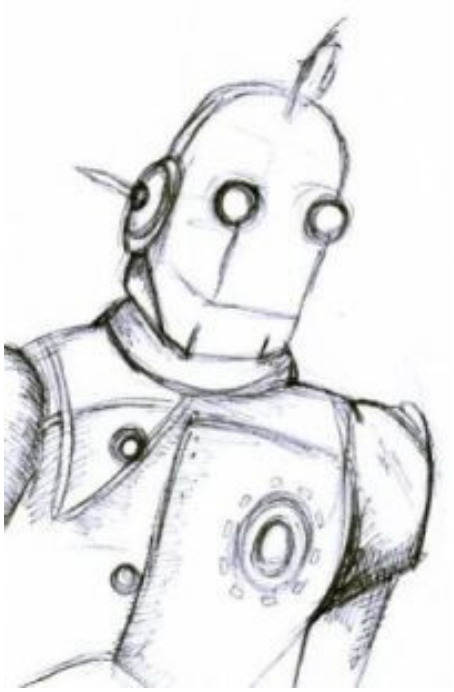
How to Draw Robots

Written by Katie O
Edited by Aaron Mullins

Smashwords Edition



With special thanks to Aaron Mullins for his helpful advice and editing. A brilliant author, editor and fellow artist.

www.aaronmullins.wordpress.com

About the author and artist Katie O

Katie O is an artist who lives and works in Coventry, England. In school she discovered her love of drawing and quickly gained a reputation amongst her peers as a talented artist. She continued her love of art on through to university, where she honed her skills and developed a style that reflects her unique imagination, while gaining an honours degree in Fine Art.

Katie O has experience working in two art galleries, as well as spending time as a scenic art assistant at her local theatre and employing her skills within the art department at her local university. She has also had numerous exhibitions and art fairs displaying her work, and is an

active member of her local art groups. The media have noticed her artwork too, with many newspaper articles covering the success of her exhibitions.

Katie O's artwork covers many subject matters. She wants to help people to achieve their own artistic ambitions by giving them the drawing skills and confidence to create their own works of art. The result is her series of books which teach art skills to people of all ages and levels of ability.

Visit:
katieoart.wordpress.com

Introduction

Robots. Where would we be without them? Those tireless engines of activity that power almost everything in our modern world. They so rarely get to relax, put their clunky feet up and give themselves an oil change.

Well all that is about to change. In this book you will meet 10 mechanical characters, each of which has their own personality. You will get to know them by following the simple step by step instructions on how to bring these motorised creations to life.

I hope you find this book informative and inspiring. Once you have mastered them all, why not put you new skills into practice and design your own metallic monsters.

Katie O

What You Will Need

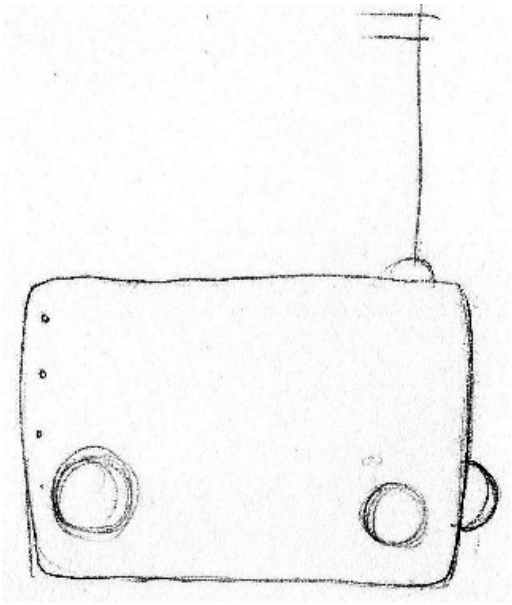
Your chosen art form. The drawing instructions in this book can be followed with a pen, pencil, or any other artist material that you choose.

A blank piece of paper, canvas or other surface material for your artwork.

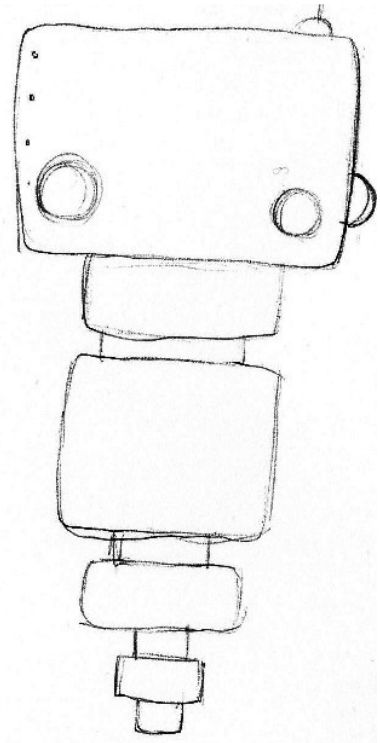
This guide introduces you to the basics of drawing robots. Remember to keep your style free, in order to allow the personality of the robot to shine through. If you keep things too rigid it will end up looking like a technical drawing, rather than a work of art.

Guide 1: Wheeler

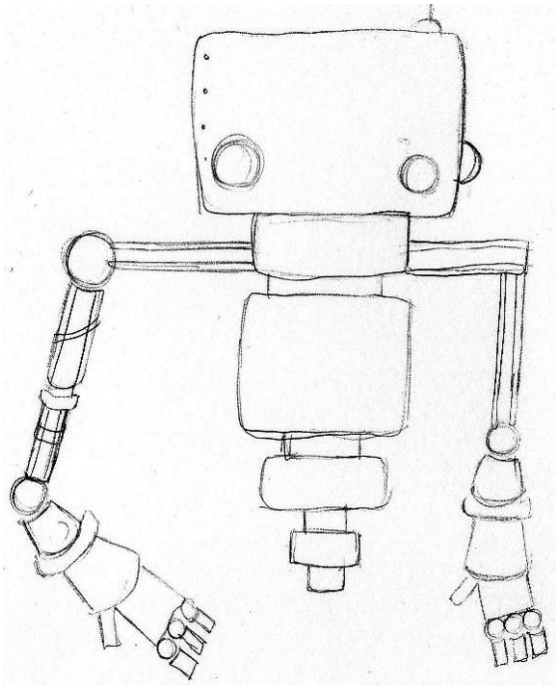
Step 1: We begin by drawing a rectangle. Remember, this doesn't have to be perfect. In fact, the more unique it is the better. On this rectangle add circles for the eyes. Then add a couple of semi-circles coming off of the rectangle. These represent bulbs, pipe covers and other mechanical items. Let's turn one of these semi-circles into an aerial with three simple lines. Add a few tiny circles in a line to represent the nuts and bolts that are holding your robot together.



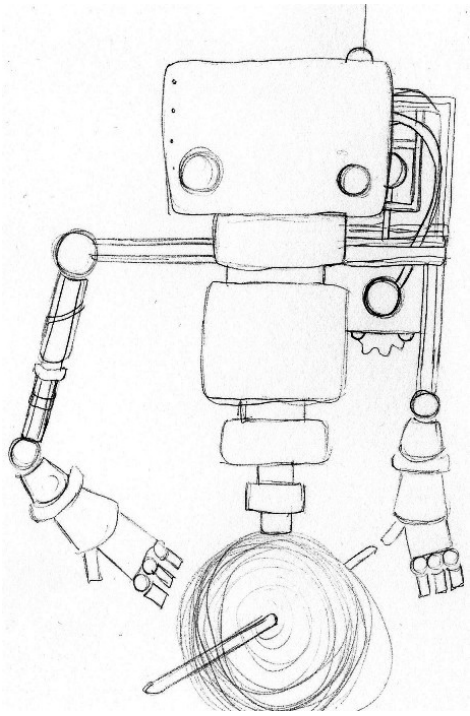
Step 2: Let's take a look at the shape of the robot body. Most robots will consist of squares and rectangles placed in various positions to create a vaguely humanoid shape. Here we have a sequence of rectangles, which grow increasingly smaller as we move towards the legs. A big square shape for the body always works well.



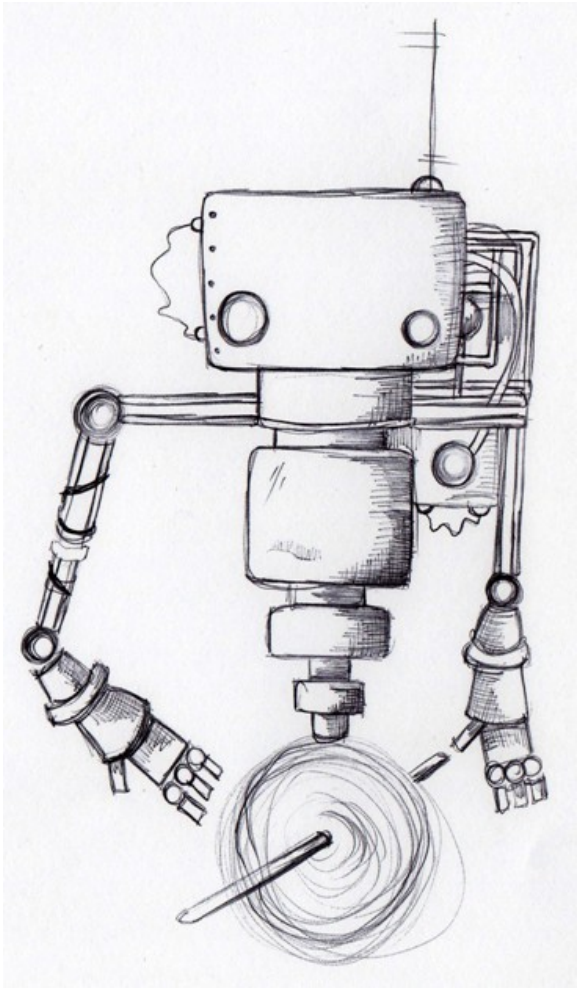
Step 3: Next we add some arms. These ones are long, thin rectangles which have incorporated circles into the joints, so that the arms can move. Remember, as robots, they do not have to be positioned in the same way that human limbs are.



Step 4: Now it's time to add more detail. You can add as many pipes, tubes, buttons and cogs as you wish. For the legs, we have drawn basic circular shapes to represent movement. In the middle of these we have added the cross-section of a pipe at both the front and back, indicating that there is a wheel in motion.

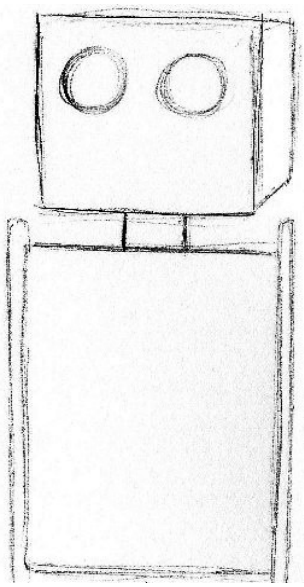


Step 5: Finally, add in smaller wires, electrodes and bulbs. Make some of the wires completely black. Add shading on one side of the robot to create the 3D effect, but leave large enough blank spaces to represent the fact that it is made out of rounded sheet metal.

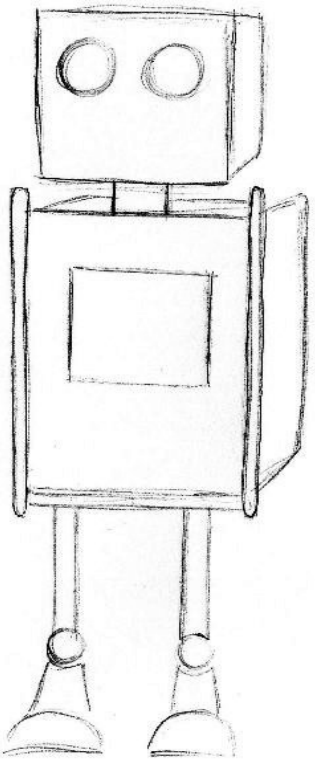


Guide 2: Scandroid

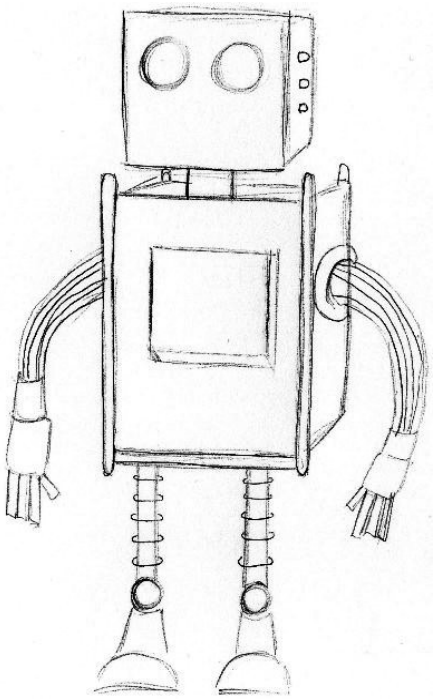
Step 1: This time start with a square and add in extra lines to make a 3D cuboid shape, some big circles for the eyes and a square body, with extra long tubing around the sides.



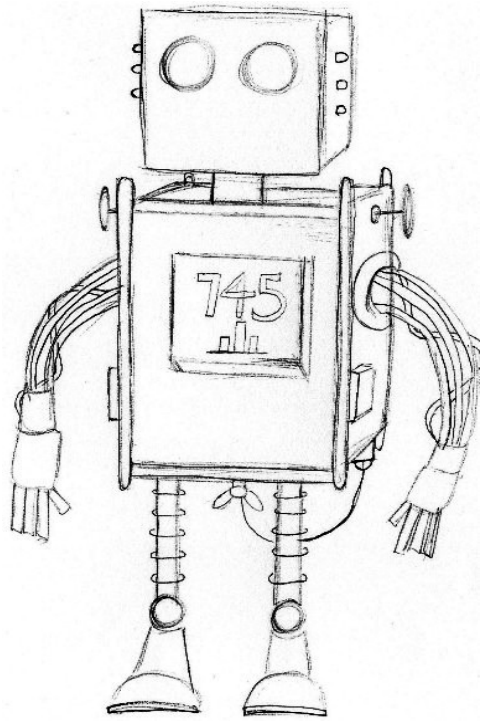
Step 2: Define the body with further 3D cuboid lines. Draw some basic shapes to create the legs. Remember that the 3D effect for the rounded pipes and feet will come from shading technique and the addition of objects around them.



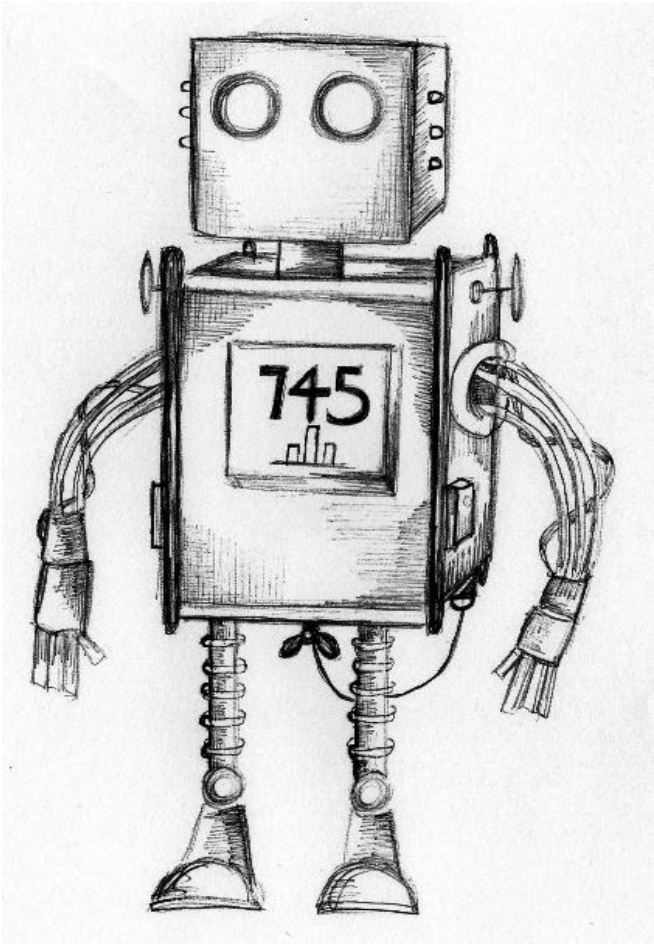
Step 3: This time the arms are not solid, so draw multiple tubes within the area that a solid are would normally take up. Add some hands on the end with a couple of squares and mini-rectangles. The ringed circles going behind the legs help create the 3D effect. Add in lines to create a 3D raised area on the chest square and a few circular bolts along the head.



Step 4: Draw in the tip of the matching bolts on the other side of the head. Add an extra wire to each arm, going around the others, for that authentic robot look. Some cogs or keys can be added by simply drawing some elongated ovals with a thick straight line protruding from parts of the body.

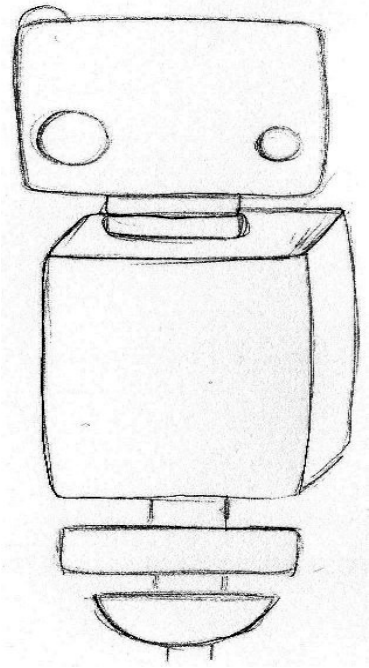


Step 5: Add shading to one side of the leg pipes, hands and feet. All four corners of the larger square areas at the front have received hatched shading to represent a metal surface.

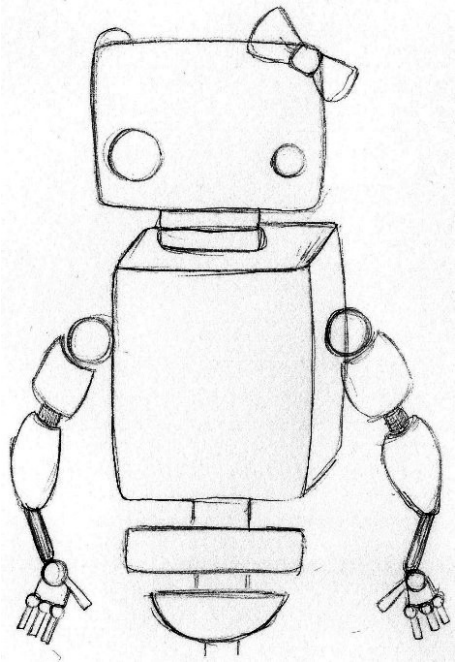


Guide 3: Rosie

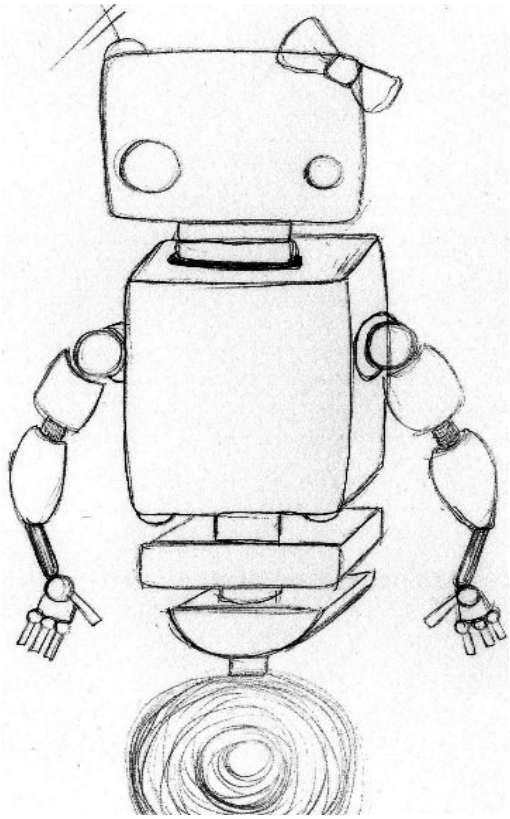
Step 1: There is unlimited variation when designing your robot, all from the use of simple squares, rectangles and circles, of all different sizes.



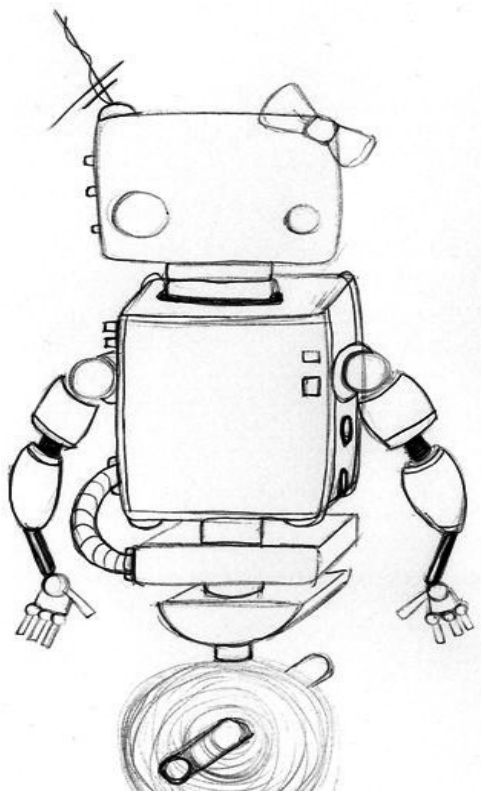
Step 2: As Rosie is a female robot, we add a bow onto her head. Draw the pipes and body part shapes as before.



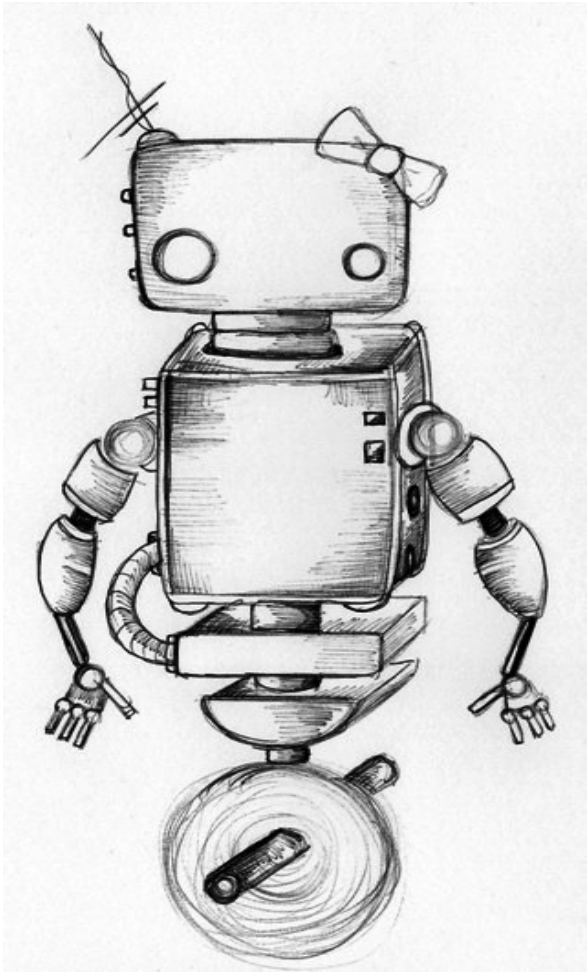
Step 3: As you can see, we have used parts that have already been covered, mixing and matching them to create a new robot.



Step 4: This time, add an extra wire running along the antenna, and blacken out some of the interconnecting pipes.

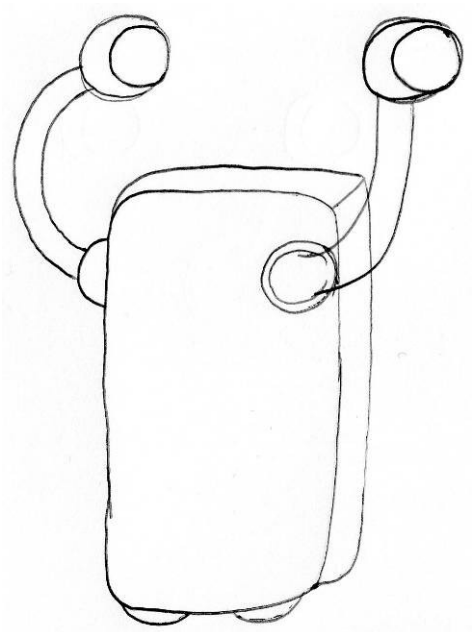


Step 5: Rosie has been shaded with horizontal line shading. Achieve this by moving the pencil across the page, pressing harder in the darker parts.

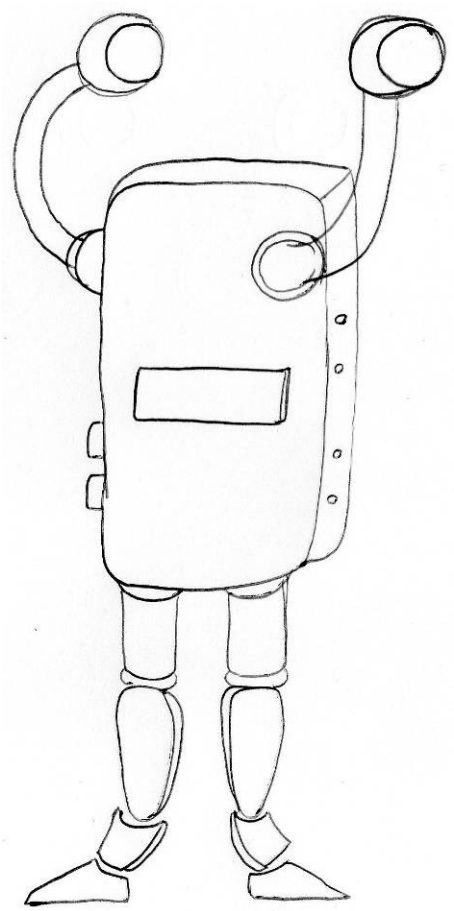


Guide 4: Scrappy

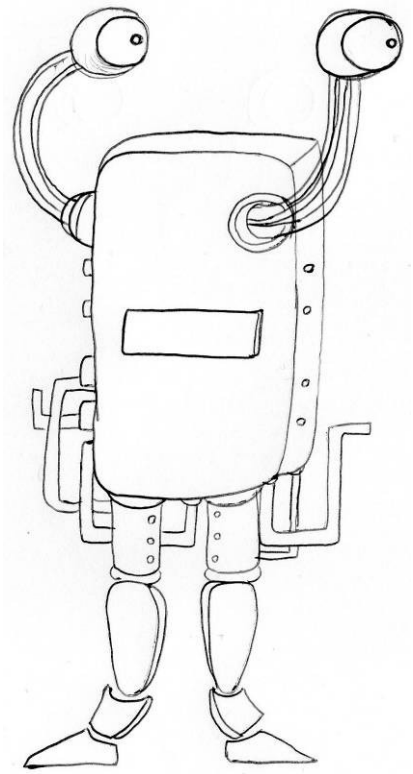
Step 1: Scrappy requires some guidelines to be drawn, which will become more detailed.



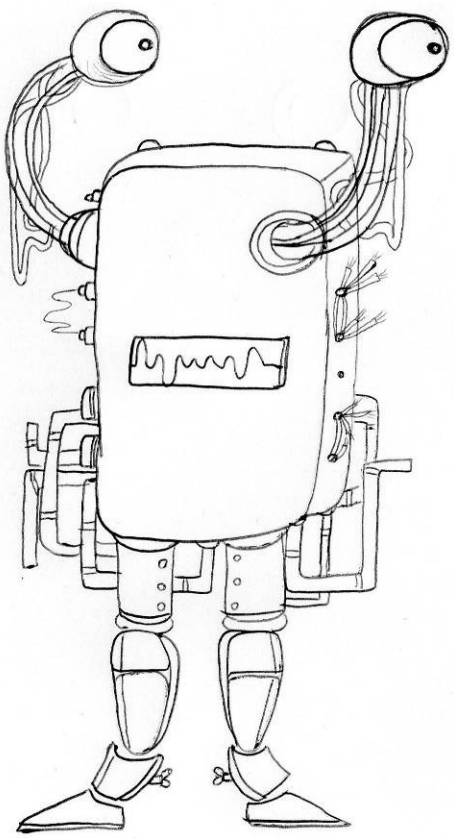
Step 2: Extend the basic outline to include legs and small features.



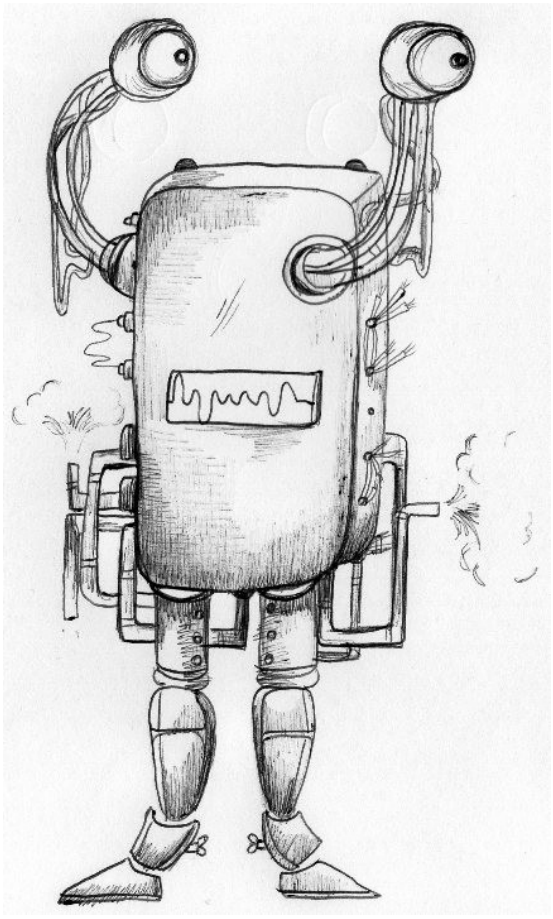
Step 3: Add to the initial lines to create wires for the eyes and a series of exhaust pipes behind Scrappy.



Step 4: The real detail is added now, with numerous wires, pipes and cogs.

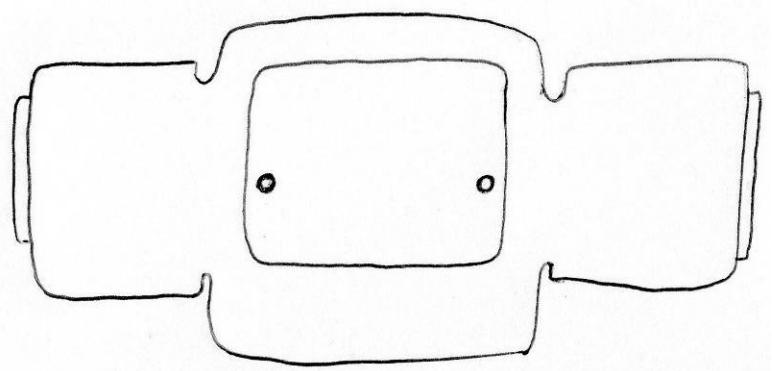


Step 5: Finally, shade Scrappy in the hatched technique. Also, add in semi-circular lines to represent exhaust smoke.

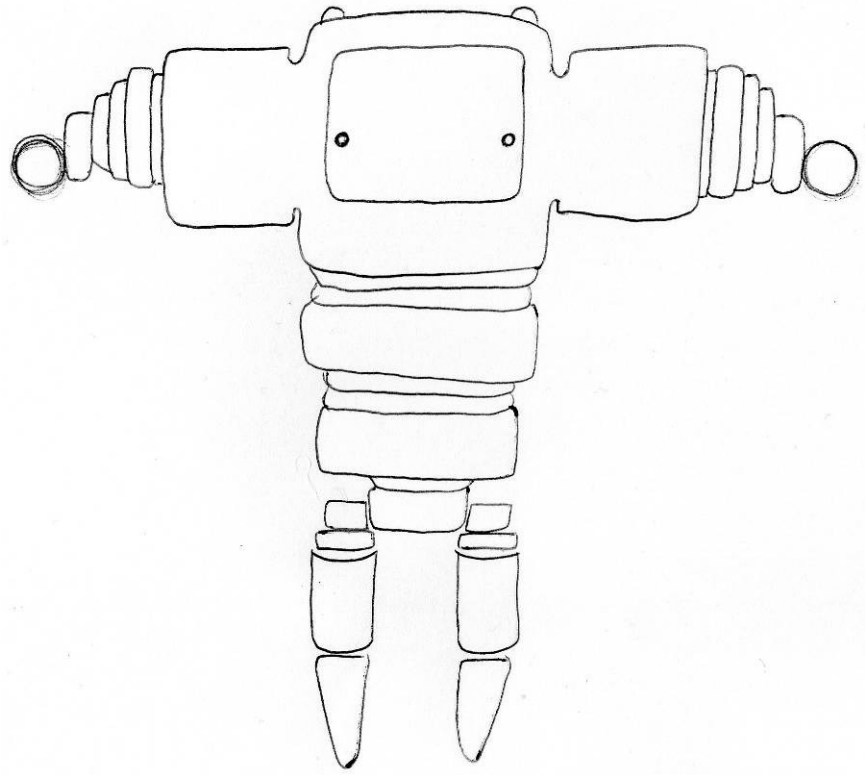


Guide 5: Clank

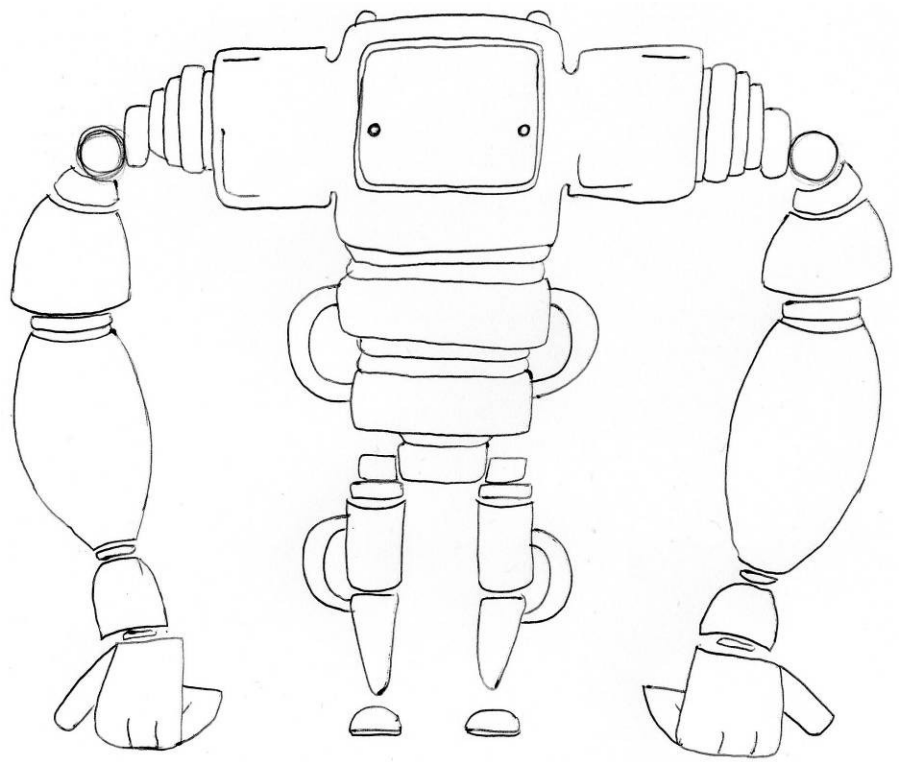
Step 1: Clank will have a front perspective, so start with a basic head shape. Here we have simply joined three squares loosely together.



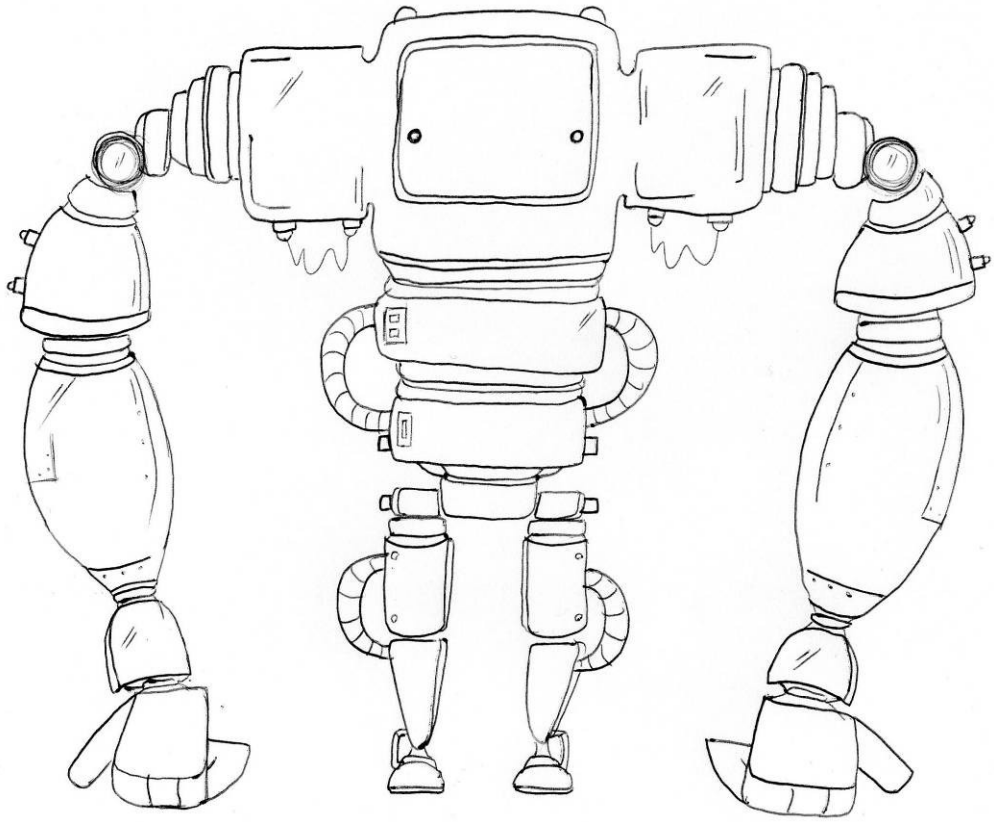
Step 2: Clank's unique feature is that his arms come out of his head! So add in a series of rounded rectangles for the body and shoulders.



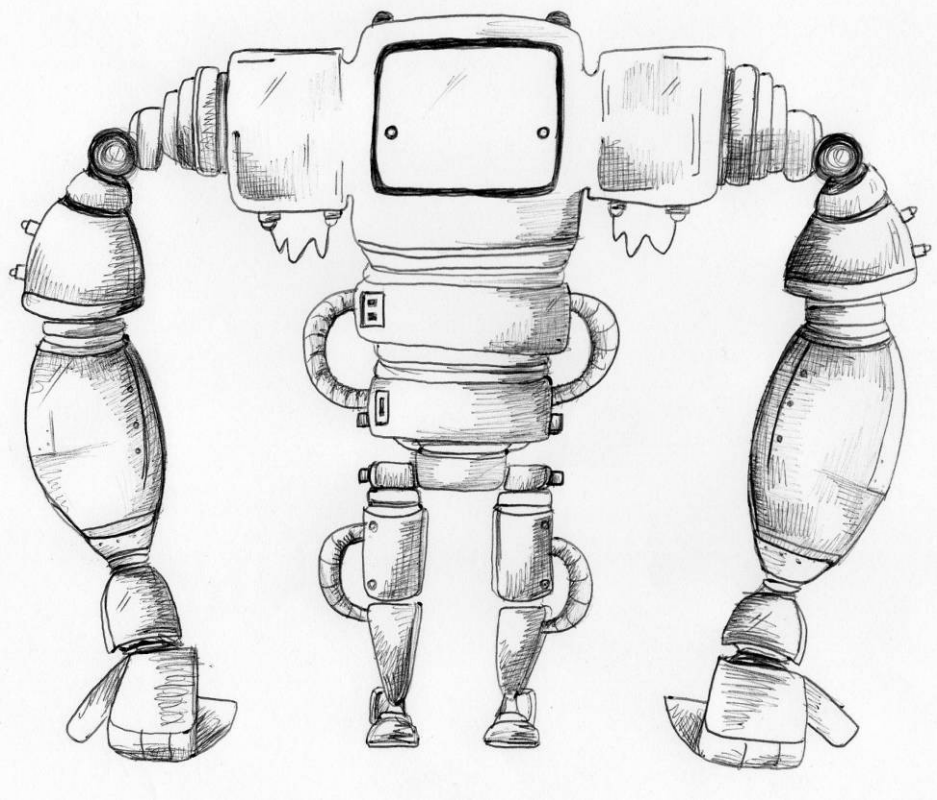
Step 3: Finish off Clank's giant arms with a mix of larger and smaller shapes, with folded knuckles and thumbs opposite to humans. Connect parts of the body together with large flexible pipes.



Step 4: Clank is a larger robot, so requires more detail to be added to fill the blank spaces. Add in lines at a 90 degree angle from each other and a few dots to represent metal plating. Add in detail to the flexible pipes and install wires, bolts and bulbs wherever you choose.

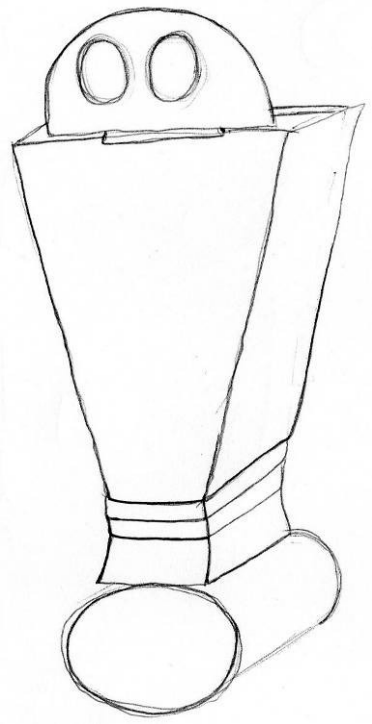


Step 5: On the shoulders, don't bring the shading right to the edge. add in a couple of lines to represent scuff an shine marks on the larger white parts.

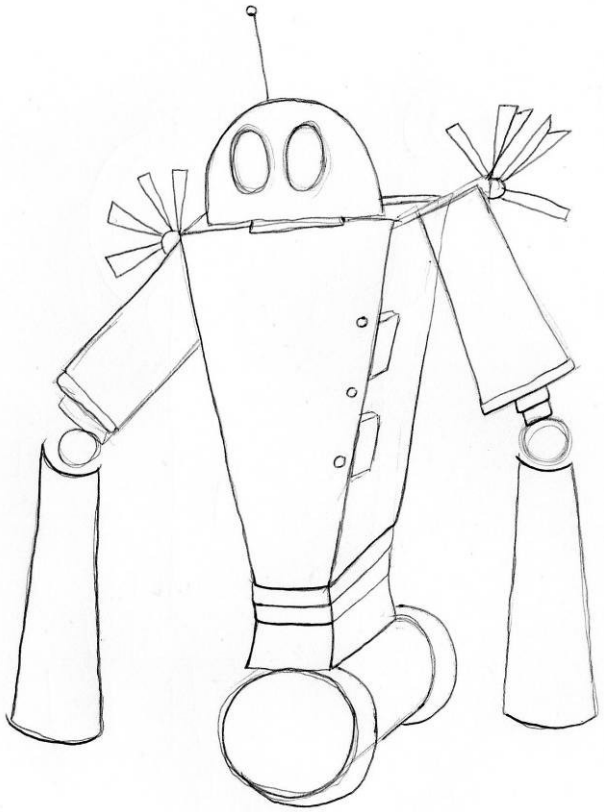


Guide 6: Sparky

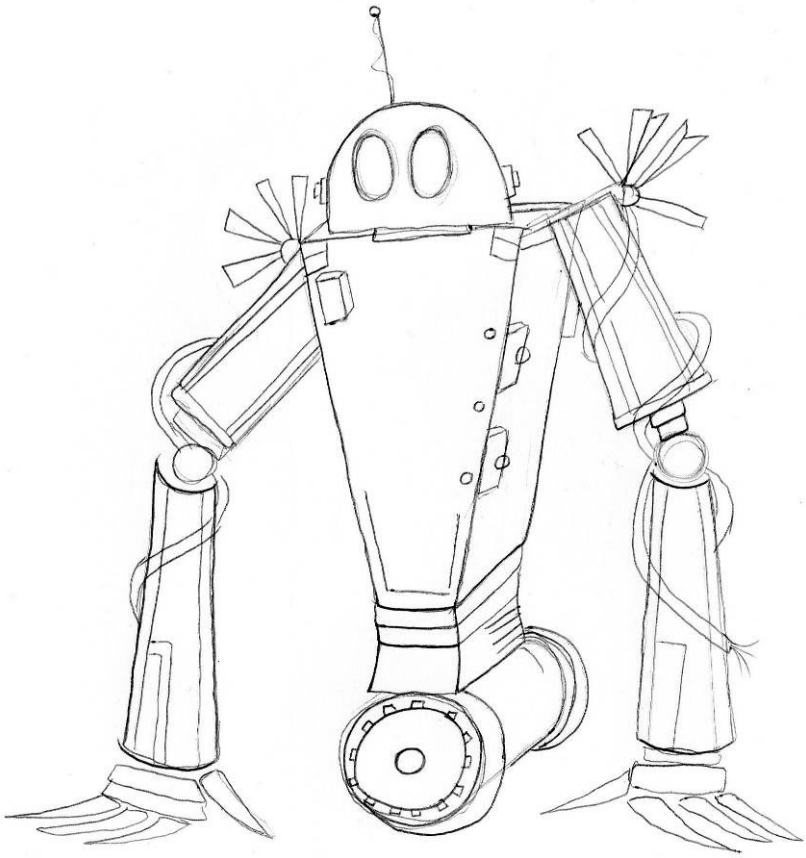
Step 1: Sparky has a thicker body than the other robots, so go large with the outline.



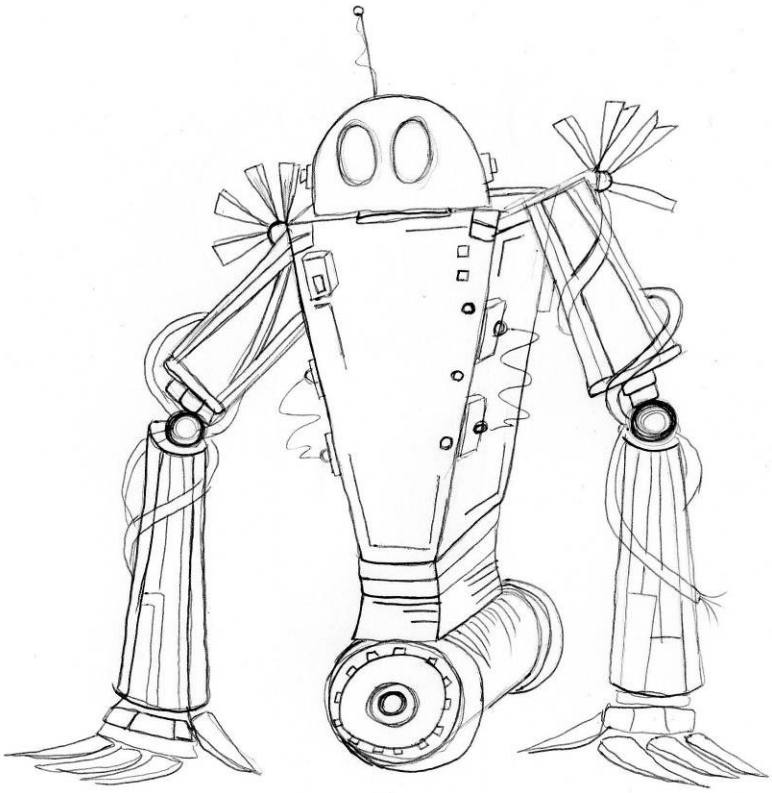
Step 2: Add some big arms to match Sparky's body.



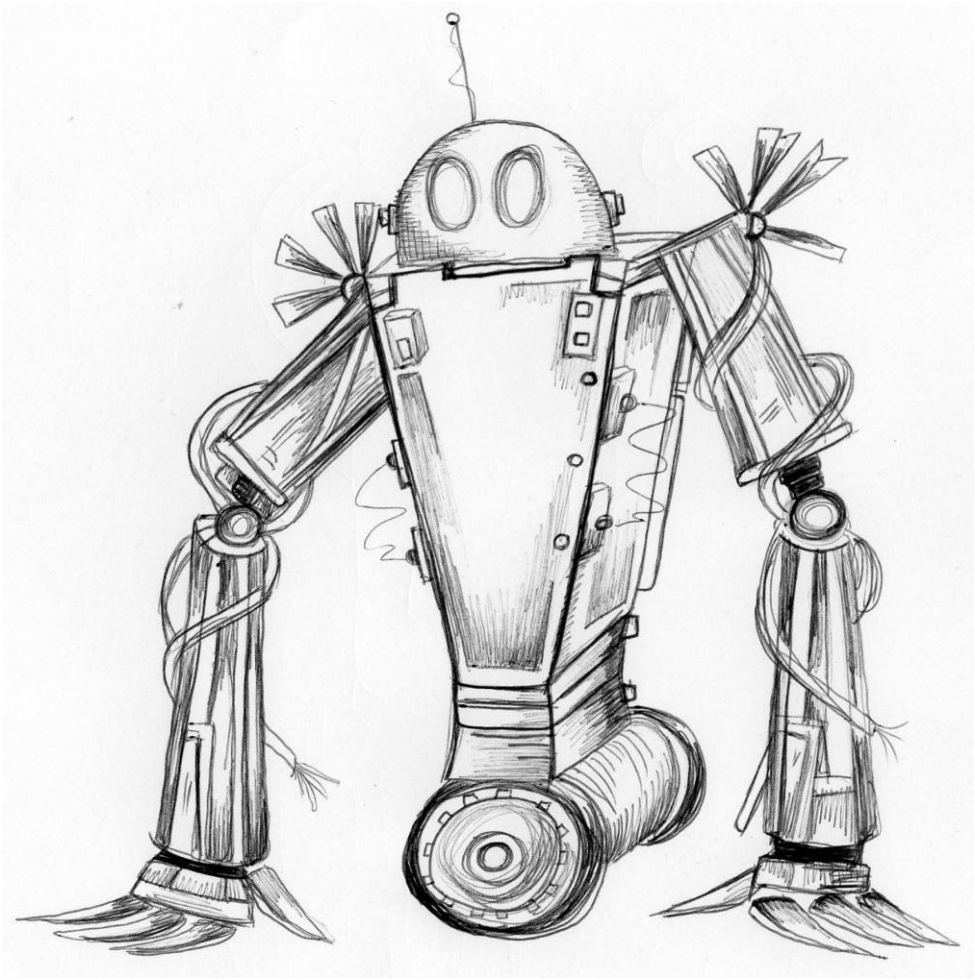
Step 3: Sparky really comes to life with the addition of multiple wires. Spread the fingers out on the ground and add detail to the body parts with simple lines.



Step 4: Add character to Sparky by sharply defining some of the earlier lines. Add further lines that follow the outline or contours of the flat areas.

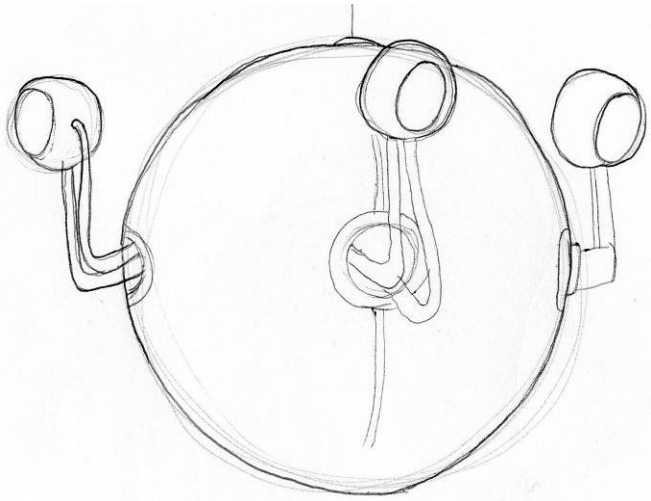


Step 5: Sparky's shading is a combination of all the techniques we have seen so far. Add vertical line shading to the body and arms and hatched line shading to the head.

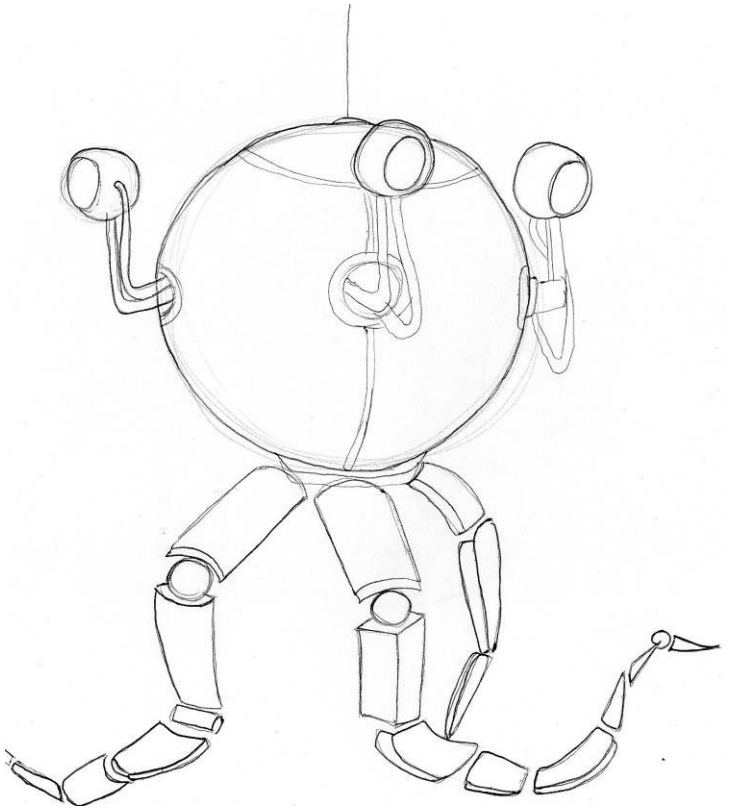


Guide 7: Globatron

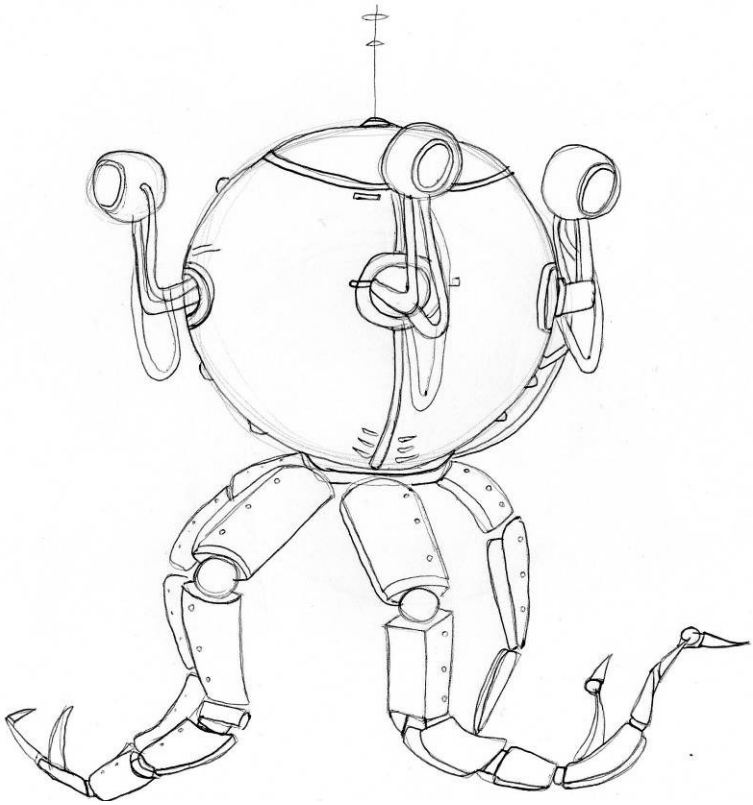
Step 1: Popular culture (films, video games) love the image of a round robotic head with multiple legs. So I will show you how their artists achieve this look. Begin with a large circle and add in eye stalk details.



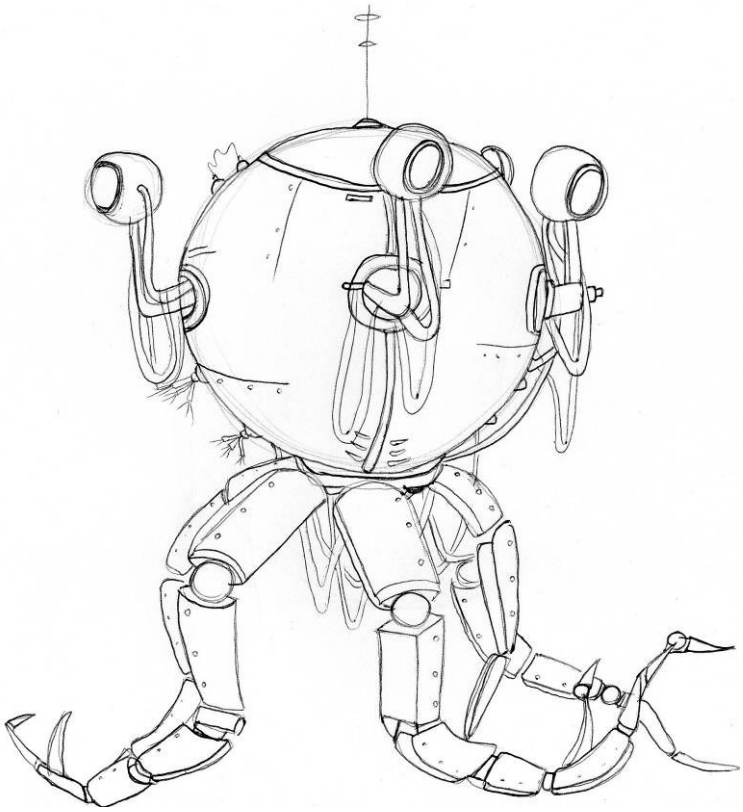
Step 2: Begin to add in the leg outline. Remember that these need to be very flexible, as they are tentacle-like, so add plenty of movement.



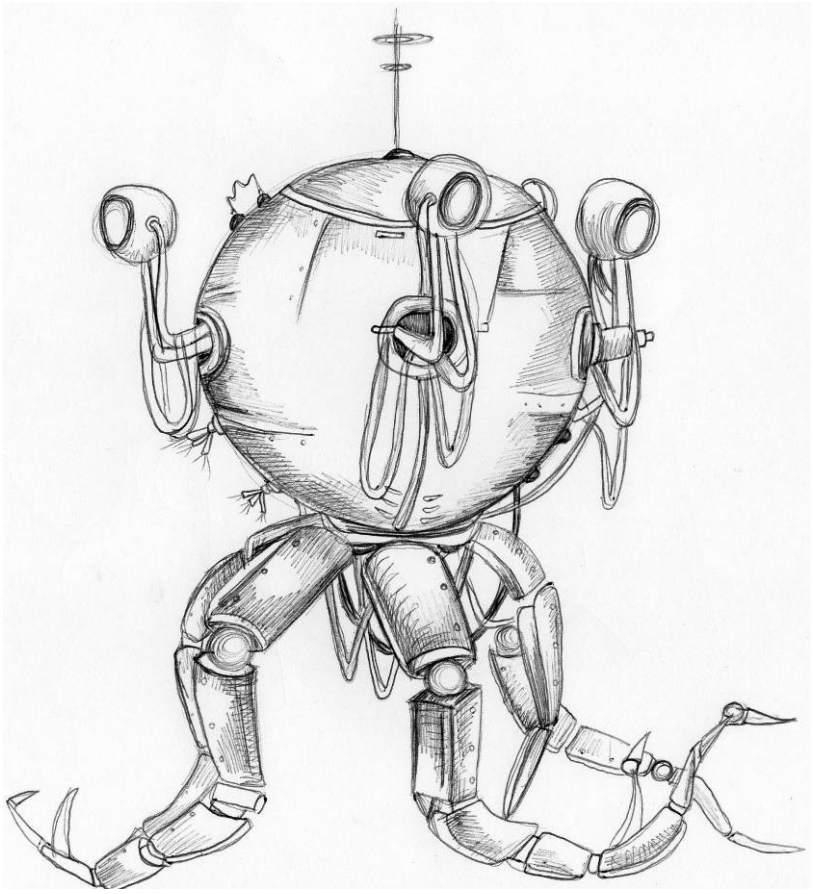
Step 3: Add the usual robot-like details to Globatron. Make sure you put the bolts in the same place down each leg for consistency.



Step 4: The globe head requires curved lines to emphasise the 3D effect.

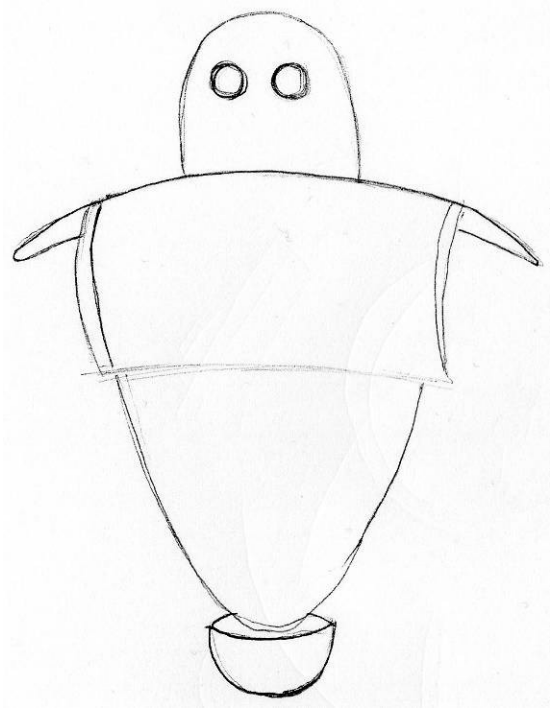


Step 5: Pay close attention to the direction of the shading on the head and legs. Try to imagine where the shadows would fall on a globe or rounded surface.

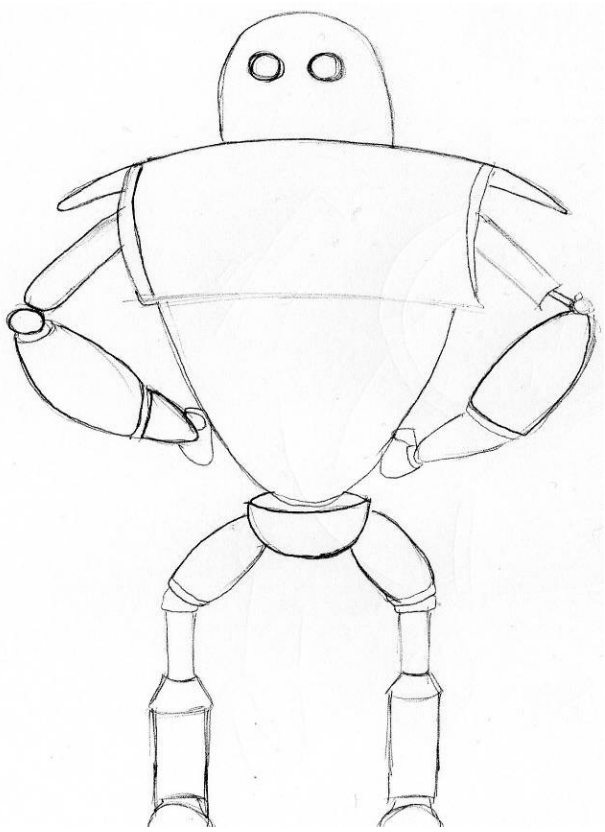


Guide 8: Auto-Bob

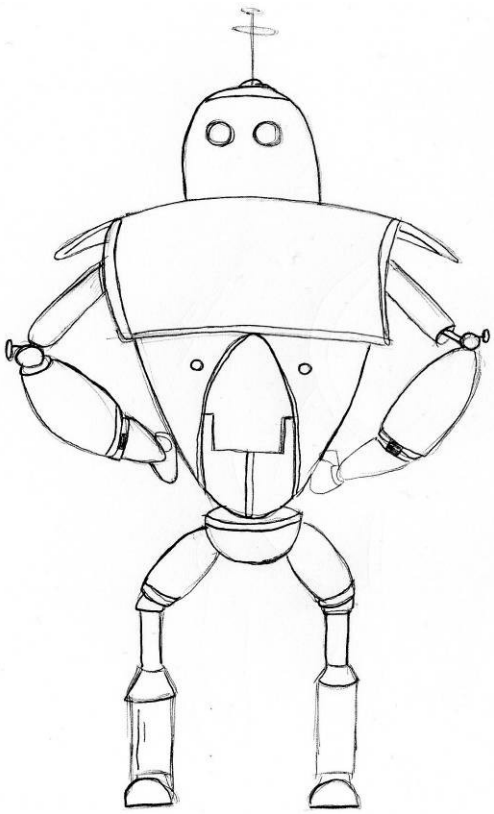
Step 1: Meet Auto-Bob. He is a sentry robot and will be adopting a guard stance. Firstly, draw his chest larger than his waist to give a muscular V-shape.



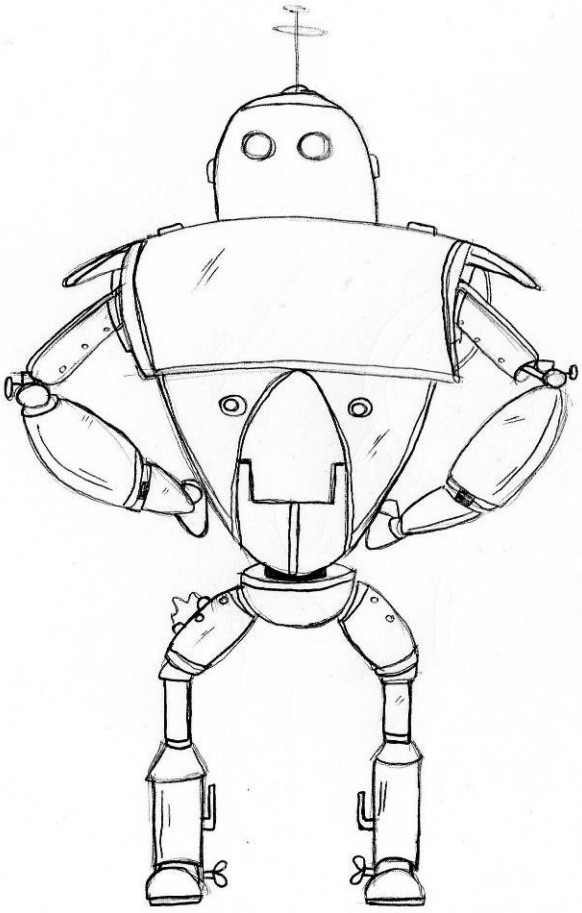
Step 2: Add in those hands on his hips, so he looks like he means business! Legs set shoulder length apart. None shall pass Auto-Bob!



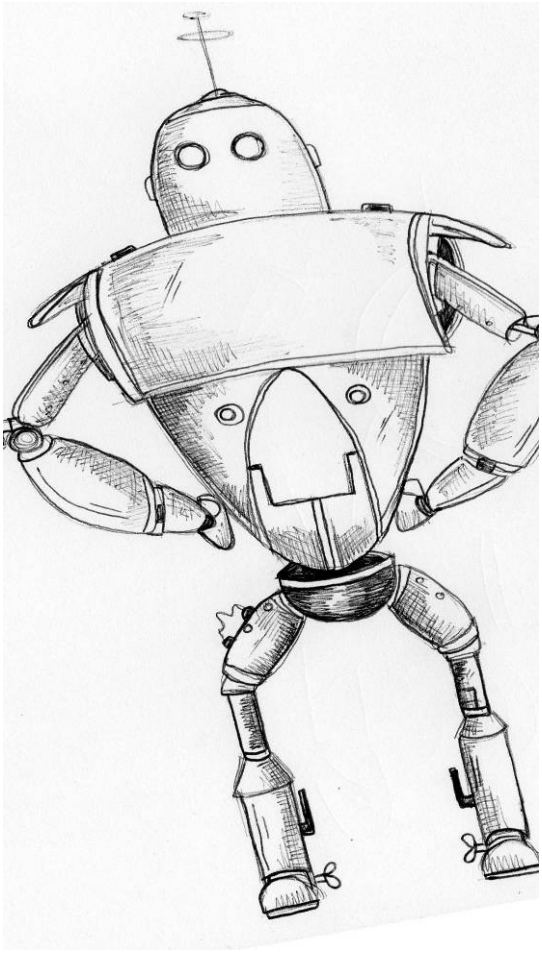
Step 3: The shoulder pads reflect the idea of rank badges on a uniform.



Step 4: The harshness of the thick lines adds to the overall dominant feel of Auto-Bob.

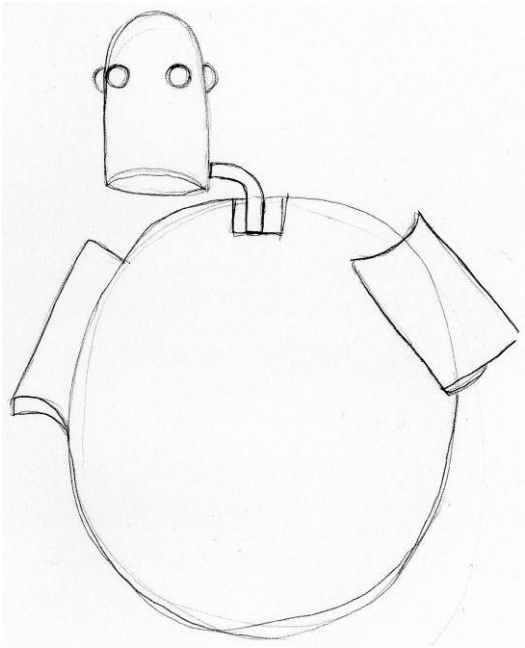


Step 5: Add cowboy spurs with a couple of cogs on the ankles. Add in sketch line shading, the roughness adds to his character. You can offset the angle of his stance to give the appearance that he is looking down on you!

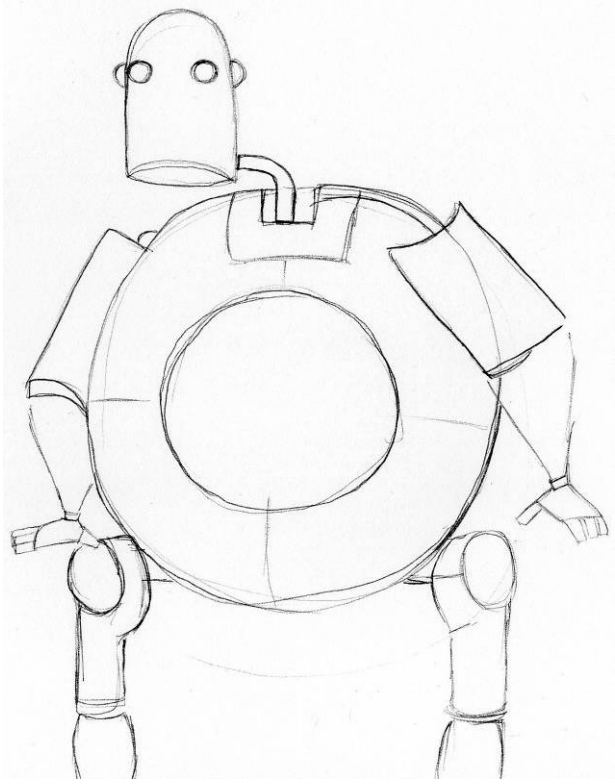


Guide 9: Big Mek

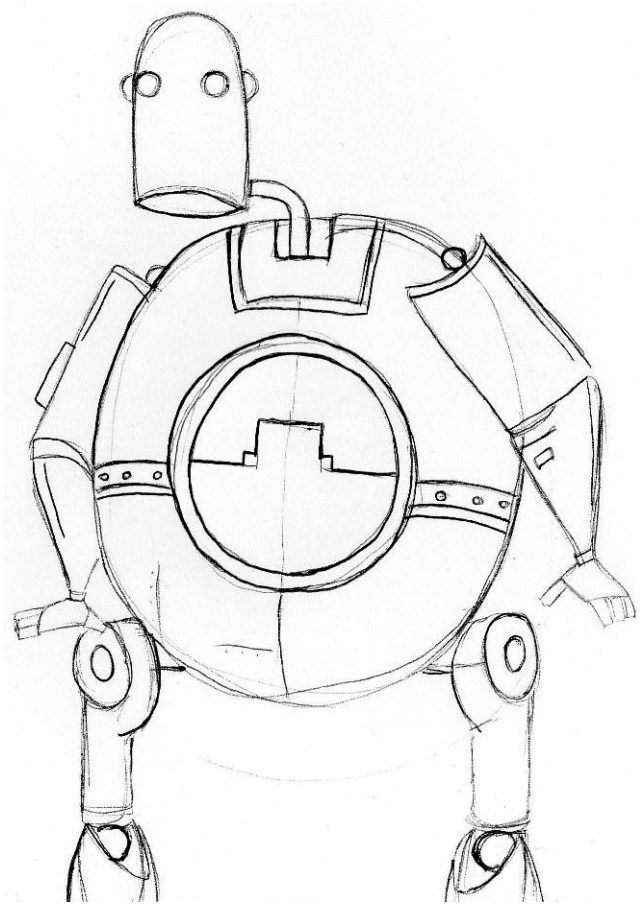
Step 1: Big Mek gets his name from his huge round body, so begin with this feature.



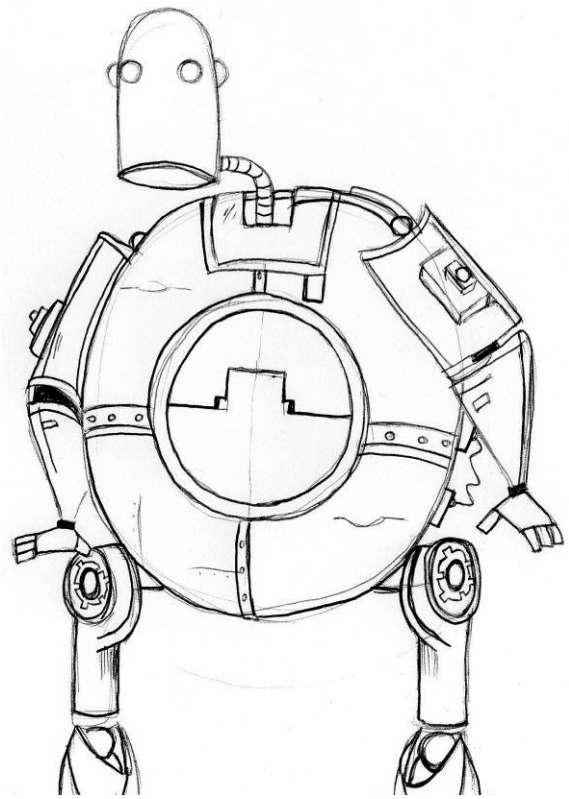
Step 2: Big Mek needs his legs placed wide apart to support his weight.



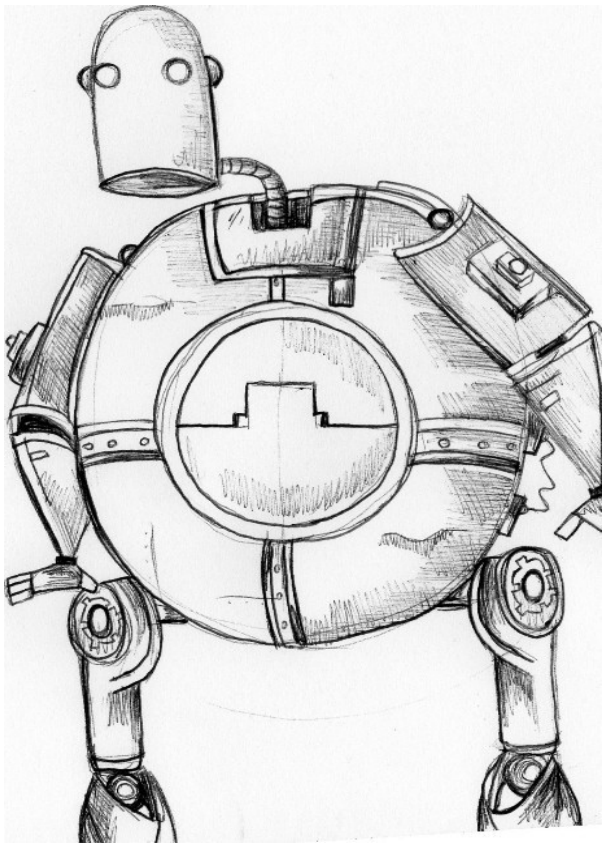
Step 3: Add plenty of detail, particularly to the body, which is the main feature of this robot.



Step 4: You can add dents to robots by drawing a squiggly line in flat places (yes, squiggly is a technical term!). I have added 3 of these to the body. Define the outer details with the usual array of bolts, wires, bulbs and pipes.

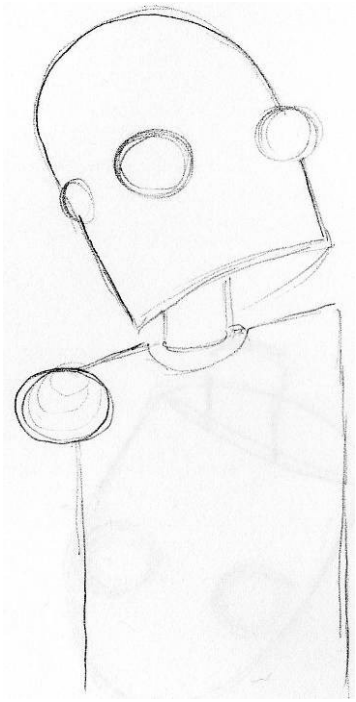


Step 5: Shade beneath the dents to add depth. Hatch shading on the head, line shading on the arms and legs and a combination of both on the body.

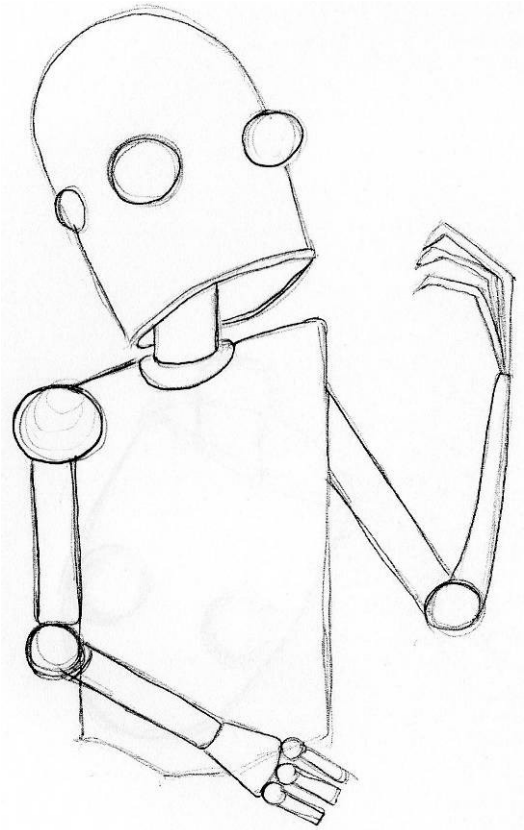


Guide 10: Emotibot

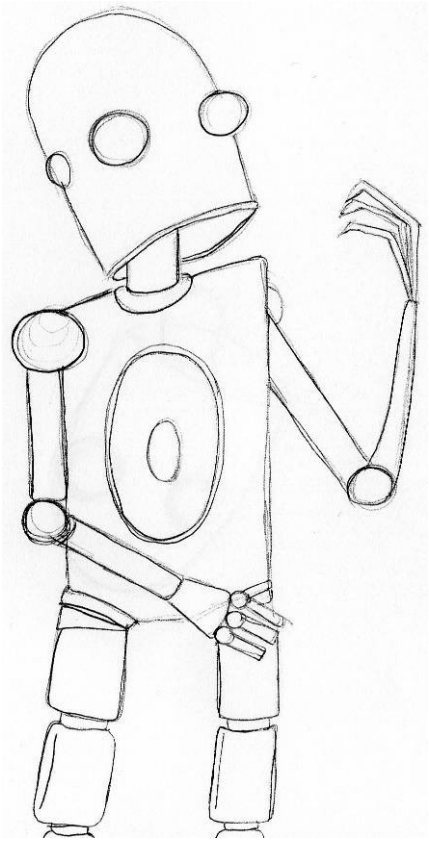
Step 1: Emotibot thinks he is a Shakespearian actor! The downward slanting of the bottom of his head gives the impression of emotion and the tilt of the head upwards represents alertness.



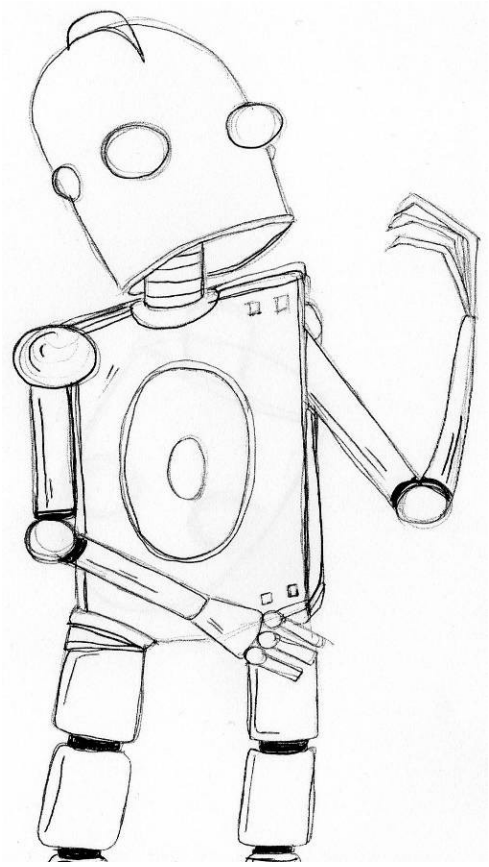
Step 2: Adopt a classic emotional pose with the positioning of the arms and hands.



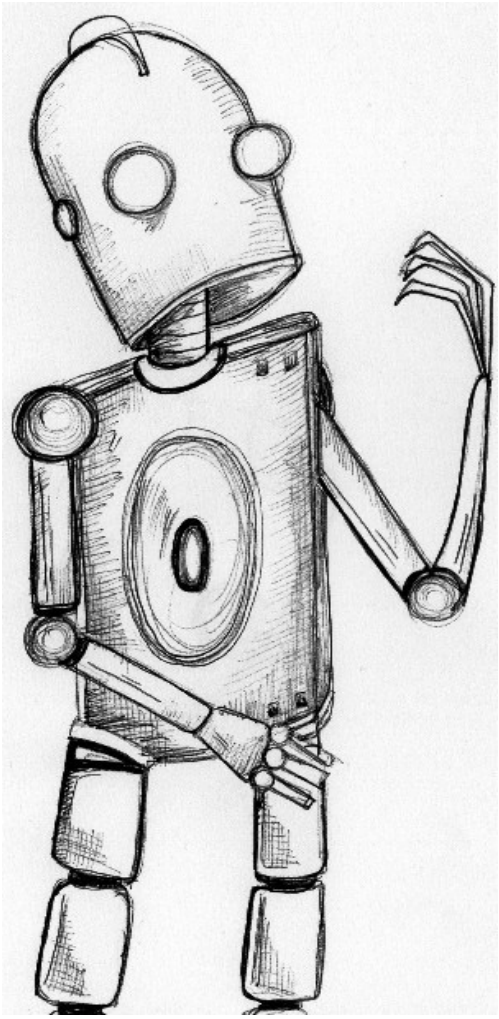
Step 3: Add in some basic features, but not too many, as this robot is built to represent basic human emotions.



Step 4: Continue to pick out the most important lines, darkening as you go.



Step 5: If you are trying to represent a darker emotion, such as sadness, then have the shading reflect this. Lighter emotions require lighter shading.



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And finally...

I hope you have enjoyed seeing these mechanical creations come to life and have learnt about the techniques I use to achieve these results.

You can see more of my artwork and read more of my eBooks on my website:

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