

# Motion Graphics Techniques - Lesson 8 Notes

Working with a Full Body Character in AE

## Work That Body!

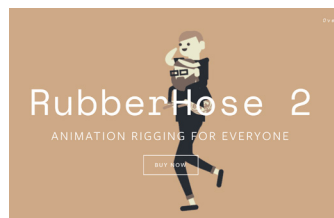
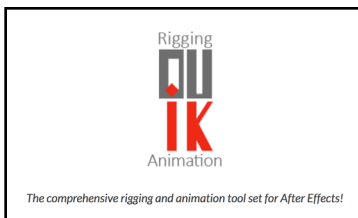
This week we will be starting a two-week animation using a full body character rig. This will be more complex than working with a face-only character like Dopey the Bear, because you will be responsible for controlling hands, feet, arms and legs, as well as a face. However we will be approaching this sequence over two weeks, and luckily for you, will not be rigging the puppet this time.

## Keying vs Tweening

Because traditional animation is such a time-consuming process it is generally broken up into two stages -- a first stage, where “key frames” are drawn to rough out the action, and a second stage where “in between” frames are drawn to create the illusion of smooth movement. These names have been shortened to Keying and Tweening in modern, digital character animation, but the process is very similar. In our animation of Slappy we will first be creating all of the key poses using hold keyframes, and setting those poses in time, and then later on using the Speed Graph to make smooth, naturalistic motion between the poses.

## Forward Kinematics vs Inverse Kinematics

There are two basic ways that characters can be rigged in After Effects: FK and IK. Without getting too technical, FK means that each limb of the character is controlled by itself, and IK means that each limb is controlled by one master part (generally a Null Object). IK is more challenging to rig up in the first place, but the animation is much easier and you wind up with a lot less keyframes. Now, I need to mention that creating an IK system in After Effects is very challenging and requires quite a bit of complicated coding. Therefore some genuine wizards have created third-party tools to make this much easier. Click on thumbnails below for more information.



## Slappy the Puppet

I made Slappy for this class, and deliberately tried to keep him as simple as possible. If you wind up working as a character animator in the motion graphics industry, chances are you will be working with more complex puppets than this one. Still, I added in as much functionality as I could think of, and it was a complex process. I used DUIK (see above) for rigging the limbs and body, and good old fashioned expressions and linking for the facial features. It was still such a complex process that I decided not to make you do the same, and instead concentrate only on the animation.

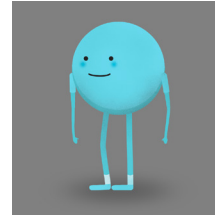
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The Seven Poses to make Slappy Jump

## 1. Resting pose

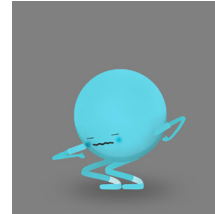
This is Slappy's "normal" standing-around-doing-nothing pose. Just chilling. But I've added some slight bends to his arms and legs to make him look casual and not rigid.

**Remember, your animation is different from mine. You need to give Slappy an action before jumping (your choice) and have him jump forward, not straight up.**



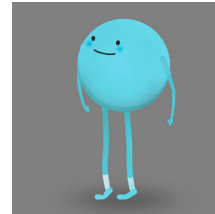
## 2. Anticipation - Crouching

Before he can jump up, Slappy needs to move down first. This is very important for creating the flow of the sequence and convincing the viewer that Slappy has weight and obeys the laws of gravity. Always consider the contrast between your poses, as well as balance of the character on their feet.



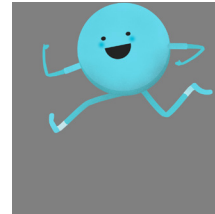
## 3. Leaving the ground

Slappy needs a pose between crouching down and being up in the air. Otherwise he would just look like he was floating upward from the crouched position. In this pose he is stretching up strongly, but his feet are still touching the ground. **Remember, in your jump he needs to be moving more forward in this pose, so he can jump ahead.**



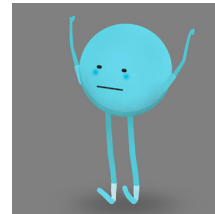
## 4. Up in the air

This is the real jump part of the jump, where Slappy is up in the air. His legs are bent to create more distance between himself and the ground, and to give him a feeling of having sprung upwards. **In your animation, you will need to move him forward, to his right, to create the impression that he's jumping ahead.**



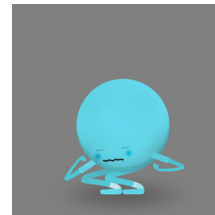
## 5. Landing on the ground

What goes up must come down. Gravity dictates that Slappy must eventually land back on the ground, and this is the pose where that starts to happen. Notice that Slappy lands heels-first. **In your animation, he will need to land at a greater diagonal angle, to show that he has moved forward in the air.**



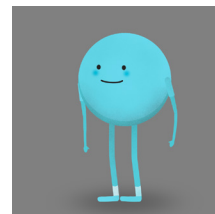
## 6. Impact

This pose is very important for giving the impression that Slappy has mass and weight. Because he has traveled so far up in the air, his landing needs to have a big impact when he hits the ground. The contrast between this pose and the one before really sells the entire jump sequence.



## 7. Back to the resting pose

The final pose in my sequence, Slappy now returns back to a normal resting pose. In your animation, you might want to give him another action after this pose, but he still needs to stand back up at some point.



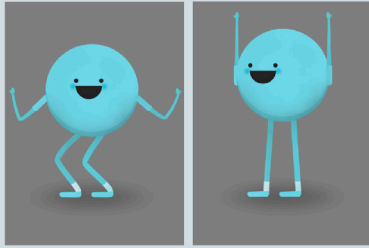
# Motion Graphics Techniques - Lesson 8 Notes

Good Rules for Character Animation Posing

## Three simple rules for posing your animated characters

Good things to keep in mind when posing Slappy, or any animated character.

### Avoid Symmetry for Arms & Legs

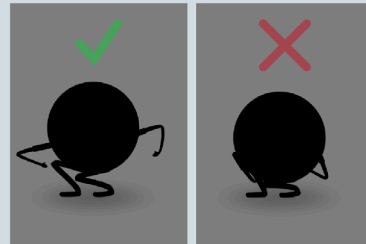


It makes the poses look stiff and unnatural

At almost no time in your life do you stand with your limbs exactly symmetrical to one another. Because you have the ability to move all of the parts of your body independently, you hold all of your limbs in slightly different ways. When you pose characters this is important to keep in mind, to avoid them looking robotic and unnatural.

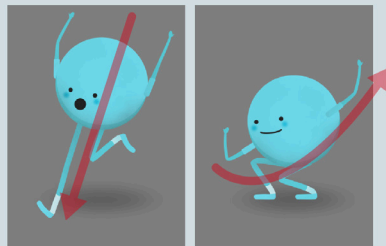
Try to avoid having the arms or legs of your character be difficult to see at any point in the sequence. Remember, character animation is all about clear storytelling, and that starts with clear poses. If the viewer cannot see what a leg or arm is doing, they will get confused about the pose. With a character like Slappy, who has a huge head/body this can actually be quite tricky. Make sure also to avoid having the legs “clump” together with too much overlapping.

### Make clear silhouettes for poses



Or the action will be harder to see and more confusing

### Pose along clear lines of action



Think of the pose as one line, with one direction

It's easy to think about your character as a bunch of different parts, since you are responsible for animating them all individually. However, the viewer will think of your character as one single body, not as two arms, two legs and a few different facial features. Therefore it's important for you to step back and see your character as a single line of action, and pose them accordingly. This makes for the clearest, most direct posing and is therefore the best kind of storytelling.