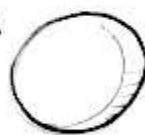




Where to begin... well... I suppose the first thing to consider in drawing a character is its **CONSTRUCTION**. The character must be constructed out of **basic shapes** -

That is to say **3D** Dimensional shapes, spheres

Boxes



AND

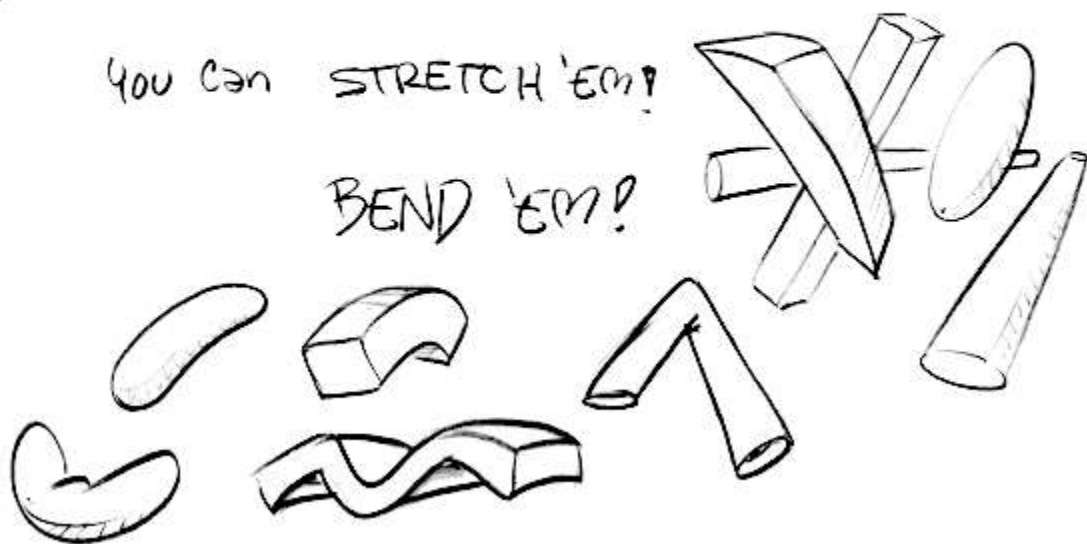
CYLINDERS



.. **MANIPULATING** the Basic Shapes

You can **STRETCH 'EM!**

BEND 'EM!



NOW

Let's practice manipulating the basic shapes starting with the ball. 

PLOT A SERIES OF ARCS FOR IT TO FOLLOW...



And bounce the ball ALONG it!



REMEMBER

IF YOUR BALL IS MADE OF RUBBER,
IT WILL HAVE ELASTICITY, AND WILL
SQUASH UNIFORMLY OR ELLIPTICALLY



A TOUCH O'S HADOW!

IF YOU FLATTEN IT ON THE
BOTTOM, IT WILL LOOK LIKE A
SORRY, SQUASHED MEATBALL

NO REASON
TO BOUNCE!



So, AFTER YOU'VE GOT THAT DOWN, TRY ANIMATING IT IN PERSPECTIVE!

Plot A SERIES OF ARCS GROWING EITHER BIGGER TOWARD CAMERA
OR SMALLER AWAY FROM CAMERA

PUT 'EM TOGETHER
AND WADDYA GOT?



Let's just give the sack
some NUBS at the CORNERS, to act as ARMS AND LEGS...

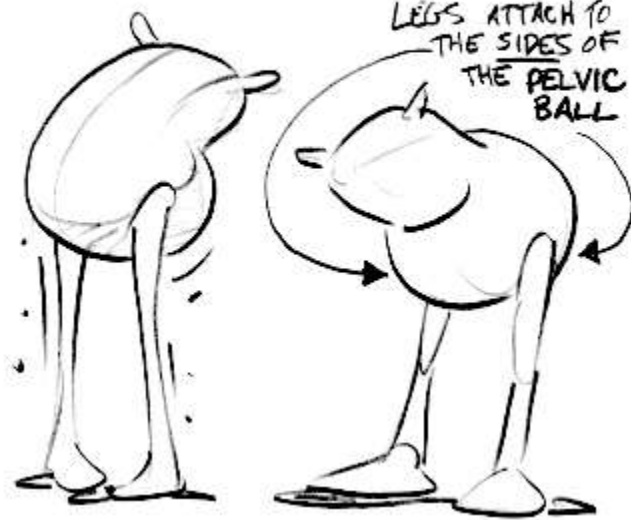
Because you see...



FLOUR
SACK
Represents
THE BASIC TORSO
OF THE
2
LEGGED
CHARACTER!



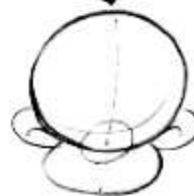
Next let's add some
legs to the sack...



WE'LL CALL THIS
GUY **MR. BASIC**



His Head is made
up of a
CRANIAL
SPHERE...



... AND A SMALLER
BALL ATTACHED TO
IT DESCRIBING THE
JAW



THE JAW
AREA BEGINS
BELOW THE EAR

THE WHOLE HEAD
SITS ON THE
CYLINDER OF THE NECK



BASIC HAND STARTS
WITH A BOX

FOR THE FLAT OF
THE HAND ...



ADD AN OPPOSEABLE
THUMB,



ROUGH IN
A SHAPE FOR
THE
ATTITUDE OF
THE
FINGERS

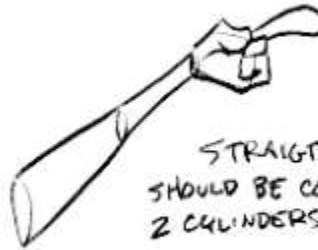


ELABORATE
AND
DIVIDE
THE FINGERS

ARMS ARE
2 CYLINDERS



TAPER AT
WRISTS



STRAIGHTENED LIMBS
SHOULD BE COMPOSED OF
2 CYLINDERS; EVEN THO...

AND
NOW...

See if you can make MR. B. move...
IN the next few pages he will
take you through the basic
principles of ANIMATION



Animation Principle #1

SQUASH and STRETCH

We've already practiced squashing and stretching the basic shapes individually... but how about when they're joined together as a character?



PRINCIPLE #2

ANTICIPATION

Well, we all know that in order to make our character jump up ↑ WE NEED TO SHOW HIM GOING DOWN ↓ FIRST. IF WE DON'T, HE WILL APPEAR TO FLOAT UP OFF THE GROUND.

This would be fine if he was on the moon...



BUT on earth, he must contend with GRAVITY... so...



He must do THIS...



BEFORE he CAN DO THIS!

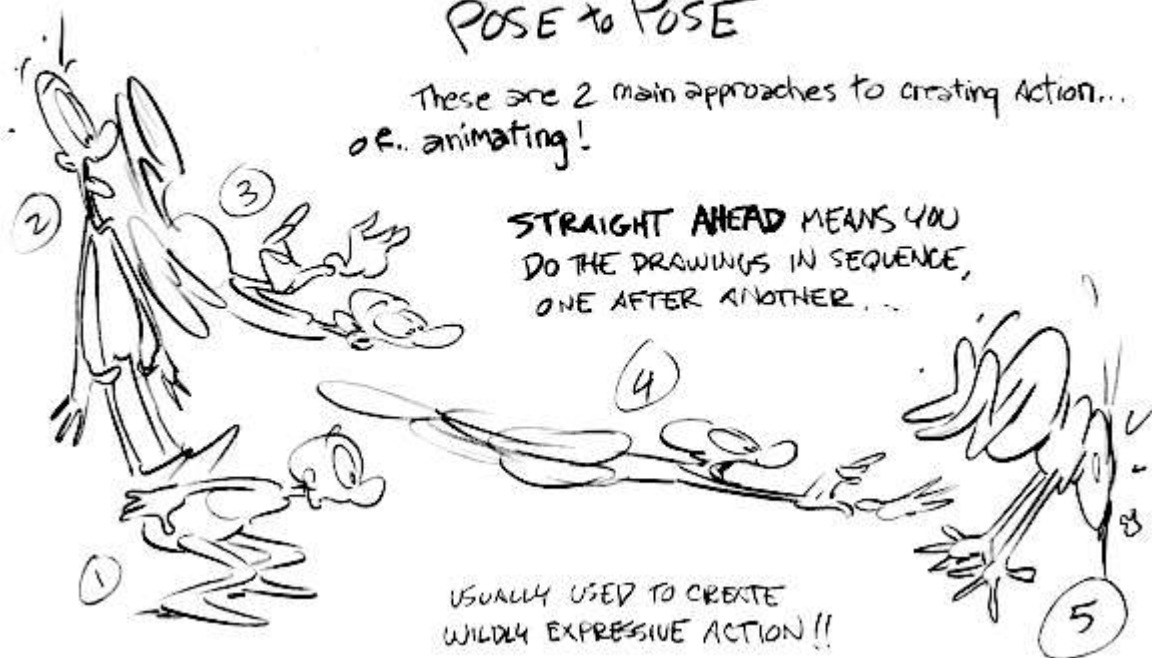
PRINCIPLE #3 **ATTITUDE**

The Story, the most important element of ANY NARRATIVE entertainment MUST BE TOLD CLEARLY, but since we don't have a story yet, Lets just say we should show what our character is doing clearly enough so the action can **READ**.



PRINCIPLE #4 **STRAIGHT AHEAD & POSE TO POSE**

These are 2 main approaches to creating Action...
o.e.. animating!



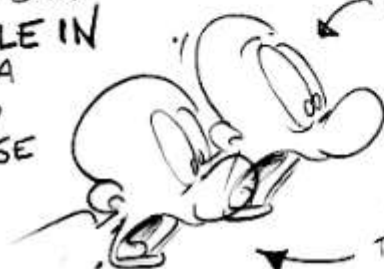
PRINCIPLE #5 FOLLOW THROUGH AND OVERLAPPING ACTION

These are simply ways of keeping your character "alive"

Nothing will remind a viewer that he is watching drawings like having those drawings pop to a sudden stop. Yet, some poses need to be seen long enough for the viewer to register them.

There are a few ways to deal with this conundrum...

YOU CAN SETTLE IN TO A HELD POSE



HIT A MORE EXTREME POSITION THAN YOUR FINAL ONE...

AND SETTLE BACK INTO THE FINAL 'HELD' POSE.

YES! There is much more to this principle... but let's hold off on the rest till later...

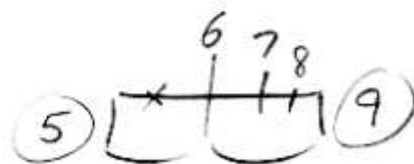
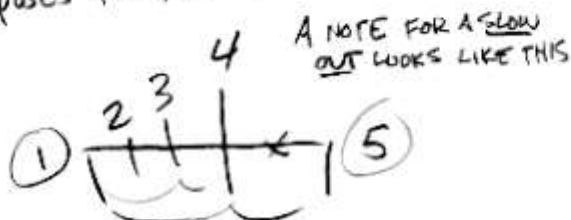
PRINCIPLE



SLOW IN & SLOW OUT

We already mentioned slowing out of the tops of our arcs when we were bouncing our balls... them... our ~~SPHERES~~ back on page 3...

As a general rule: Action will usually tend to slow out of the tops and bottoms of an arc, or what are usually the extreme poses in your action.



A NOTE FOR A SLOW IN LOOKS LIKE THIS

PRINCIPLE #1

SECONDARY ACTION



Let's
say we
give Mr.B.
A BIG
FLOPPY
HAT!



You can use it to create
SECONDARY ACTION - MOVEMENT
CREATED BY THE PRIMARY ACTION

Here, the Primary Action is the RUN.
DRAG THE FLOPPY HAT BACK IN THE
PATH OF ACTION TO CREATE A
SECONDARY ACTION.

PRINCIPLE

TIMING



The MORE inbetweeners you put BETWEEN YOUR EXTREMES - THE LONGER YOUR ACTION WILL BE DRAWN OUT. SO HOW DO YOU FIGURE OUT HOW LONG YOU WANT TO MAKE YOUR ACTIONS? THE ONLY TRUE ANSWER TO THAT IS: "EXPERIENCE"
BUT until you gain experience, here are some rough guidelines...

PRINCIPLE #9

ARCS

We all know what an ARC IS...

We use it as A **PATH OF ACTION** when we're plotting
A move from one pose to the next.



Animation without
arcs will tend
to look
Mechanical



TRY TO
SEEK OUT
NICE,
LOOSE,
NATURAL
ARCS TO MOVE
YOUR ACTION
ALONG.



PRINCIPLE #10

Let's face it, cartoons were
not invented for their ability
to convey subtleties!

OK, so no cartoon character ever
won an Oscar for best Actor...

But let's see Al Pacino do this!

Make each required attitude
of your character as BIG
AS YOU CAN!

EXAGGERATION



WHOO-
HA!!

PRINCIPLE #11 SOLID DRAWING

Again... always remember to CONSTRUCT your characters using basic shapes. This, if done correctly, will give your character the look of being 3 DIMENSIONAL.

Any character animated in the traditional classical way will have a CONSTRUCTION FORMULA that he/she/it can be broken down to. Whether squashed, stretched, twisted, tapered, or bloated they are all basic 3 DIMENSIONAL shapes. You just have to connect them AND move them around in the right way!

PRINCIPLE #12 Appeal

HEY, to make a character appealing, you've got to make him AS CUTE AS possible, right?

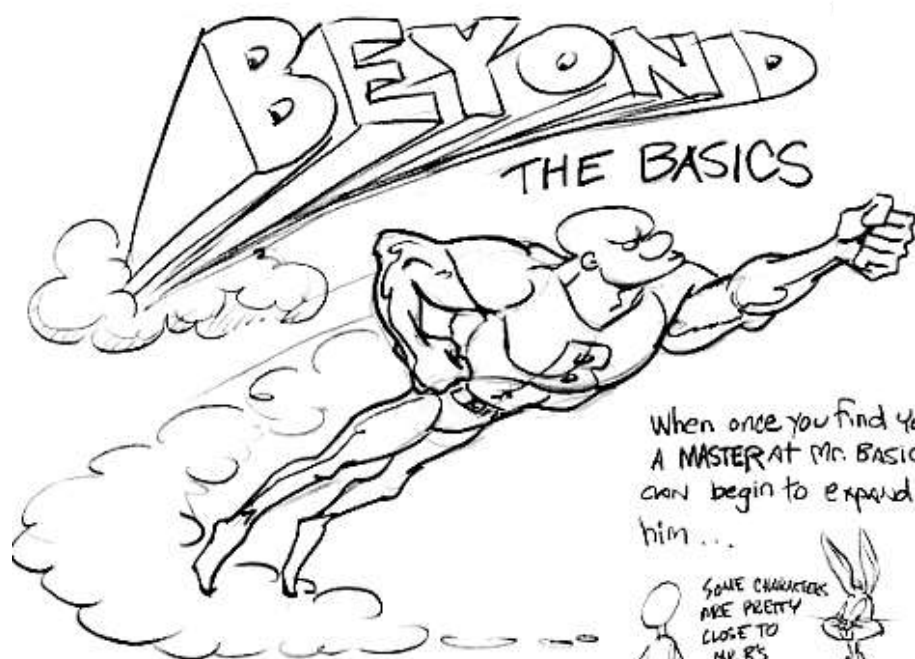
WRONG!

WHAT APPEAL REALLY MEANS IS THAT THE EYE OF THE VIEWER IS ATTRACTED TO THE SCREEN RATHER THAN REPELLED... BY SAY...
BAD DESIGN



★
WHATEVER ROLE YOUR CHARACTER PLAYS, YOU'VE GOT TO MAKE THE VIEWER WANT TO WATCH HIM/HER/IT





When once you find yourself
A MASTER AT MR. BASIC, you
can begin to expand upon
him ...





Many times in animation an artist will endeavor...



Let's
START
WITH 2 LEGGED CHARACTERS,

Ancient Animators* have discovered, that in a 2 legged character, bodily movement usually begins AT THE CENTER OF GRAVITY, OR PELVIC REGION... SO THAT IS WHAT WE WILL START ON.

THE PELVIC CYLINDER

* THE "OLD MEN" OF LOVE

IN GENERAL,
A MALE
HUMAN'S
PELVIC CYLINDER
IS FAIRLY
STRAIGHT



IN A FEMALE
THE CYLINDER
TENDS TO WIDEN
AT THE BASE (HIP)
AND TAPER AT
THE TOP (WAIST)

A General Rule of Body Attitude is that when the pelvic cylinder is tilted one way

IN THESE 2 FIGURES, THE WEIGHT IS MORE ON ONE LEG THAN THE OTHER



WHEN THE WEIGHT IS ON ONE LEG, IT PUSHES THE PELVIC CYLINDER UP ON THAT SIDE



LEGS ATTACH TO SIDES OF PELVIC CYLINDER

THEN THE UPPER BODY BOX WILL HAVE TO TILT THE OPPOSITE WAY, TO CREATE A BALANCE IN THE FIGURE



The male head is usually more angular ...

WHILE A FEMALE HEAD TENDS TO BE ROUNDER IN CONSTRUCTION

USE THE EAR AT THE BASE OF THE SPHERE AS A POINT TO ANCHOR THE JAW BOX TO



CRANIAL SPHERE ON TOP
EYES NEAR THE BASE OF THE SPHERE



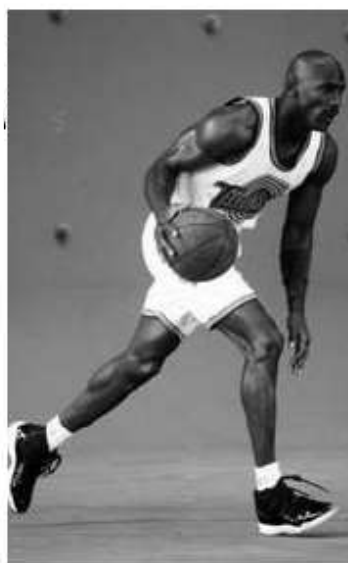
THE NECK CYLINDER ON A WOMAN IS MORE SLENDER THAN A MAN'S (USUALLY)

MUSCULATURE SHOULD BE ADDED AFTER THE INITIAL CONSTRUCTION



THE MUSCULATURE ON A FEMALE ARM IS FAR LESS PRONOUNCED USUALLY

Here much of the body is covered up by loose clothing, and the pelvic cylinder is partially obscured by a prop.
(the basketball)



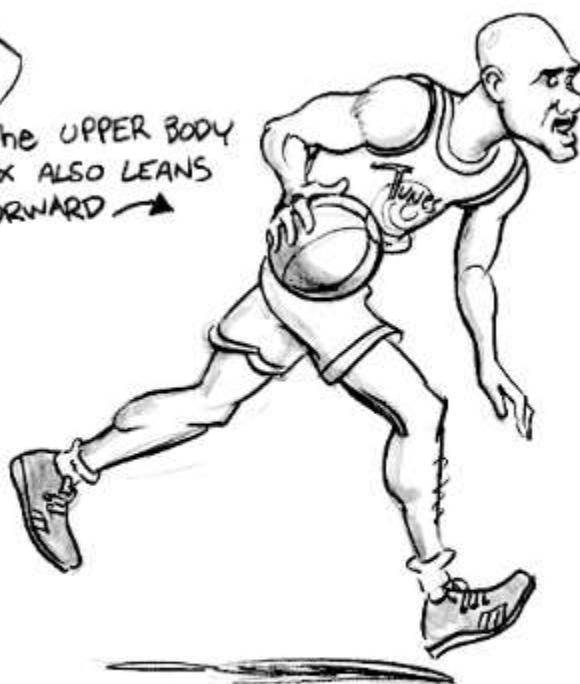
YOU MUST LEARN TO SEE THROUGH the obstructions WITH YOUR "MIND'S EYE" To the Basic shapes of the figure

The pelvic CYLINDER IS ANGLED FORWARD



THE UPPER BODY BOX ALSO LEANS FORWARD →

CONSTRUCT THE ENTIRE FIGURE USING BASIC SHAPES,



THEN, USING THAT AS A FRAMEWORK, BUILD ON THE REST OF THE DETAILS.

Practice drawing the human figure in as many possible positions as you can. Using a live model is best of course, but if you can't get one, use reference or videotape.



The # Legged CHARACTER

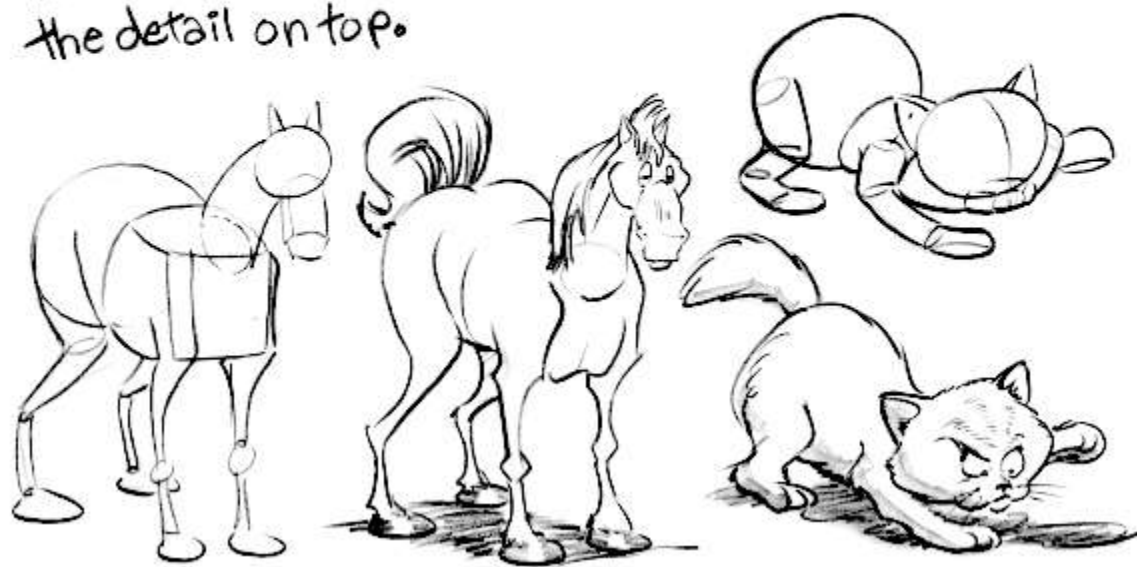
If you've gotten a good handle on human construction, then it's time to try drawing animals!



Let's take
Flour sack
AND TURN
him forward...



Practice drawing animals. Begin as with the human figure, with basic construction, and build the detail on top.



So As you set sail into the sea of animation, just remember...there are zillions of things to animate, and as many ways to animate them! You, as a character animator, are an actor...and a giver of life! When your characters come alive, the viewer will forget that they are watching drawings, and experience what it's like to be...