animating in
  + Going back to Take-1 will maintain the original animation

**TUTORIAL #5 – FINISHING SCENES**



**LIGHTS AND CAMERAS**

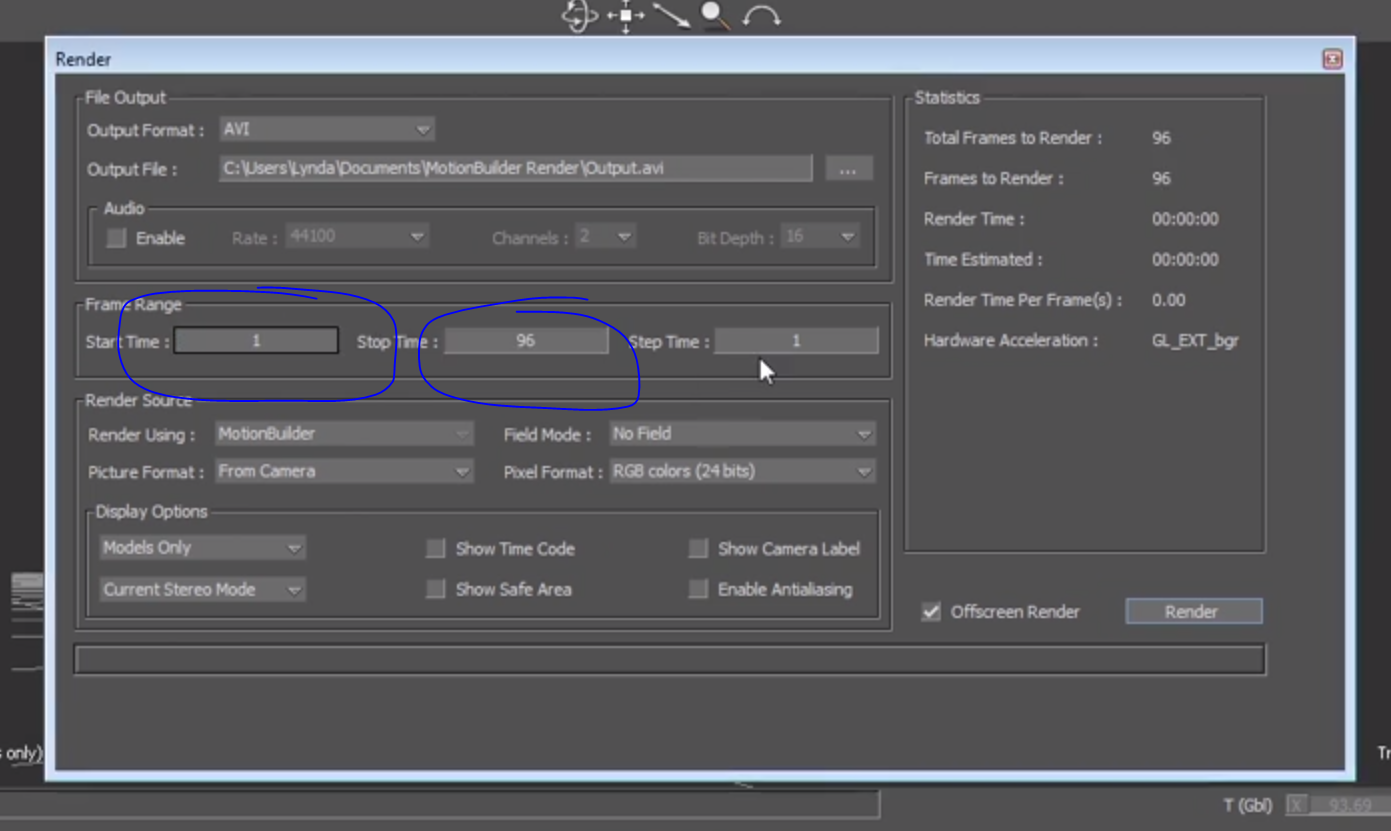
* In the Resources panel (Bottom right)
  + >> Asset Browser
    - “Elements” tab
      * Cameras
      * Lights
  + Cameras
    - Click and drag the camera icon into the open area
    - Change the View within the Perspective dropdown
* You are able to go into the Camera Settings



* + Change the Picture format to HD
    - This will show aspect ratio
* Key your camera as necessary!
* There are the other settings in the Camera tab
  + Back plate
    - Image behind
  + Front Plate
    - Image in front
  + Render options
    - Settings for camera
      * AA
      * Real-time effects
      * DOF
      * Interest (Null object to point camera)
* LIGHTS
  + Click and drag from the Asset Browser
    - Elements
      * Lights
* Select the lights from the Navigator Tab
  + Settings will pop up to experiment with
  + Try doing Ctrl-1 or Ctrl-4 to switch between different views to move the light to a desired position

**CREATING A PREVIEW**

* Change layout to “preview”



* Go to File >> …
  + Render
  + Check settings
    - Enable AA

**EXPORTING SCENES**

* File
  + Send to Maya
    - New Scene
    - Send selected objects or your entire scene
* Within Maya
  + Make a change
    - File >> Send to Motionbuilder
      * Update Scene
* Back in MoBuild
  + Scene should be updated!