**Character Rig Demo Outline**

The COG – Center of Gravity

* One of the first controls manipulated
	+ When posing, broad strokes first, details later

Arms and Hands

* FK - forward kinematics
	+ Poses limbs like a wooden mannequin
	+ Can select multiple FK controls along the chain and pose them altogether
	+ Should start from the base of the chain and work outwards

Legs and Feet

* IK – Inverse kinematics
	+ “Goal based” control system
		- Works at the end of the chain and Maya will rotate everything leading up to it
		- Additional refinement using knee controls
* Addition control attributes are sometimes available and can be found in the channel box using the virtual slider. Similar to the squash and stretch control in the bouncing ball.
	+ Some of the foot attributes:
		- Ball Lift
		- Heel Spin
		- Toe Spin
		- Toe Wiggle

FK/IK Switching

* Arms and legs can both switch between IK and FK which can be toggled through a switch control
	+ IK and FK are independent rigs. Posing limbs in one rig will not translate to the other.
	+ FK/IK Matching
		- Make sure production workspace is installed
		- To switch from FK to IK, use the “Align Switch” from the rig’s marking menu
		(Ctrl+Shift+a and Left Click)

The Spine

* RFK – “reverse forward kinematics”
	+ Two independent spine controls that guide the curve of the spine
	+ Aiming the whole upper body requires rotating both controls at the same time
	+ Pelvis also has an RFK control that independently shifts the hips

Marking Menu

* The marking menu also gives you access to “Select All Anims,” “Key All Anims,” and “Set Default Pose”

Parent Space Switching\* - We’ll come to this for the walk