

# **Dynamic Posing** **for** **Animation**

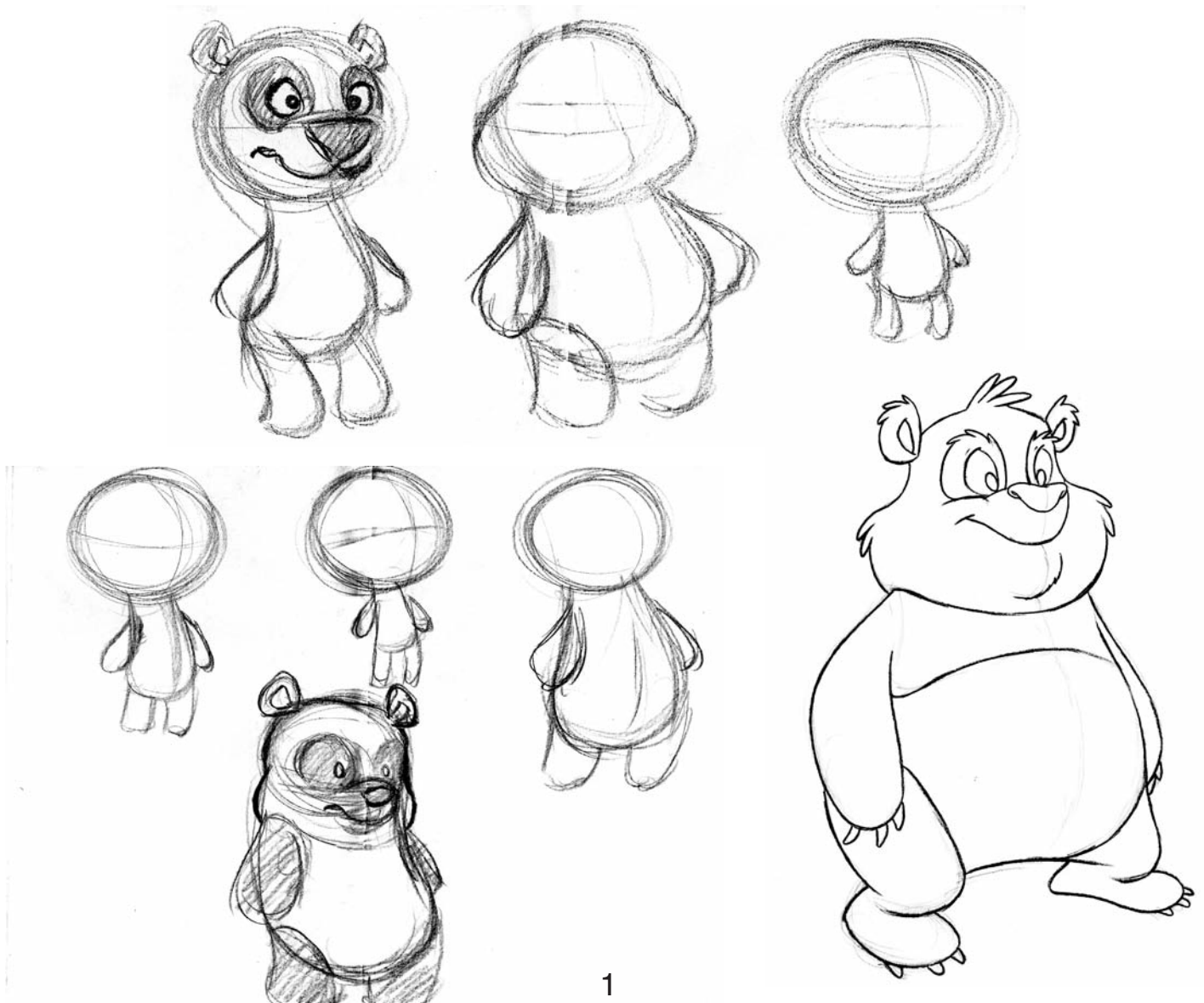
by  
**Brian Lemay**

# Section One

## Quick Sketch Posing

This was a class where I had the students do drawings of each other. For this class I was using a panda bear design from an idea I had about a zoo that was trying to get their female panda to mate with another panda but she kept refusing all suitors. The zoo keepers try one last time and this panda gets shot down as well. He's dejected and decides to leave but suddenly gets an idea. He pulls out a CD player and pops in a disk then presses play. K.C. and the Sunshine Band start playing "Do a little dance, make a little love, get down tonight..." and the male panda starts dancing his heart out. She has no reaction to his wild and sexy gyrations. Exhausted he finally stops and once again, dejected, he picks up the CD player and begins to walk out. Just as he reaches the doorway, she jumps him from behind and the zoo keepers react with joy.

At this point I had done several different concept designs but not settled on the final look of the character. Here are some of the designs I had done:



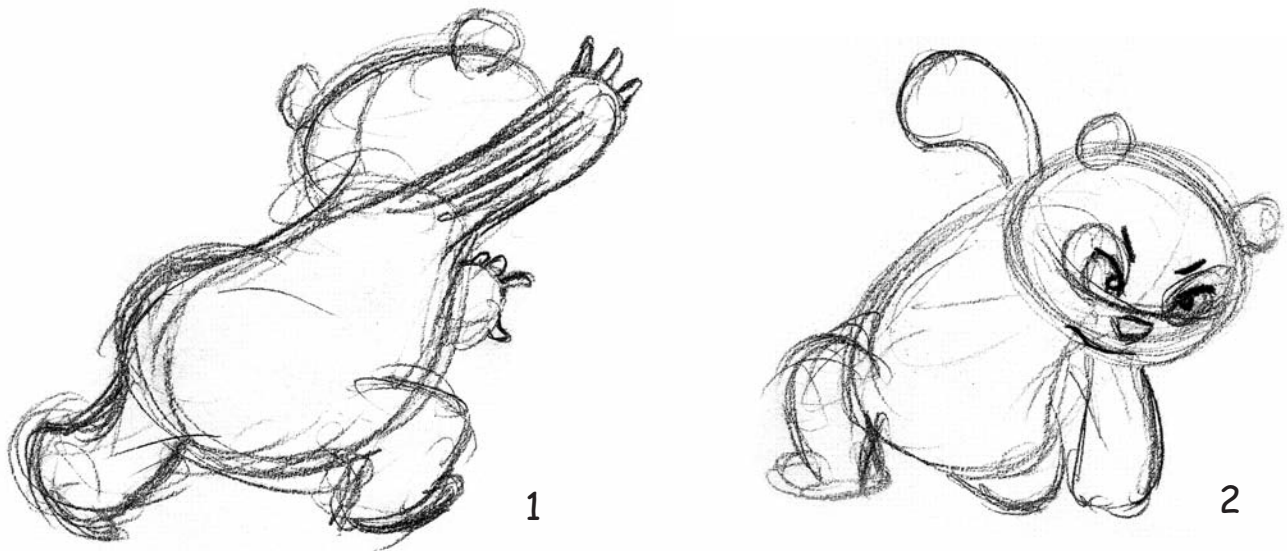


I decided to use this one for now and possibly make modifications to the design later.



The class sat in chairs in a large circle. Before we began I outlined what we were going to be doing in the class; each student was to go into the center and assume a pose for 2 minutes. I told them: no poses just standing up straight, I wanted there to be some kind of action associated with the pose. Because we were all sitting in a circle, some people would have the pose from the rear view, so I suggested that each student rotate themselves a bit from the last pose. I a group of students got stuck with multiple rear views they could do one of two things; move to another chair to get a better view, or extrapolate the pose and draw their character from the front view (I actually ended up doing this for about 50% of the poses. I also stressed to the students that they were not to draw the person posing but rather their character that they had designed. Because each pose was only 2 minutes long, they needed to focus on the essence of the pose. Look for the major line of action and draw the character in “shorthand” meaning; simplify the character down to it’s core essentials and eliminate the details. They could leave these for later when they do the final poses for the model sheets. Any students who had characters with multiple legs or arms would need to come up with the extra positions on their own as well.

So then we started with the students posing. Now, I have to be honest with you here, these students are not professional models by any stretch of the imagination. Their poses were in most cases pretty lame and I had to ask them to move themselves into much more interesting positions as we went along. We went through all 22 students in about 45 minutes then took a 15 minute break and then went through everyone once again to come up with the 44 poses you’ll see here.



These are the first two poses of the class. You can see the first one is a rear view. I decided to do all the remaining poses from a front view regardless of whether the student was facing me or not. The second pose was also from behind but the pose is modified.



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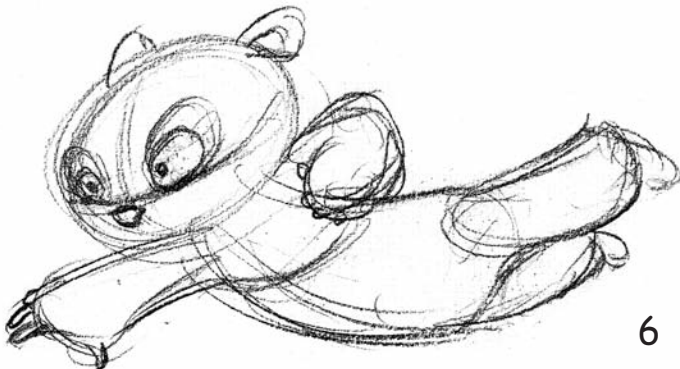
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These two poses were pretty good. I spread the legs a bit farther apart on the 4th pose.



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The shooting pose was of the student's back and they were facing in the opposite direction. I basically did a mirror image as though I was sitting in front of them instead.



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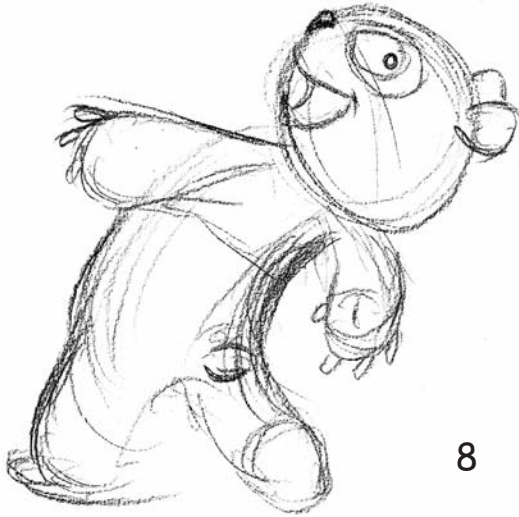
The flying pose was a big modification from the student's pose. The student was actually down on one knee and his back was arched the opposite way.



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These two poses were pretty much the exact same as the student's poses. I did arch the standing pose a bit further back to create a stronger line of action.

In this "anticipation to a throw" pose below, the student had their left leg down on the ground. I picked it up to balance the pose a bit better.



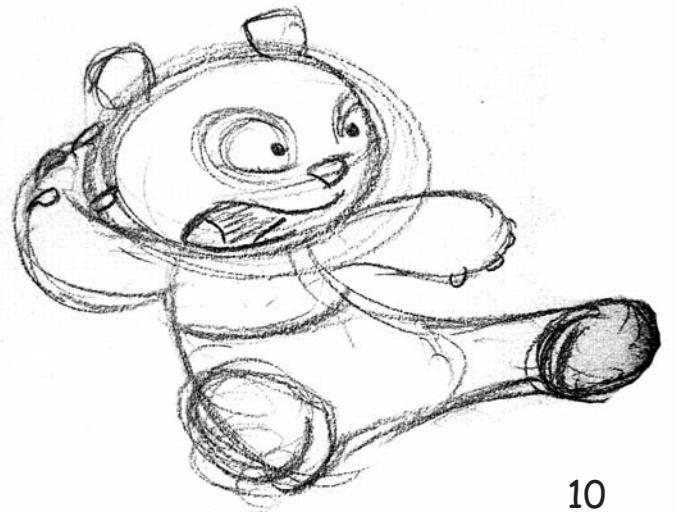
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In this pose I pushed the panda back a bit more off balance with the feet up in the air to add more action to the pose.

As the class progressed I told the students not to be afraid of pushing the poses more to make them extreme. In many cases, this can add a far better dynamic to the overall pose and make it seem as though you've captured a moment in time as the character was moving.



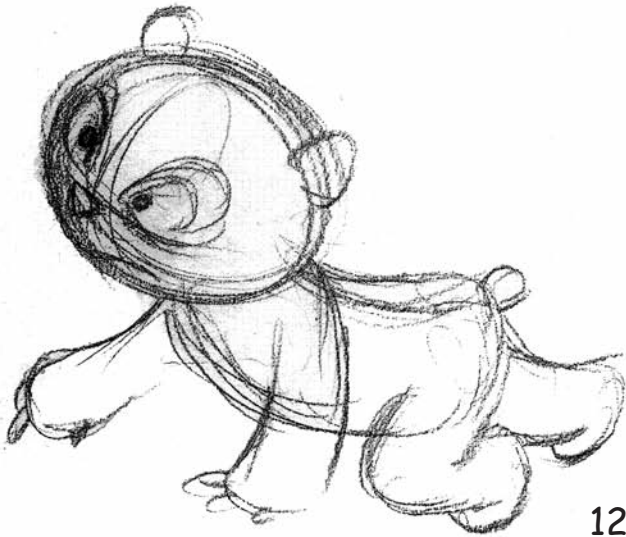
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This was one of the more sedate poses, there were 4 others that were similar of the character just “sitting”.

These can be just as useful in exploring who your character is. I tried to approach the pose as though the character was no longer “acting” but as if I had drawn them during a break as they were relaxed and more themselves.

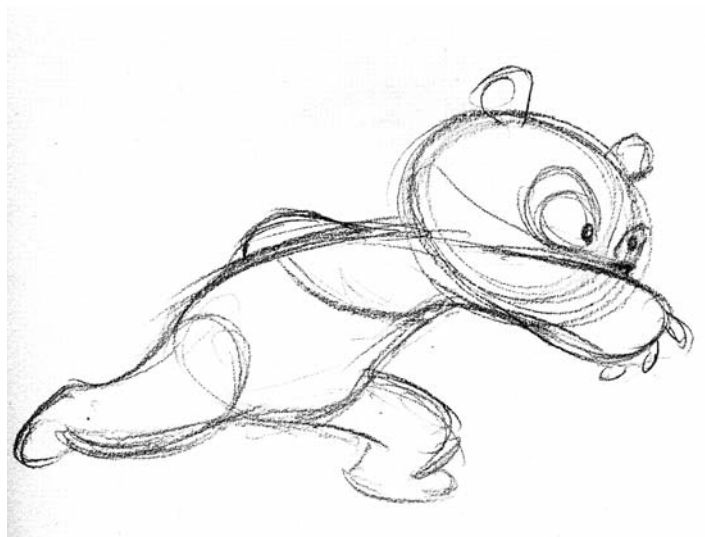


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In this pose the student was laying flat on her stomach, facing away from me in a 3/4 rear view. I changed the pose to make it look like the panda was crawling on the ground. You’ll notice that I’ve added some facial expressions to the poses. Up to this point I was putting them on after I had done the poses.

I always enjoy doing throwing or running poses as they have such nice lines of action running from the tip of the fingers right through to the toes. Try to get the line of action to always form an “S” or “C” curve. It helps to make the pose flow better.

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It was on these poses that I started with the head first (which I normally do anyway) but rather than just drawing the shape of the head and the center line and eye line, then moving on to the body shape, I drew the entire facial expression first. I wanted to get the right emotional attitude and then draw the body pose to match it.

In this pose you can see how I've made adjustments to the legs - spreading them apart to give the pose more stability.

This pose was with his back to me again. I flipped the panda around and pushed the line of action along his back harder.



This was a nice Kung-Fu type pose but I didn't quite capture the back leg right, the knee should be turned towards the back more.





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I got stuck on these two poses. I'm not quite sure what they're supposed to be doing. I think these are the two weakest ones in the whole bunch.

I may come back and modify them somehow... I'll need to give them some thought, or I may just throw them out.

These bottom 3 are the more sedate poses. 20 and 21 are almost the same. In 20 the character looks like they've spotted something on the ground and in 21 they're taking a closer look.



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This was the last pose as there were 22 students in the class. I liked this one. Again the student was standing with her back to me. I like the strong line of action and the expression on the panda's face.

You can see the adjustment that I made to the legs early on before I finished the volumes on them. I think I might go back over this one and use the original line, but keep the belly pushed out far to exaggerate it more.

We took a 15 minute break to stretch. I photocopied the poses out of my sketchbook and then laid them out on the floor.

I let the students take a look and see if they could find their pose. We talked about how I pushed the poses further than what they were doing, also how I had looked at the pose and then, even though they might have had their backs to me reversed the position and drew it the way I saw it in my head.

This seemed to baffle some of them, so I had the next student go into his pose (#23). I told the students to crowd around me and watch my face and eyes as I drew.

I looked at the student's pose for about 10 seconds, then started on the head and face. I then looked back up again for about 5 seconds and saw the position of the back and legs then drew them in. Then I looked at the back hand and drew it, then the front hand on the forehead and drew it in. About 1 1/2 minutes had gone by so I went back over it and modified a few of the lines slightly (belly, back arm and back leg).



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So, I stopped the class and told them that this had to be the lamest pose I had seen in a long time (a very long time!). I then showed them what I had done in my pose. I knew what it was that he wanted to express but he just didn't think about the best way to show it.

I suggested that they try to give a bit more thought to the pose that they are going to present, more action: running, walking, picking something up, throwing, etc., action, action, action! (I hate it when students become complacent!) Make it interesting!! C'mon.



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This little talk and demo didn't seem to inspire the next student who came up to pose at all. He got down on his knees, put one hand on his heart and drooped the other out in front of him like a piece of limp spaghetti and then he bent himself forward. I didn't say anything, I just drew my pose shown here (basically the opposite of what he did).

If I had drawn him as he was posed, this is what it would've looked like:



So, the next student stands up and walks into the center and proceeds to dislocate his shoulder and wrap his arm around the back of his neck. I had another rear view, so I made up the expression based on what he had done to himself (he later told me this wasn't the expression he had but it was close).

Notice the change in the leg positioning to balance the character better.

O.k., now this got everyone going. All of a sudden, it was a competition to see who could out do who. "This is great", I thought.

The next student pulled out the old Dragon Ball Z power burst (like I've never seen this one before... and I have).



Another rear view pose. This could be a yawn or a scream, not quite sure yet.

Here's a zombie pose.

I tried to get as many "S" curves into this pose as I could.

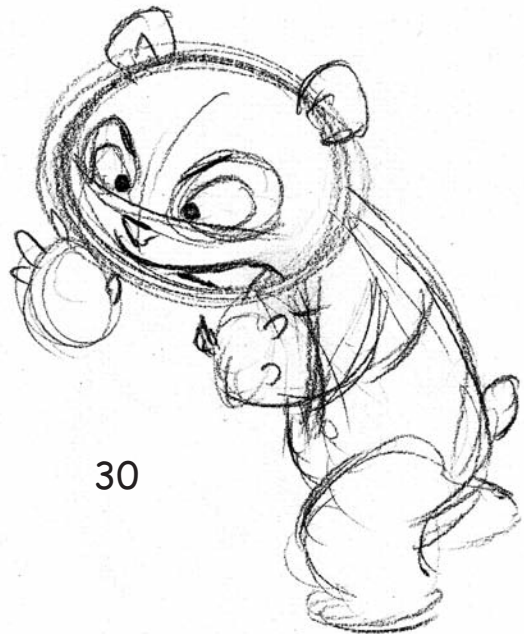




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I've had the exact same thing happen in my first year animation classes when we start doing the walk cycle, even though I lecture on how to walk (which seems goofy now that I've written it out here), the odd student (and I do mean "odd") will still do the cycle with the character moving their same arm and leg together, which nobody ever does in real life.

Pose 30 here was a neat one from the point of view that the student held this pose for 2 minutes. It's really quite the off balance position and he really made it look like the character was pushing something.



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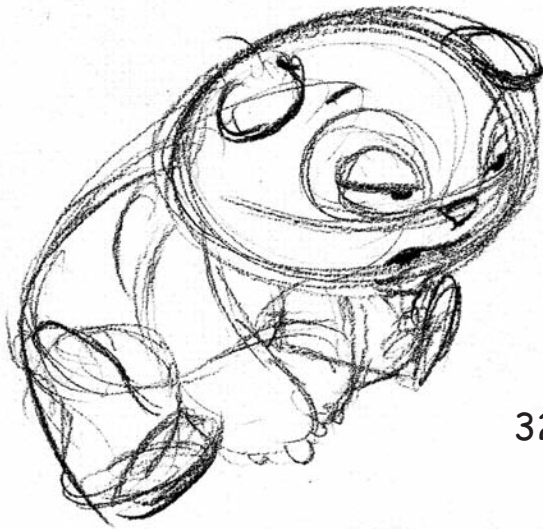


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I really enjoy drawing running poses.

What was funny about this one was that when the student got up to do the pose he stood with his right leg forward and then also put his right arm forward. I glanced up to start doing the drawing and noticed this right away but didn't say anything immediately. About 30 seconds in I asked the students if they noticed anything wrong with the pose and no one said anything, so then I pointed it out.

This was a slightly awkward pose of the character tripping. I may end up just discarding this one later on.



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Here was another sitting pose. I pushed it further to make it look like the character was exhausted. I changed the legs from bent to straight to correct the line of action from the heel up through the back to the neck into a “C” curve rather than an “S” curve.

This was another rear view pose.

I decided to make the character look surprised in this one. You’ll notice that I drew on a floor plane in perspective just to give the character a plane to stand on. I drew it in before I did the legs, then matched the feet to it.

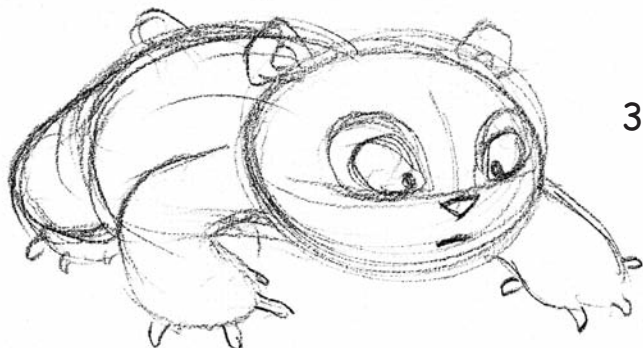
The other thing you should notice about this and all the other poses is how I’ve set the hands at different levels so that they are not parallel. This is called “twinning” and generally should be avoided.

There are certain instances where you



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can do it, such as in poses 3, 7, 22, 30, and 35. But even in those if I were to shift the hands a bit it would probably make the pose more interesting.

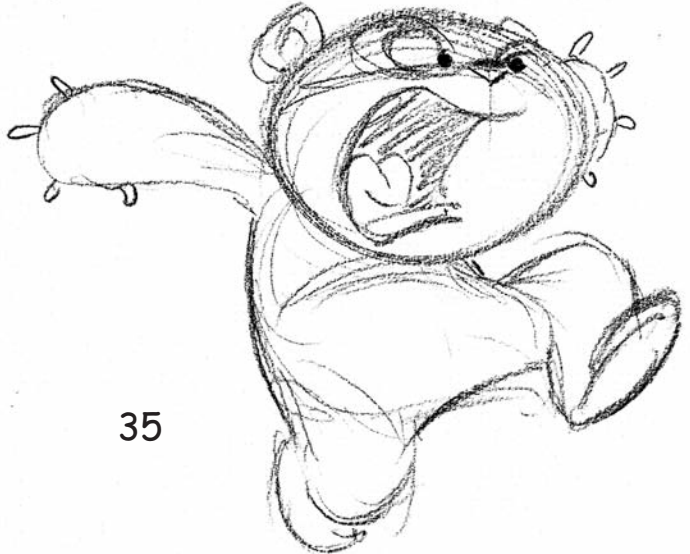


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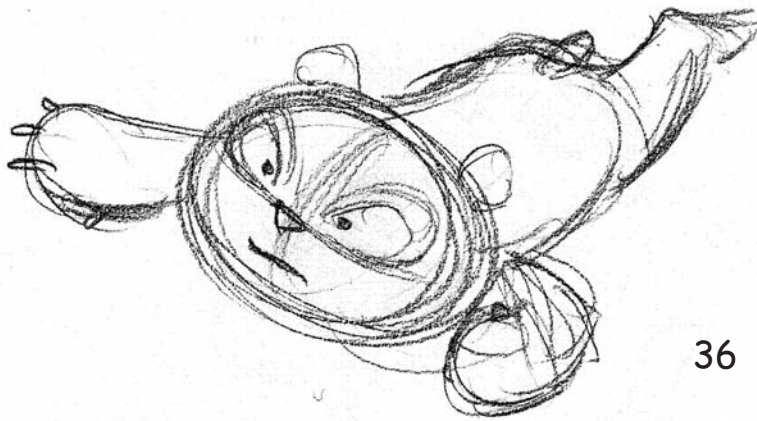
This was a rear view that I turned into a Spider-man type pose.

This was also another rear view.

I chose to have the character in a mid-air Kung-Fu type leap. I think this could be stronger if I pushed the hips forward a bit and rotated the pelvis CCW, then maybe straighten out the front leg and turn the back leg in the opposite direction and bend it under the butt more.



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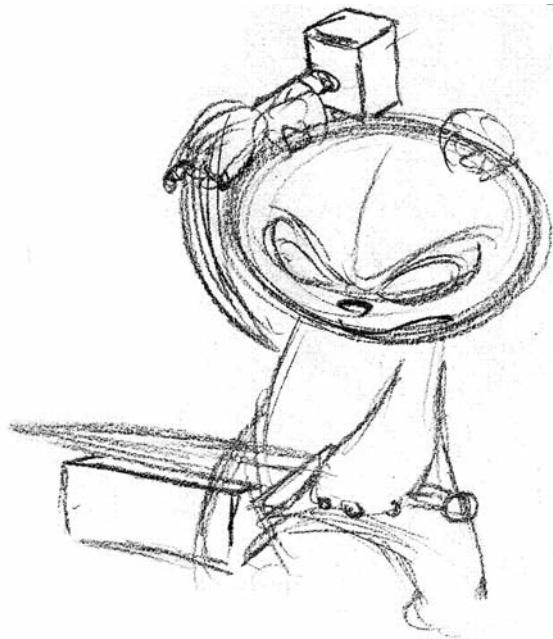
This was a rear view of the student lying on the ground. I chose to alter the angle and position of the body to turn this into a "Superman" flying pose.

I don't think this is really a relevant pose for the character and will probably discard it.

This was another Kung-Fu pose similar to #16 but just a bit stronger as far as the overall line of action is concerned.



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The students didn't have any props and didn't state what the pose was supposed to be about, so it was all up to the individual artists to figure out what to do with the characters.

I thought it looked like he was hammering something, so I decided he was forging a sword on an anvil.

The next four poses were all rear view. There were 19 poses in total that were from the rear, pretty close to half of them.

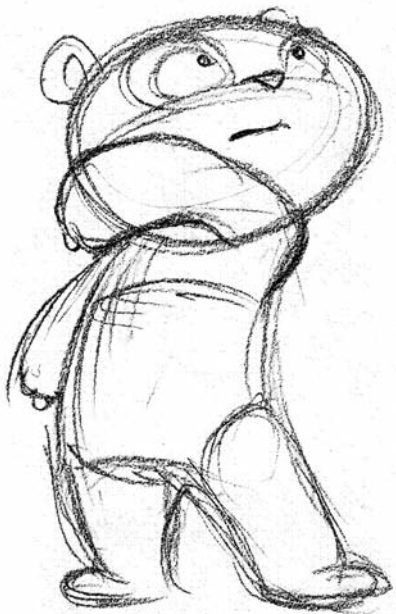
The students were pretty impressed with the fact that I could come up with these poses even though I couldn't see the front of them. I told them it was just a matter of looking at the pose and inferring what the action is and then mentally visualizing it. As I mentioned before, I probably spend



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about 20 seconds total out of the 2 minutes actually looking at the person posing. In this type of an exercise, it's not like a life drawing class, you're not drawing the person standing there, you're using them as a reference to draw your own character.

This is a really important point to remember when you're doing this kind of drawing.



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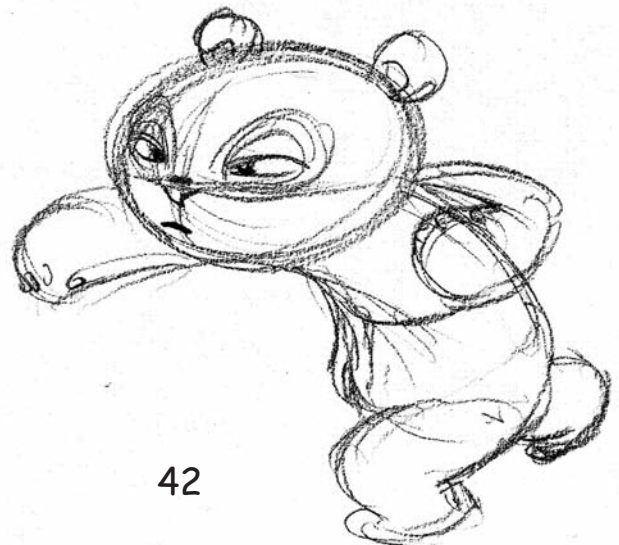




This was a similar pose to #30 but the student went down on one knee. I just thought it looked like he was going to punch someone small out, so I added in the little bunny, which many of the students found funny when they saw it later.

This was another “lame” pose by one of the students where i really had to push the pose. I think it could still go further than this.

I gave the character the squinty eyes after the pose was done because I realized the pose wasn't extreme enough, so they should look as though they were holding back a bit.

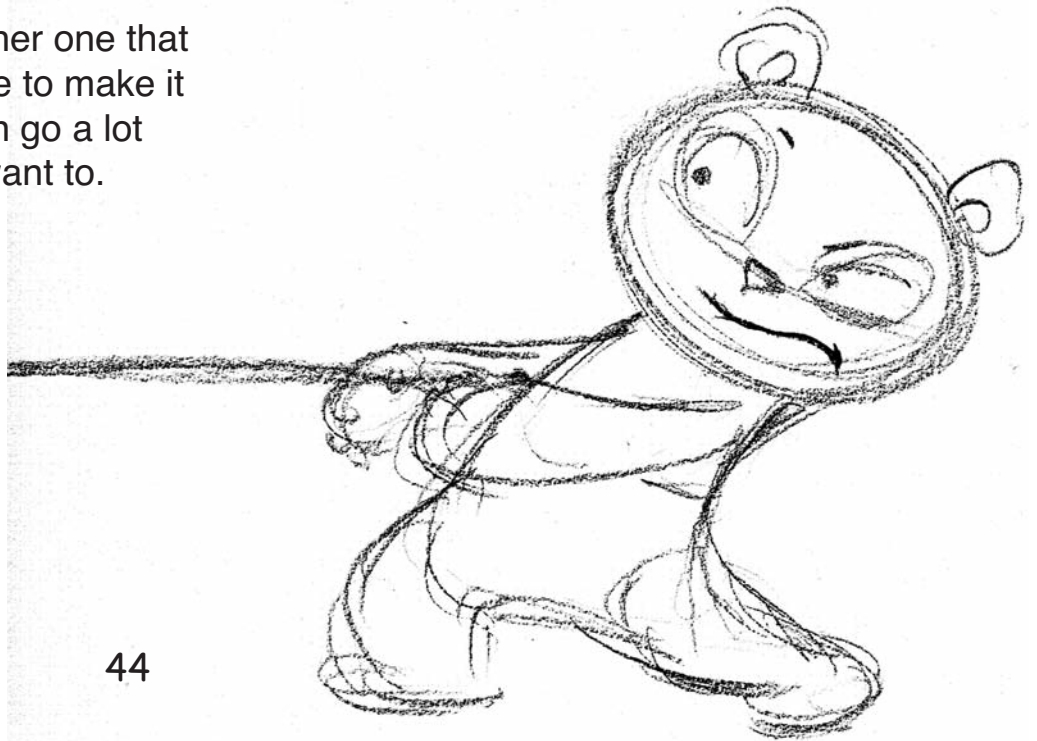


All the students said, “Hey, she can't do a sitting pose, that's not an action!” Well, if you can add some attitude to the pose, then it can be, so I gave the panda a smug look on his face.

Having body parts crossing or overlapping can be difficult if you don't pay attention to the volumes and proportions.



This final pose was another one that needs to be pushed more to make it look more extreme. I can go a lot further with this one if I want to.



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So, after this I did another couple of drawings and settled on the final designs that you see here...(not the weird one on the left). I made the heads a bit more pear shaped and made the body fatter with shorter arms and legs.



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The next step is to now go back over the poses that I like and will use in the final model sheets and redraw them using the new character designs. I basically just take the sketches that I did in class and put a blank sheet of paper on top of it and trace off the pose, modifying the proportions and possibly pushing the pose further or moving the arms and legs a bit to rebalance the pose.

Over the next few pages I'll show you the revised sketches along with the finished clean ups beside them. For cleaning up, I like to use a Pilot Fineliner marker. You really need to be careful when cleaning up with markers because, if you make a mistake you really have to start the drawing all over again. Using white out can leave some messy bumps on the paper that will effect the new line that you go over with and make it not as nice. Over the years, I've practiced with it so much that I feel very confident using it. I usually go fairly slowly and if I sense that the line is going off a bit, I simply stop drawing the line and lift the pen off the paper. You really need to pay attention to what you're doing during this process and simply be in control of what your hand does at all times.

At the end I'll show you the final composited model sheets with some rendering on them. I'll do all that stuff in Photoshop.

Here's the first example from pose #23. I'll go through all the things I did to modify the poses in detail and then on the remaining examples, I'll let you try to figure it out.



So, in this first revision: v2, I've used the new model design for the panda. You can see the obvious differences in the overall proportions of the character, the fatter body, shorter legs, arms tapered from thick at the shoulders to thin at the hands and the new head shape. You can see the note that I wrote to myself after I had gone through about 10 more revision poses. As I was doing the new poses, I was getting more used to the new head design and found that this first version had deviated from what I had intended. This is a common occurrence as you begin to search out the new design that you're using, you probably won't get it right the first time, but as you practice it more and more, you get used to the new shapes and spatial relationships between the features.



Now in version 3, you can see how the head is closer to the design I had chosen. There are still some subtle differences from the original sketch but that can be a good thing if it makes the design stronger or more appealing.

I've also changed the pose slightly. You'll notice that the head is bigger in proportion to the body, the character is bent forward a bit more and towards the viewer as well, the front leg is bent more, the back leg has been pushed farther back and just the toes are touching the ground. The back arm has been raised up so it's more parallel to the horizon line, and there is a more definite angle at the wrist and elbow of the raised arm in front. The back ear is pulled down and further back on the head. There's also just a slight CW tilt to the head.



In this final pencil revision 4, the changes are even more subtle. I've squished the shape of the head just a bit, opened the forward eye a bit more and squinted the back one. The back ear has been flattened even more and there is a tiny crease added to the corner of the mouth.

The front arm from the wrist to the elbow has been changed to an "S" curve. The body has been rotated slightly and the front leg is bent a bit more than before. The back leg appears to be floating a bit. (I may bend the front leg more in order to bring the back leg down a bit so that it appears to be touching the ground plane.)

The back arm has been raised slightly so that the shoulder is above the cheek tuft of hair.

By pushing the pose further, it makes it stronger overall.

The completed drawing now reflects all the revisions I wanted to do to make the pose the best I could within the time frame I was working with. Now I could have continued to revise it even further, making more and more subtle changes, but there is a time where you need to say, that's enough. In your specific instance right here and now, it will be you that needs to make that decision. In a studio, it would be your supervisor or department head, or possibly the director themselves that would decide if you need to push it further if necessary.

This scenario can be a major pain in the butt depending on who the person in charge is. I can remember at least three separate instances where someone kept asking for little revisions to a character drawing: "the nose is too small, make it bigger... now make it longer... now it's too big, make it smaller... that's good, now just make it a bit longer... now a bit smaller... smaller.... now let's shorten it up a bit... a bit more... almost there... that's it! Perfect. Now why didn't you draw it like this in the first place?" and it ends up looking exactly like the first drawing you did.



Here's the pencil version 4 along side a traced off pen version 5, using a Pilot Fineliner. Now I have to admit here that I did this on purpose: I used an older crappy marker that was on it's last leg to prove a point - if you don't use the proper tools, you'll end up with a substandard product. I also skimped on the line quality using very little thick and thin on the lines, creating what is usually called, "bent wire lines". Because the line thickness is pretty much all the same it makes the lines look like pieces of bent wire. This is something you don't want to do in your clean-ups.



23 v5



23 v6

Here's the bent wire version 5 next to one that I put a lot of line quality into version 6. The thick and thin is quite exaggerated but does add an awful lot of weight to the drawing. It looks much closer to the pencil drawing in version 4.



23 v7

In version 7, I've added a thicker outline around the character to make it look more graphic. This style has become extremely popular in many television cartoons recently, such as Dexter's Laboratory, Two Angry Beavers, Fairly Odd Parents, Samurai Jack, just to name a few.

This style originated in the 1950's, mostly in magazine advertisements. It was then used in many of the Hanna-Barbera cartoons of the 1960's such as Huckleberry Hound and Yogi Bear.

This is the final colored and shaded version 8 of pose 23 which will be used on the final model sheet.

So there were 8 steps in getting to this point. Sometimes there may be more and sometimes less. Usually, after the first run-through like this, the remaining revisions are only two steps from the first initial sketch: 1) getting the character on model with an nicely pushed pose, and 2) the colored version.

Below are the 8 steps reviewed again on this one page.



Step 7 & 8  
Final line and coloring



Step 6  
Adding line quality



Step 5  
Clean up in pen



Step 4  
Pushing pose further



Initial rough sketch



Step 2  
Drawing to model



Step 3  
Revising model and pushing pose



Here's the next pose that I chose to modify (I just pick them in any order, or whichever one I think is neat at the moment). Usually, I'll go through all my initial rough poses and pick out the ones that I think are the best, most interesting, and/or the ones I think suit the character best and will work well on the final model sheet. I try to think in terms of what the character might do within the context of the production being worked on. In one of my early lectures, I said to my students, "When deciding which poses to use for the final model sheet, pick the ones that you will actually be using in the film. If your character is never going to iron their pants or brush their teeth, then what's the point in doing those poses?" Several of the students decided, as a joke to have their characters ironing their pants and brushing their teeth.



29 v1



29 v2

You can see the obvious changes to the basic design again. On this one I was much closer to getting the character on model to the new design. I made a little notation on the pose that the panda's tail is not black but rather white as I found out after doing a bit of visual research on the internet.

I kept the pose pretty much the same as the original sketch. Due to the bulk of his body, I kept his right leg back a bit and the left leg forward. This made the two legs line up over top of each other. After I drew it I realized the mistake that I had made and knew this was one of the things I wanted to fix on the next version.



29 v3a



29 v3b

In version 3 I fixed the legs so they were further apart and overlapped the right leg in front of the body mass. I also made some subtle changes to the face and the hands. Now at the time of me writing this, I had already gone ahead and inked the final version of the 3a pose, but looking at it now, a day later, I'm thinking that I kinda like the eyes on version 2 better. So I'm going to go back and revise the final inked drawing again.

In version 3b, I traced off version 3a but reversed the arm and leg positions to see if it looked better. I didn't really like it as much as 3a. I think it's better to see the arms in the silhouette that 3a shows rather than having the arms hidden by the body mass in 3b.



BEFORE v3a



AFTER v4

I went into PhotoShop and cut the eyes off version 2 and pasted them onto the drawing of version 3a. I think this looks better.



**BEFORE**



**AFTER**

Here are the final variations both before and after the eye fixup. Either one probably would have worked. In the before version, he does look a bit more scared as the eyes are bigger and the pupils are smaller. I think the eyes in the after version are better as they don't seem to be popping off the head mass.

Whenever you do this type of thing - revising and pushing poses - you'll always be second guessing yourself as to which one is the better version. It's a good idea to get a fresh set of eyes to look at it, even if they're your own a couple of days later. Another neat trick that some people will do is to reverse the drawing - flip the paper over and see if the pose still works strongly. You can redraw it again, then flip it back and see if it makes the pose better.



I used to do this quite a bit when I was working for an advertising company and doing stuff for Kellogg's, McDonalds, or Burger King. You never knew if they were going to take your illustration and reverse it for some reason for printing purposes, or whatever. You had to be sure the poses looked good both ways. Oddly enough, It was a fellow animator who showed me this trick first way back when I was just starting out.



16 v1



16 v2



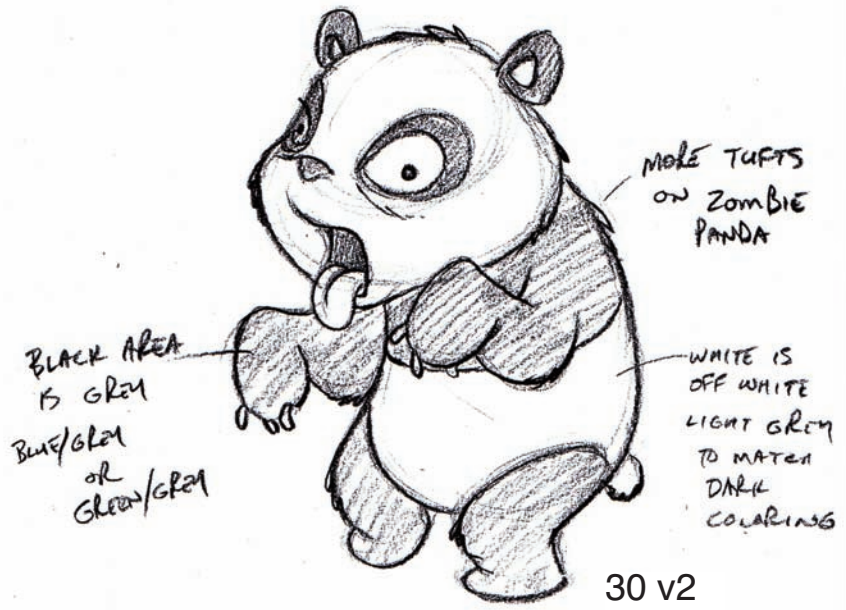
16 v3



16 v4

I liked this pose, but decided to keep it out of the final model sheet. If I was to go to three sheets, I'd probably include it.

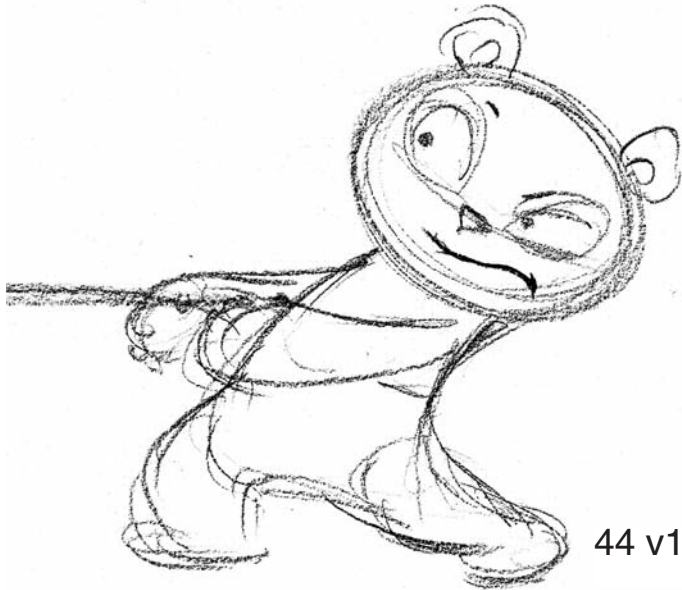
You can see all the notations that I made to myself on the things I wanted to fix up in the next version.



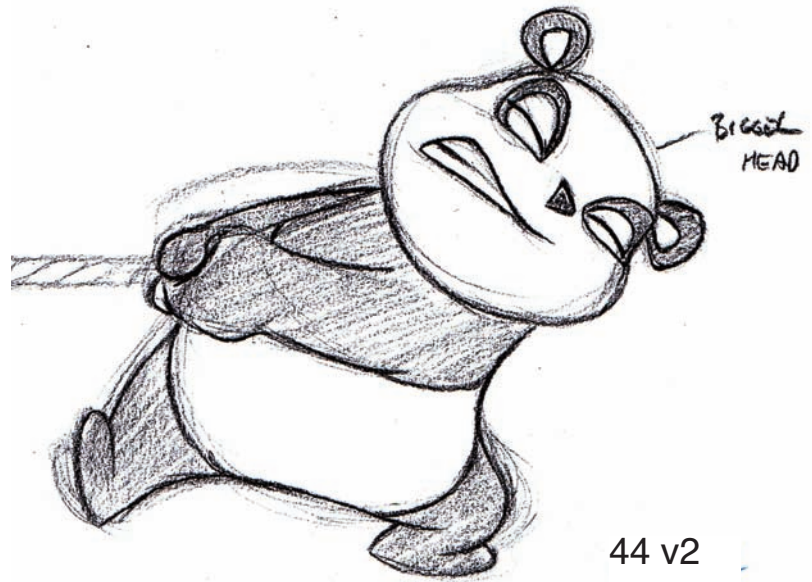
Originally I was thinking of leaving this pose out as I thought, he's never going to be a zombie in the story, so why even bother to use it. Then I thought, well, he is going to be dancing, I could have him break into a bit of Michael Jackson's "Thriller" moves just to break things up a bit and add a visual gag.

For the sculpting part of our class, I ended up using this pose, just because it was different. You can see some photos of the sculpt with the model sheets.

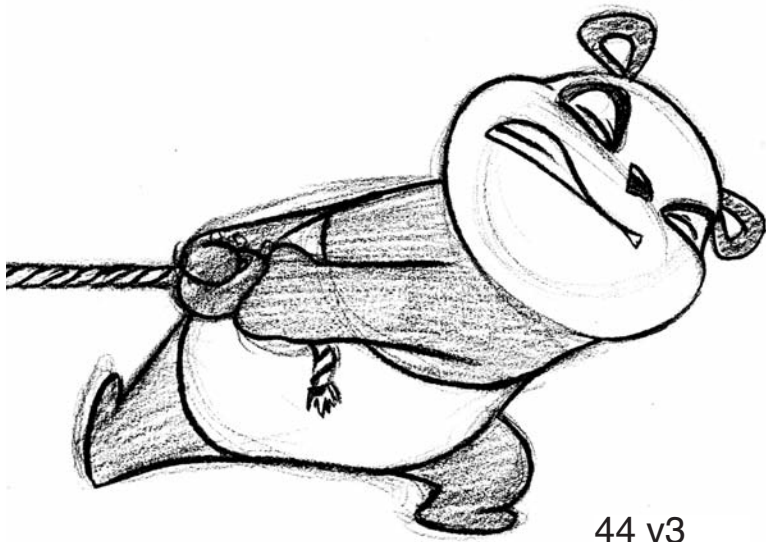




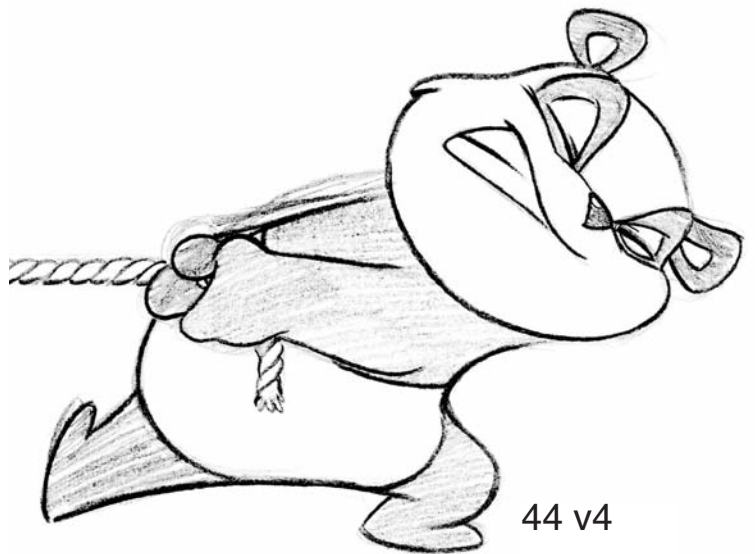
44 v1



44 v2



44 v3

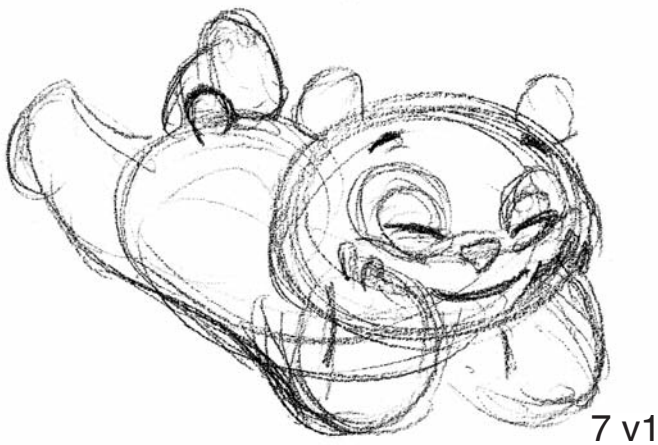


44 v4

In this pose I had to push the line of action harder to make it seem as though he was really pulling hard on the rope. You can see the really strong "S" curve along the back and into the leg, while on the front of his belly I used a "C" curve.

Also, look at the lines of the front leg to see how it creates more tension. By pulling the toes back behind the heel gives it more of a feeling that he's really digging in and pulling with everything he's got. Try drawing this pose even further.





7 v1



7 v2



7 v5



7 v6

This pose gave me a pain in the neck, mostly the head, eyes, and position of the hands on the cheeks. I liked the panda's right arm and hand in version 3 and the left hand and arm in version 4. I was really close with the eyes on version 6, but still messed the right one up on version 7, and the mouth was too high on the right side.

I realize all this might seem rather anal to you and you might even be looking at versions 3 to 7 and think, any one of them is o.k. as far as I'm concerned, the differences are incredibly trivial. That may be completely true but it's one of the struggles that most artists who care about their work suffer through - thinking that it can always be better. Of course there must be a point at which you have to say, "Enough already, this is the one I'm going with." If you're working for someone else, they will be the one to tell you when it's done, and that can be a major pain as well.

I worked on one production where there were two supervisors overseeing a group of



7 v7

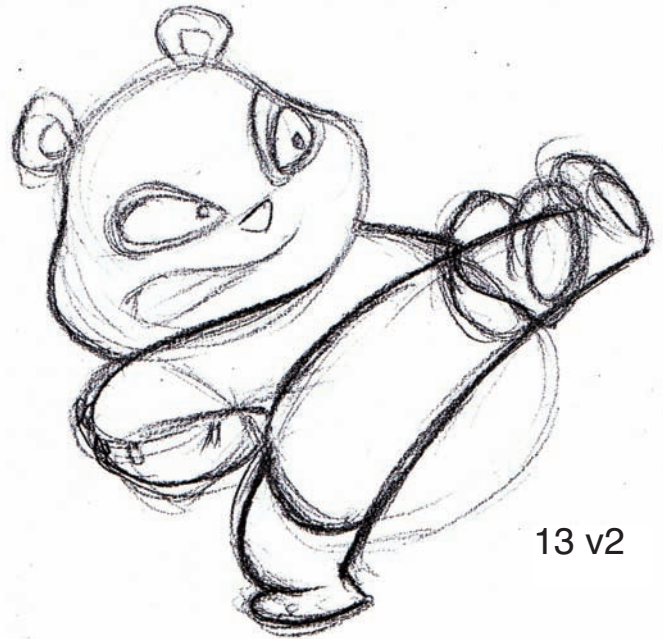
artists working on a Saturday morning cartoon show (better left unmentioned). Neither of these guys were better than the worst of us. One of them would call for revisions on an animation layout pose, saying the character was off model, then he would do a sketch to show me how it was supposed to be drawn properly. I would take his drawing and just trace it off, then hand it back in again. The other guy would then look at it and say it was **way** off model and do a new drawing for me which was even more horrid than the first. It was kind of a no-win situation at times.

7 v7

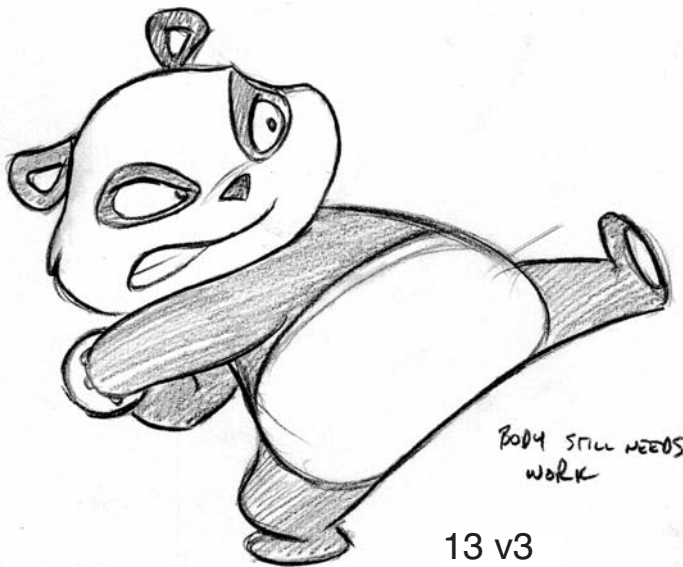




13 v1

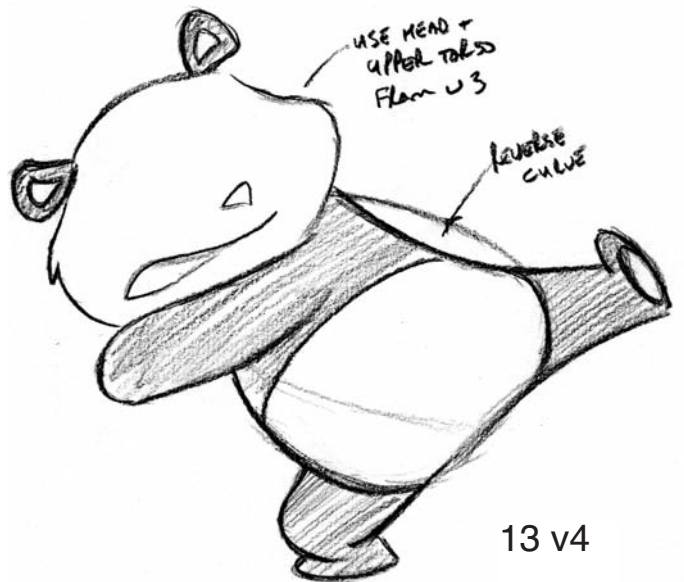


13 v2



13 v3

Body still needs work



13 v4

In this final pose, I reversed the curve on the line for the back and into the leg. In the previous versions, it formed an “M” curve which seemed a bit awkward. I try to avoid using the “M” or “W” curves as much as I can. I found that in this particular pose it gave more of a backward extreme position as opposed to a forward movement in versions 1, 2, and 3.

I'll talk more about the use of “S” and “C” curves in the poses later on.





6 v1



6 v2



6 v3



In this pose, I modified the expression in the face and arms, making the pose less of a scary, “I’m-coming-to-get-you” type and turning it into a slight lunge forward as though he was saying, “Hey, wait a minute...”

You can see how I adjusted his left hand into more of an open, stretching gesture as opposed to the grab and pull position in version 1 and 2. I also twisted the back leg out a bit and raised it off the ground to give more of a forward motion, rather than the pose in version 1 where the weight is back on the rear leg more.



21 v1



21 v2



21 v3



I liked this pose very much but felt the arms were too much like the ones in drawing 9. So, I changed the pose to him on all-fours. Whenever I do drawings of any characters, I try to create a little scenario in my mind and try to think about what they are doing, thinking, and feeling at the moment that I take the snapshot of them. It helps to give me a personal frame of reference for the drawing. Even if no one else thinks about it when they look at the drawing on a conscious level, I'm hoping that they might pick up on it subconsciously.

I was thinking that perhaps this was the very first time that he saw the female panda and realized how beautiful she is. It's just a second after this and he pulls back slightly in amazement, that's why I didn't press his hands firmly onto the ground, but just had them slightly touching.



22 v1



22 v2



22 v3

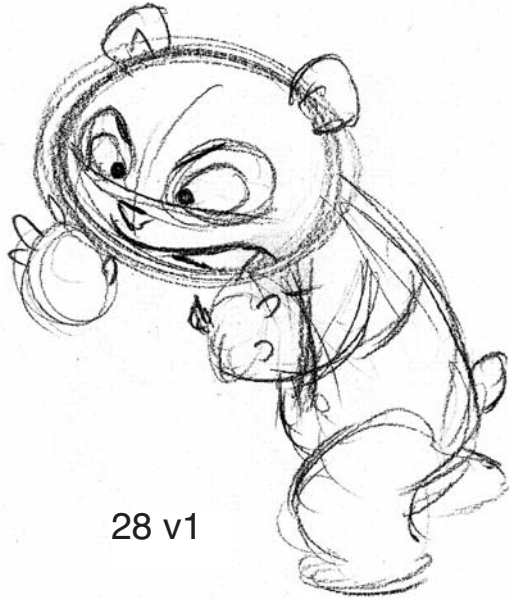


22 v4

In version 2 I pushed the pose too far and had the panda jumping off the ground. I decided it would be better to pull him back down onto the ground and adjust the arms back, closer to what I had in version 2 but still apart like in version 3.

I also made a bit of an adjustment to the eyes to get them to sit better on the head mass. In version 3 it seemed like the left eye was peeling off the head a bit.





28 v1



28 v2



28 v3

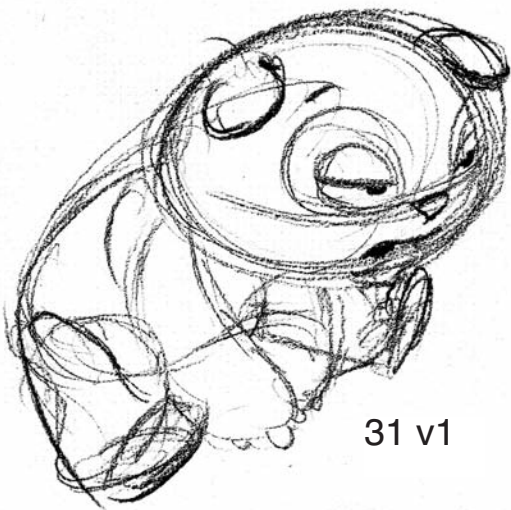


28 v4

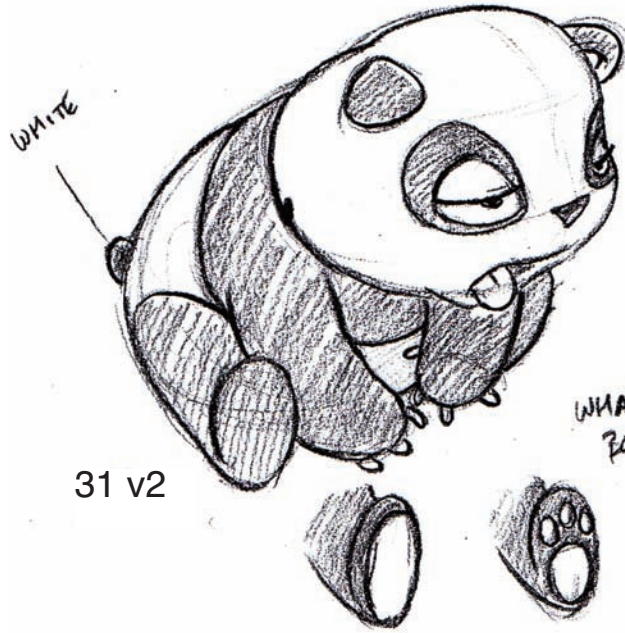
I think this pose turned out really nice. I spread the feet apart more in version 3 and pushed the hands out further away from the body as well. I also drew the character leaning into the push further with more of an arched back. I also think the expression on his face is better than version 2. I gave him angry brows and puffed up the cheek a bit more.



28 v4



31 v1



31 v2



31 v3



31 v4

In this pose, I decided to revert back to version 2. It seemed like I had just pushed the pose too far in version 3 and he looked more like he was dying rather than tired.

I kept most of the body the same as version 3.

In the final color version I rotated the pose 15° CCW so he doesn't look like he's going to fall on his face.



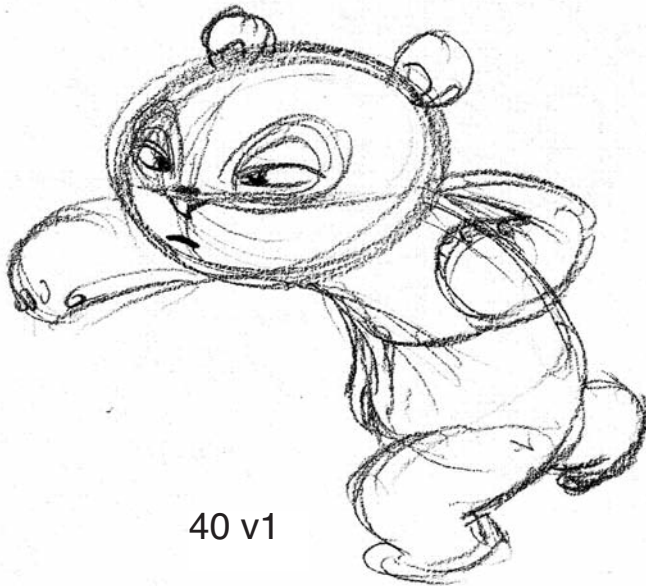


9 v1

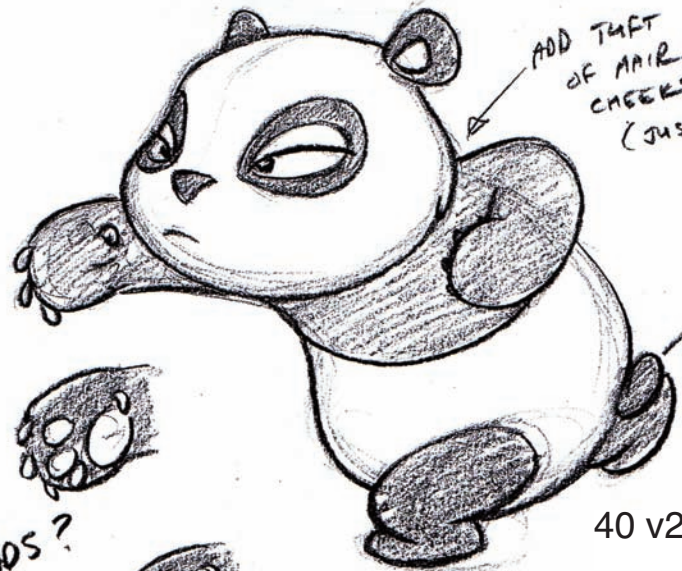


9 v2

9



40 v1



40 v2

PAW PADS?  
OR  
JUST WHITE?  
?

The poses on these next two pages are the ones I decided to edit out of the final model sheets.

Drawing #9 was similar to 21 and 31. And #40 was kinda close to 6 and 28. There's nothing really wrong with 9 but I never really liked pose 40. There didn't seem to be any real motivation behind it.

Sometimes that will happen: where you just do a pose that goes nowhere or doesn't say anything. You can try to modify it into a better pose, or just get rid of it altogether.



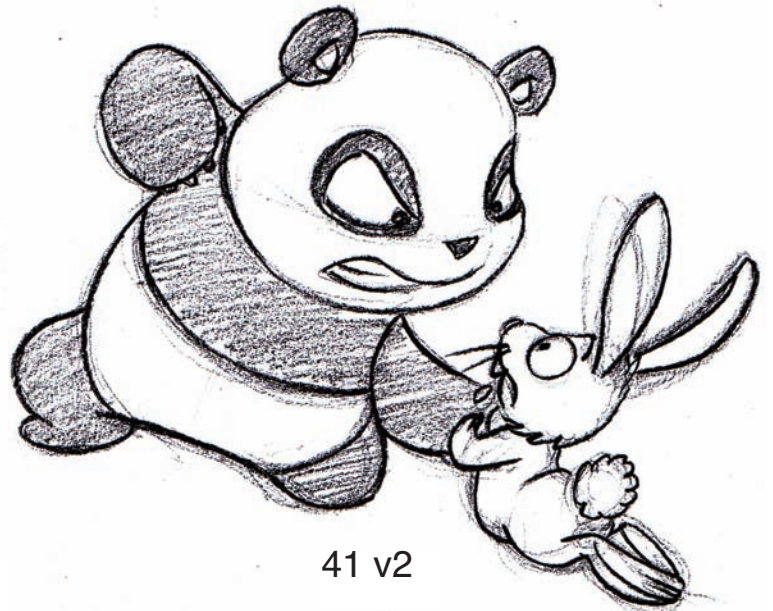
29 v1



29 v2



41 v1



41 v2

Again, I never really liked pose 29.

Pose 41 was funny at the time that I drew it, but it became quite apparent that I wouldn't really have any use for it within the context of the storyline. This will happen if you don't get the chance to actually direct the person who is posing for you. In this instance it was completely up to the person doing the posing. There wasn't any rhyme or reason for doing this one, the person just thought it was an interesting pose. I extrapolated what the character might be doing and drew the rabbit in. I could have done a number of different things with the exact same pose, such as having him sawing a piece of wood or maybe doing a flying Kung-Fu kick in the air. Either way, it's not really a pose I can use in the model sheets, so out it goes.





Panda  
Model Sheet 1





Panda  
Model Sheet 2





Here are some photographs of the zombie sculpt for the panda bear. The overall time for this was about 10 hours, including the painting which was a combination of Acrylic paint and airbrush.

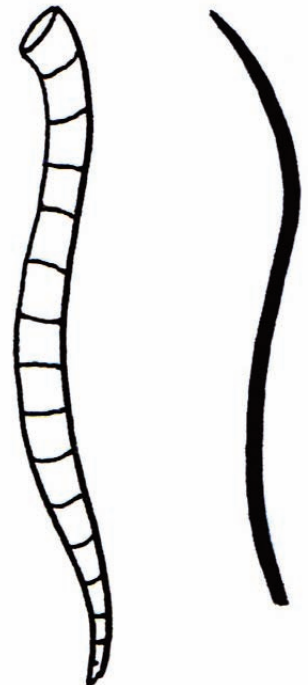
Sculpting your characters can really help you understand their three dimensional structure and also help you solve any unforeseen design issues before you get into the process of building the characters in a 3D computer program. They're also a great visual reference as you're doing your computer modelling.

## Line of Action “S” Curves and “C” Curves

I'd like to spend a few pages here talking about these areas because they are so important to your drawings. This is something that I was taught in College when I was taking animation but didn't fully grasp or apply until I had started working at Nelvana, an animation studio in Toronto.

In my other books on animation and character design I've listed S and C curves under the basic drawing principles of animation and for a good reason too. Without the proper use of them, your drawings will seem stiff and lifeless. You want to use your lines to create a rhythm and flow throughout the drawing.

Let's talk about the "line of action" first. This is a line that usually (but not necessarily always) runs through the characters spine. The curvature of the spine in the pose will certainly dictate the line of action in other parts of the body. If you look at a real spinal column in a human being, it forms an S curve from the top, at the base of the skull, right down to the tip at the bottom in your butt. (I'm not counting the little curve at the bottom called the "coccyx".)



In the examples shown here, you can see how the line is drawn through the spine but it can also extend down to the foot, knee or up through the hand or into the head. These particular lines are known as "primary" lines of action. They're the big main line that runs through the character.



There can be secondary lines that can run through just the arms and legs as well. These always form either an “S” curve or a “C” curve.

You can make your pose even more dynamic by pushing the line of action into a more extreme position. This can be done by simply tilting the line forward more for example.



Let’s look at a few of the poses to see where the lines of action are in them.

In this pose there are several lines of action. First there is the Primary Line of Action. This line runs from the tip of the fingers on the panda’s right hand through the arm, down the spine and along the left leg and out the toe. It’s the primary line because it runs through the spine.



The next major secondary line of action run through the arms, from the tip of the right hand through the arm and shoulders and out the left finger tips. The next two lines run along the outer edges of the body mass. The first one goes from the elbow or the right arm, down along the front of the belly, along the thigh and down the lower leg. The second one extends along the panda's back, across the crotch and out the back side of the right leg.

You'll notice that all of these lines form an "S" shaped curve. We'll look at another pose later that has a "C" curve for it's primary line.



If you look at the original version of this pose, you'll see the exact same lines of action running through it.

When I talk about pushing the pose by angling the lines of action more, you get the results shown in the final version.



This is what is meant when you hear someone say, "Make it more extreme."

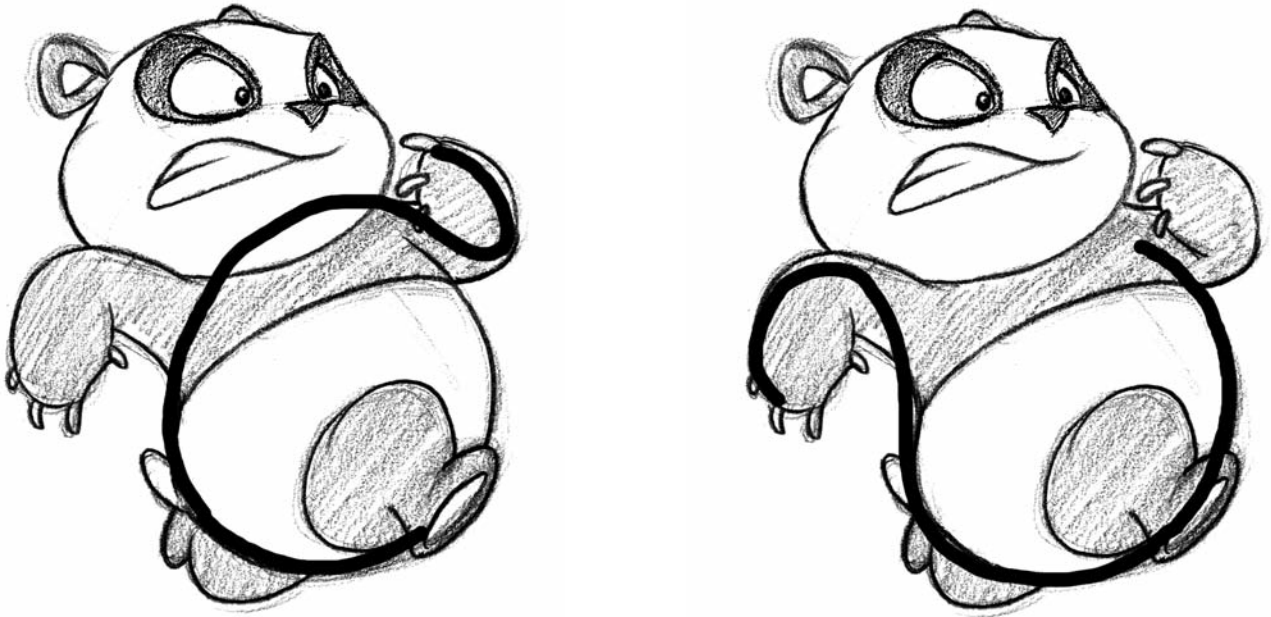
In this running pose, the primary line of action is a C curve, but it could be extended out the back leg to turn it into a modified S curve. It's not really important as to whether it's an S curve or a C curve in this case, just so long as you know what the main intent of the line is to the pose.



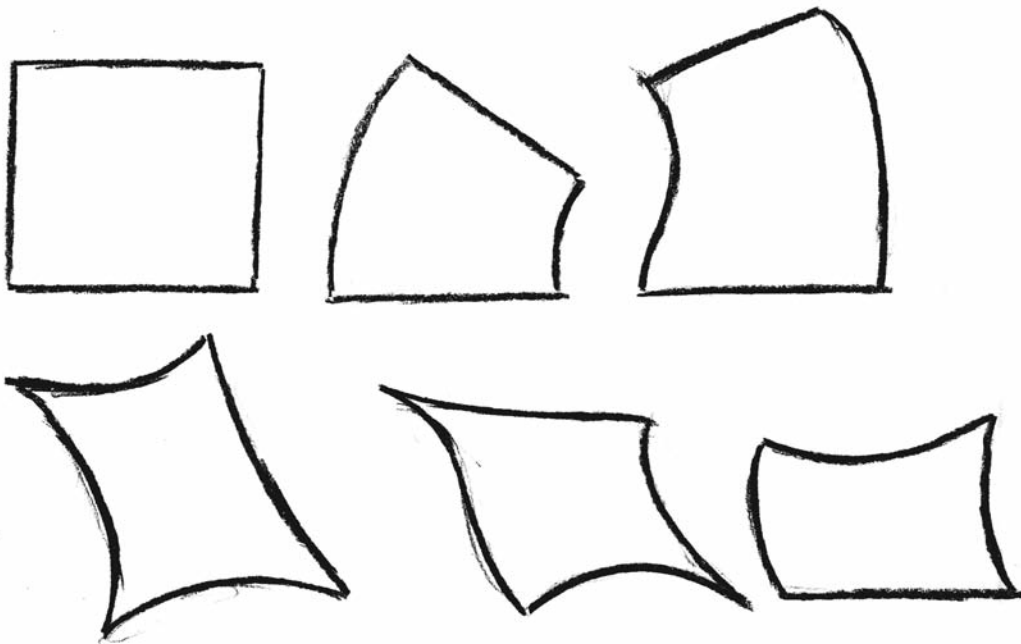
The secondary lines run through the arms and legs forming an S curve and each leg has it's own S curve if you include the feet as well.



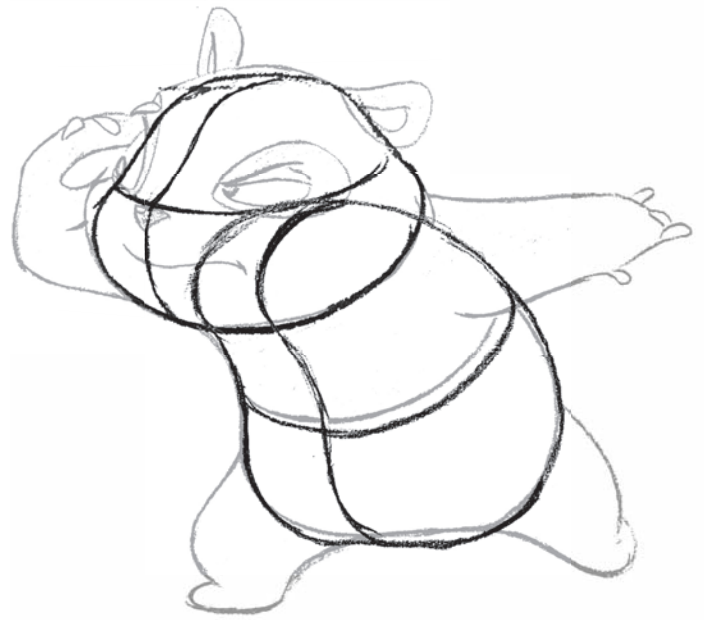
There are also other minor lines of action that run from each of the arms, through the outer edges of the body.



Next come the individual lines that make up the structure of the drawing itself. I'm not talking about the internal structure of the character but rather the final lines that describe the look of the drawing itself. These lines are dictated by the shapes that you use to form the character. It should work for pretty much every single design style. For instance, if your character was a square block, there wouldn't seem to be much room for any S or C curves unless you're allowed to make the box somewhat flexible then, that's where you can have some fun.







The character is made up of two basic shapes: the sphere and the cylinder. The shapes can then be modified to form the actual shapes of the different parts. I put the cross contours on so that you could see the three dimensional form of the shape. The arms and legs are also made of cylinders.

As I put the shapes together, I'm thinking about the lines that form the outer edges and how they fit together. These are sitting on the lines of action as well as the internal skeletal structure of the character.



Here, I've isolated the different major S and C curves throughout the pose. The best thing to do is get these lines to blend together as much as possible. One line flows into the other.

Some of the lines describe the outer edge of the shapes, others describe the cross contours and some indicate the connection points to the other shapes.



Again, you can start by drawing the basic shapes. I just go straight to the final drawing here when I'm roughing out my poses. In my mind, I'm still thinking about the structure shown in the first three drawings, I'm just short-cutting the drawing so I can get the basic pose down faster. A sketch like this would probably only take about 20 seconds max. It's filling in all the details that takes more time. remember the first sketches drawn in class with the students took 2 minutes each. The revisions took about 8 - 10 minutes each and the final clean-ups with the marker probably took around 12 minutes each, so the total amount of time to complete one finished model sheet ready pose in color was about 35 minutes, and so for the two model sheets, that's about 5 hours.



This pose has a lot of S curves running all over the place and they're all interconnected with each other, that's part of what makes the pose work so well.

Strong S and C curves can give the pose a real feeling of movement, even though it's a static pose, and that's what you really want: is the feeling that you've caught the character right in the middle of an action.

What I want you to do now is go back over all the drawings that I've done throughout the first 38 pages, and using a colored pencil crayon (I don't care what color you use), find the primary and secondary lines of action, and draw them directly onto the page. Take your time to find the right placement for the lines and think it through.

Next, take a separate sheet of paper and place it over the drawings and try to push the lines of action to more of an extreme position. Then block out the volumes of the character based on the new lines of action. See just how far you can with each one.

Learning about this process is not just a matter of reading and looking at my drawings, then hoping that somehow it seeps into you by osmosis. You have to actually do it yourself.

When I had first started working in animation as an inbetweener, I was only 19 years old. I actually dropped out of Sheridan College just before the end of my second year (but somehow still managed to get passing grades). I can remember how incredibly excited I was to actually be working in an animation studio and getting paid to draw! It was great. The very first scene that I got to work on was about 50 drawings in length (that's about 4 seconds of animation). My job was to do the inbetween drawings - the ones between the main keys that the animator had drawn. I went back to my desk and started in on the drawings which took me about 15 minutes each. The entire scene took me about 12 1/2 hours to complete over two days.

After I had finished them, I took them back to the animator to pick up a new scene. He took the drawings from me and flipped through them a few times and then started to chew me out for doing such a crappy job on the drawings. He took out a red pen and proceeded to go through the drawings (not every single last one of them, just the first 10 or so) and circled all the mistakes that I had made. That way I couldn't just erase the errors, I had to go back and completely redo the entire drawing from scratch. The whole while he's doing this he's yelling every obscenity you can think of at me. "What the **bleep!** do you think you're doing here you **bleep!** hole?! You're supposed to be getting paid to draw better **bleep!** than this!" and on and on it went. I thought I was gonna crap my pants.

I figured that was my last day there, that I was going to get fired on the spot. All my dreams of working in animation - shattered in an instant. He threw the drawings back at me and told me not to come back unless they were perfect. I can sure tell you that I really took my time on those drawings and made sure they were absolutely perfect when I gave them back to him again. He looked them over and flipped them a few times then said, "Why the **bleep!** didn't you do it like this the first time? Here's the next scene, try not to **bleep!** this one up too."

I realized right then and there that if this was what I really wanted to do for the rest of my life (not necessarily be an inbetweener, but rather work in animation) I had to be a professional about what I was doing.

One of the other animators who was working in my area overheard what had happened (as did about 20 other people who also worked in that area). He pulled me aside and suggested that I get some model sheets from some cartoon characters and practice drawing them to strengthen my drawing skills. He told me to start off by just tracing the drawings right off the model sheets and think about each line I was drawing. Try to get into the mind of the person who had originally done the model sheets and figure out what they were thinking about as they drew the characters. After I had familiarized myself with the basic design components of the character, then I could go ahead and start doing some poses on my own, trying to keep the character “on model”. I started doing this immediately. I remember that very night beginning with a model sheet of Popeye the Sailor from the 1940’s. I enlarged the poses on a photocopier and traced them off, really thinking about each and every line. Why it curved one way and not the other. Why one line overlapped another. The relationships of the lines to each other and to the volumes and proportions of the character. Did the line represent skin or cloth? Was it supposed to be hard or soft? Why was it an S curve or a C curve? Where was the primary line of action? Where were the secondary lines? Constantly thinking and questioning every movement of the pencil.

That’s what you need to do if you want to get better.

It’s not an easy thing to do and it will take some time. I noticed a huge improvement in my drawings at the end of just two weeks. I’m constantly struggling to try and make my drawings better each time I do a drawing. Sometimes it works and I do a good job, other times I fall flat on my face and the drawing ends up in the garbage pail (sorry, recycling bin).

Just as I’ve shown you here in this book, I’m not just showing only the really good drawings. What you’re seeing here is the unedited real-time stuff. The rough concept sketches, through all the revisions and into the final product. I’ve always hated those books that show the one-two-three step process to drawing cartoons: Step 1) draw a circle, Step 2) draw the center lines, and Step 3) here’s the finished drawing. How the heck did you get that???

So now, grab your pencil and get to work.

The next section will be another series of sketches with a different character design.