Points to Watch for In the Assignment

Give your character a specific attitude in the start pose

A

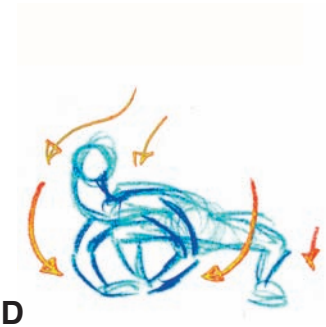
Anticipation goes up and back

B

Action of the body is down and forward as the arms overlap up

C

and then down to grasp the underside of the object, past the low point then back up slightly



D

Anticipation for the lift up goes down

E

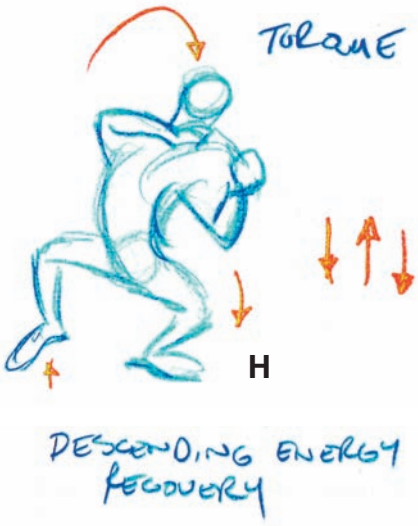
Overlap the action up, starting with the legs/hips, then the spine, the head and finally the arms

F

Apex of the lift action

G

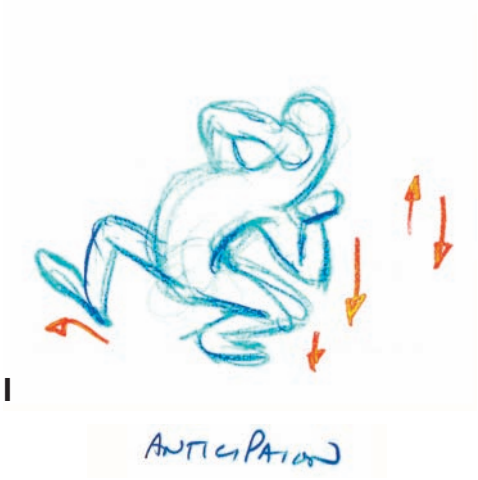
Reaction down fast and then settle with a small bouncing action



H

OVERLAPPING ACTION

Anticipation goes back and up, then down



I

Push up and forward

J

Follow through/reaction with character's own body weight

K

Step forward to regain balance

L

Push back and up

M

Into standing position

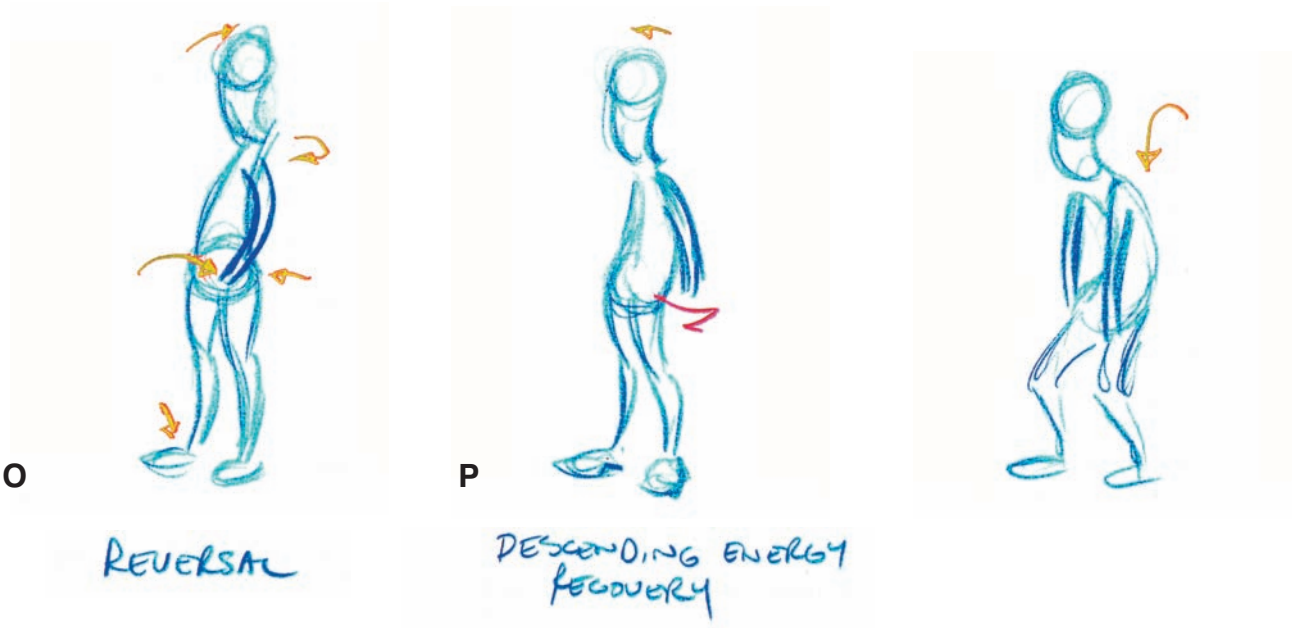
N

There are so many different variations to this exercise depending on the weight of the object, the size, the shape, or the physical make-up - if it's hard or soft. Also, the size and shape of the character will effect any actions. A tall thin character will lift something differently that a short fat person. If the person is strong or weak will also make a huge difference.

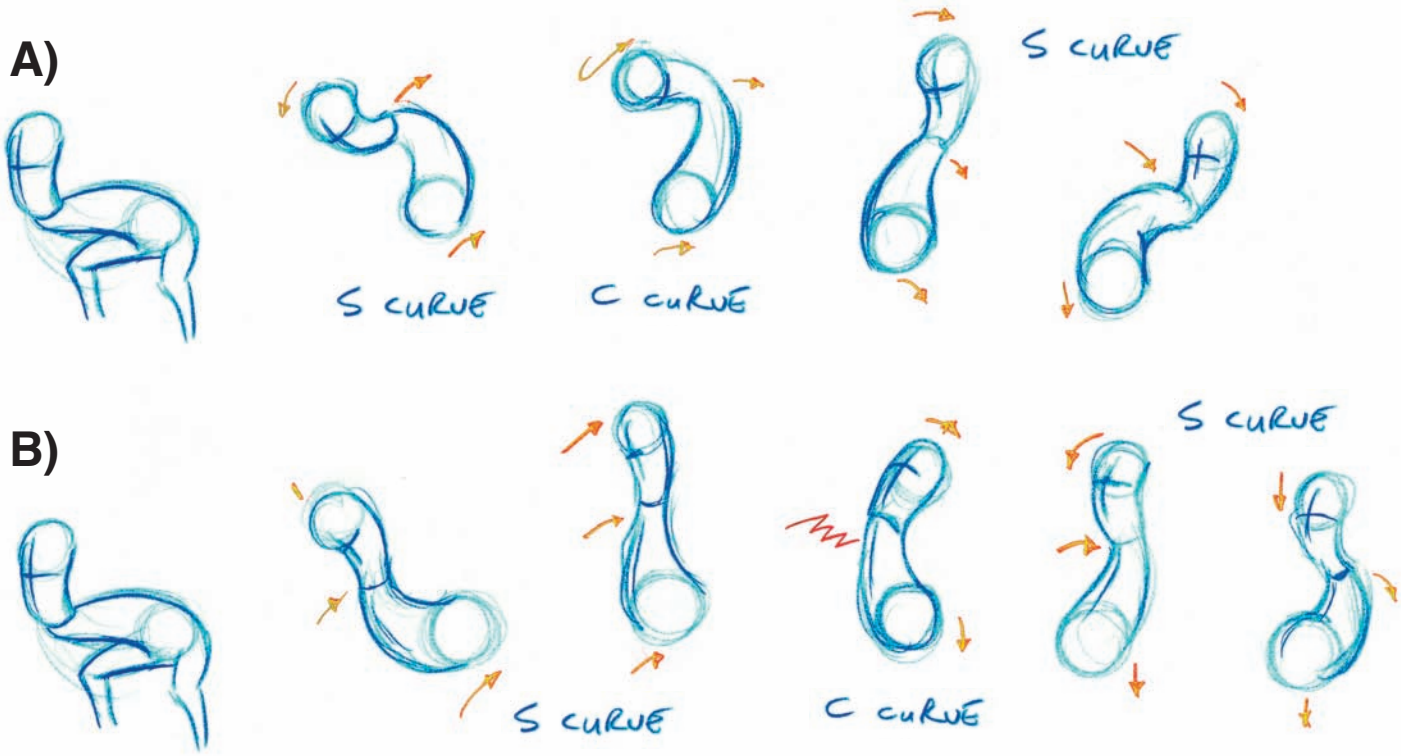
When choosing your actions, be sure to take these things into consideration in order to make the actions appear believable to the audience.

Successive breaking of joints in final recovery similar to the seaweed action assignment

Alternative recovery position shows exhaustion



Alternate Body Action During Lift



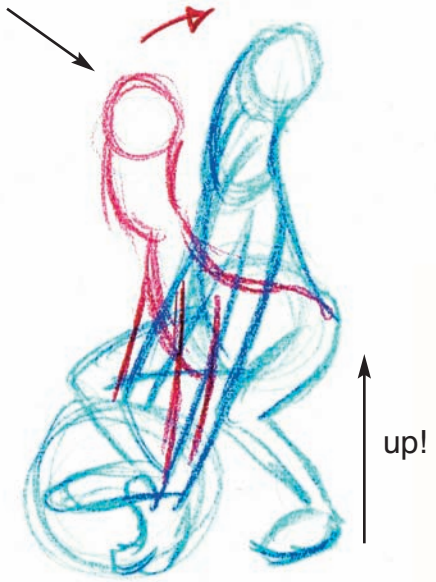
You can arch the back in either direction during the lift, you just need to make sure the overlapping actions are taking place at the right times and in the right directions.

I indicated a possible point for a stagger on the 4th pose in version “B”. The same thing could be done on pose 4 of version “A” as well. More about staggers on the next page.

Staggers to Create the Effect of Strain During the Action

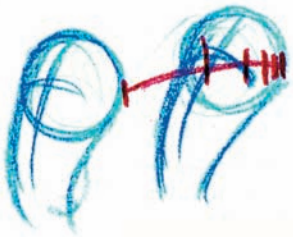
Hit the stretch pose

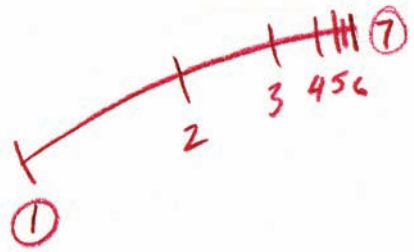
and go further



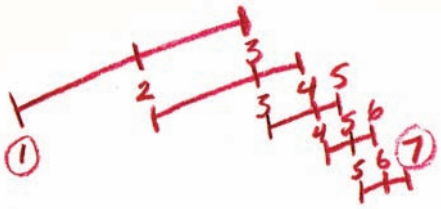
Be sure when pulling up with the body, you **do not** let the butt and legs go down. These opposite actions seem to <u>cancel</u> out the pull.

slo into the end pose



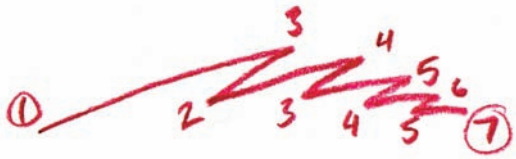


Slo in over as many drawings as you'd like. In the above example there are 7 drawings. Shot on twos, this would last for 14 frames - about 1/2 a second.



By staggering their exposure like this, the jerking action will last for 30 frames - just over one second.

The effect would look like this:



You would expose the drawings in the following order:
1, 2, 3, 2, 3, 4, 3, 4, 5, 4, 5, 6, 5, 6, 7.

You could also change the order to this:
1, 3, 2, 4, 3, 5, 4, 6, 5, 7.
This version would only last for 20 frames - just under one second.

Here's what the timing chart looks like:

• After this slo in stagger to illustrate the tension of the pull, you can break the tension by having the weight lift suddenly off the ground or you can relax the body weight forward and down. Just be sure that you carry the animation through to a logical resolution. Ask yourself the question, "what would happen next?"

The concept of hitting a pose and then adding in follow through may be new to many of you. Most of you are probably used to just going from one extreme to the other, and that's o.k. for certain actions. In this assignment you are being reintroduced to the idea that not everything happens at the same time (that's overlapping action) and introduced to the idea that not everything stops at the same time - follow through. Taking a pose and pushing it further and then coming back is also another form of reaction or recovery.

Just straight inbetweening into a strong key pose may not be enough to describe the action.

Consider a couple of different, but similar actions: when you shake someone's hand, there is the initial point of contact and then there is the compression when you close your grip tighter (unless you're one of those people who do the "dead fish' hand shake where there is no tightening).

Another variation on this is when two people hug each other. There's the initial contact and then the compression when you squeeze them tightly. This action shows added affection or concern. Without the squeeze, the hug is impersonal and just for show - like people who kiss on the cheek but it is only in the air. It's action with no contact - practically meaningless.

In the straining lift, this concept is used in reverse at the point where the arms hit their initial stretch, pulling at the heavy object. It's a variation on the moving hold, where you trace back the key two times and then expose the three drawings for a short period. There is an illusion of life because the lines boil slightly. If we add in a soft slo in to the new extreme position it will add more strain. The new extreme doesn't have to be a big move from the original key, just enough to show a shift.

Now by adding the stagger - which is simply shooting the drawings in a new order, we can create the illusion of further strain. It's very effective when used properly.

You can use the same theory when animating a laugh or a cry or a character coming to a stuttered stop.

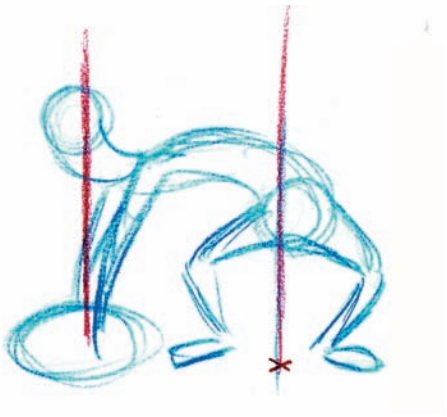
All through the first semester, we've been dealing with the concept of weight: perpetual bouncing ball, descending energy ball, pendulum swing, the double ball bounce, and the walk cycle. Depending on what order you've been going in, you may have already done the jump up and down, the broad jump and the step up and step down/jump down. All of these deal with the weight of the character alone. Now for the first time we're dealing with an object being affected by an separate character.

Force and Resistance

The force is the character or rather the muscles and the "will" (desire to move the object) of the character. The resistance is the weight of the object and gravity. This is present in any situation, even without an object. You still have the force of the character acting against the resistance of their own body weight. To ignore this principle will make your characters light and less believable.

Some of this can be achieved through strong solid drawing, however if you ignore the principles we've discussed, it won't work. On the following pages are some common errors to watch out for.

Common Errors and Things to Watch Out For:



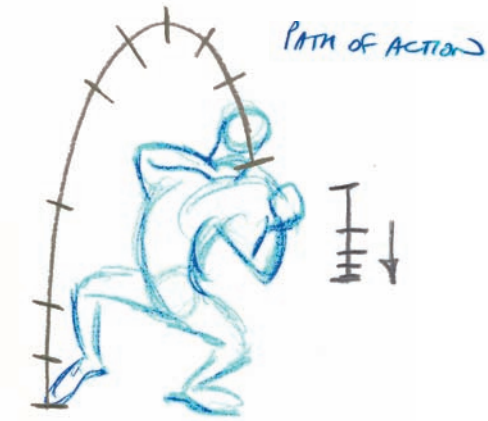
Don't pose the character with the object's ¢ of gravity away from the character's ¢ of gravity

Keep the weight close to the body and the character's ¢ of gravity

Be sure the feet and knees are properly aligned with the weight

This creates an odd twist to the character and makes the lift action awkward

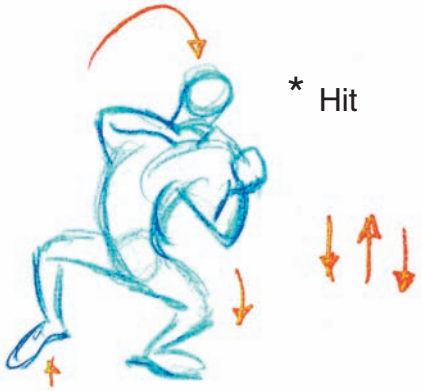
Slo in to the action off the floor to show a build up of momentum



Time this the same way you did the bouncing ball with slo in and slo out at the apex

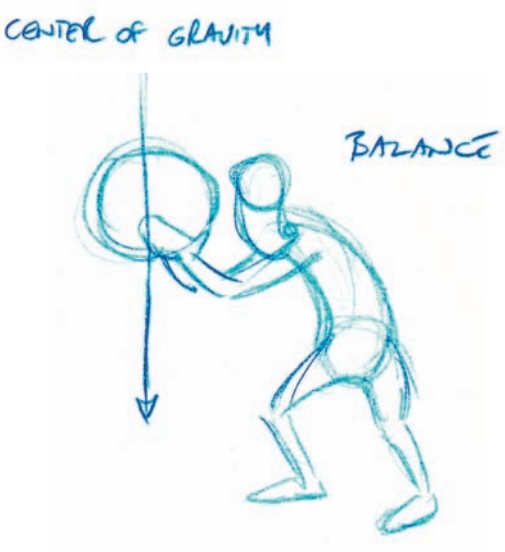
Avoid pulling up with just bent arms. It makes it feel as though the biceps are doing all the work.

Look for the point of contact and body reaction to the weight



Follow through

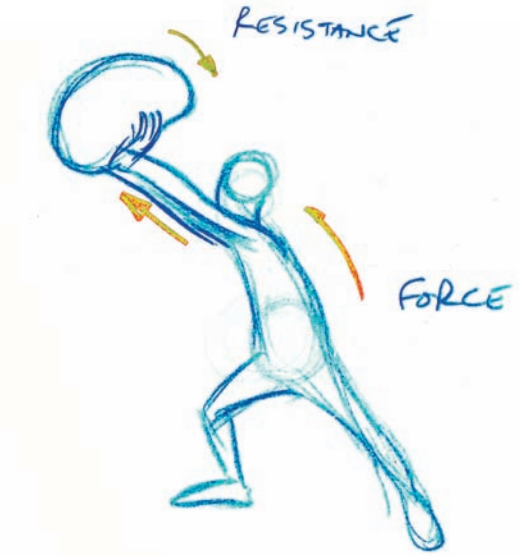
Weight hits the body ⟶ body squashes to react



Avoid poses that don't describe the weight

Be careful of awkward hand placement on the object. This can negate any feeling of weight

Keep your poses from looking static



Try to find ways to illustrate the **force** of the body acting against the **resistance** of the object.

Weight is shown in animation by:

- The character's struggle to move the weight
- The visual effect of trying to stop the weight through bouncing recovery
- Timing used to show the immobility of the object
- Timing used to show gravity
- Showing sag, stress, strain and squash

Variations

There are so many variations on this exercise as mentioned earlier depending on the character type and object being lifted that you can play around with them to create som really nice portfolio pieces.

Here are just a few alternates that you might want to do on your own:

Option 1

Board out a situation where there are two different types of characters at an actual weightlift competition using barbells.

This would actually require that you understand the proper technique of the “Snatch” and “Clean and Jerk” methods of weightlifting. Work out a simple scenario where one character is able to lift the weight successfully and the other cannot. You don’t need to turn it into a prolonged battle between the two, just keep it simple and to the point to allow you to focus on the actual lifting animation.

Option 2

With similar characters as Option 1, have each of them trying to lift the same object. The first character cannot lift the object but the second character can. You can treat this as one continuous scene with the two characters together on screen at the same time or as two separate scenes where the characters are not interrelated to each other.

Option 3

Using just one character have them attempt to lift and object and they are unsuccessful at the first attempt. They step back regroup themselves and try again. This time they do it but with a great deal of strain and effort, to the point of complete exhaustion and collapse.

Option 4

Similar to option 3, the character attempts to lift an object but is unsuccessful. The character steps back and lifts a second, lighter object with some strain.

Option 5

This one is a bit more complicated and prolonged. Using the layout from the Step Up/Step Down assignment, Have a character lift and carry a weight up the stairs but each step is more and more strained until they reach the top and must finally drop the weight.

You can come up with many more variations on this theme on your own. In all cases, the animation required is basically the same, story concept and layout requirements will differ. The assignment really requires you to phrase the action properly. If you leave out any of the anticipation or reactions, it can really effect the success of the animation. You can have anticipation and reaction blend together between the main actions, but only with the proper poses, timing and planning.