## How-To Article – Create Highlights With Illustrator By Using A Mask

I've always liked to add a little bit of a highlight to the outer edge of my artwork, but for the longest time had no idea how to make it work perfectly. I would always just draw a new shape on top of the main object and bring it as close to the edge as possible, but I knew it would never be perfect. I also knew I should get around to learning more about masks in illustrator (as every graphic illustrator should) and one day both came together to solve my problem.

To add a highlight, select your object, open the transparency panel and double click in the blank area next to your object. This will create a black box where you double-clicked and will "erase" your artwork.
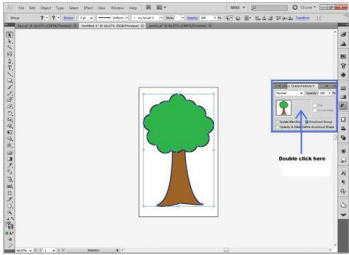
Then, take the pen tool and draw any shape you want over the empty space where your object used to be. This will allow part of your object to show through.
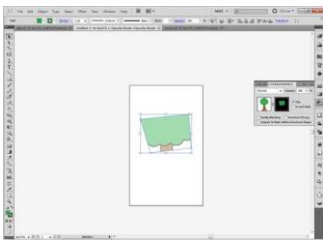
Finally, in the transparency panel, deselect "clip" and select "invert mask".
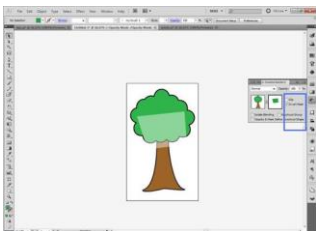
Now you have a lighter shape on top of your main object. Bend the anchor points around (add more if you want) and shape it into the highlight you want for your main object.
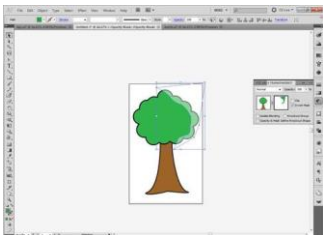
Using a mask in illustrator allows you to do many things, including creating highlights and shadows.

How-To Article – Designing A Cartoon Character

Drawing your own cartoon character is a fun and exciting experience, and you only get better with each successive drawing. There are tons of ways to design a character and these are the best guidelines that have worked for me.

Remember that you can draw however you want, but I hope some of these tips will make it easier for you to begin your design or take it to the next level. Remember not to get too detailed. After all, we are trying to create a cartoon, which is meant to be a little less than real. Simple shapes work the best and can be easily tweaked to look more natural. Curved lines make for the nicest looking cartoons, though softened edges work just as well.

The best thing you can do before you begin to design a character is to study your favorite cartoon characters. Take a close look at what basic shapes are used, where lines connect to one another, where they break apart, and what color combinations are used. Look at photos of people as well to get a solid idea of what real life looks like in relation to clothing texture, skin tone, and the basic shapes of the human form. Just remember that we won't be getting too detailed, as we are designing cartoons, not realistic drawings. The key will be using simple shapes and the pen tool and tweaking these shapes until they look more natural, not perfect.

**NOTE: These tips are meant for drawing a cartoon character in Adobe Illustrator CS5. Some tools and terminology may not match up, depending on the program you are using. The tips here also assume that you have some level of experience with the pen tool, the color mixer, layers, the selection tools and other basic elements of Illustrator.

Drawing the head

Cartoon heads come in many different shapes and sizes, but most are formed from a basic circle or square. Starting with these will make it easy to read the shape as a person's head and will not be too distracting to the viewer. I prefer to use a circle or square for the top 2/3 of the head, adding an anchor point on either side of the shape 2/3 of the way down, and then deleting the bottom segment.

Developing a chin

Finishing the face with an oval or triangle for the chin will give a more realistic feel without being too detailed. An oval or circle will add a rounded feel (obviously), and will also allow for a character to have some form of a chin. A slightly sharpened oval or a smooth triangle will give an even better effect.

Connecting the dots

To connect the main head shape and the chin, just select both and go to window---pathfinder---unite. Both shapes will become one, and some adjusting may be needed at the connection points. The key is to not get too detailed, as we want our character to be "cartoony" in the end.

Cartoon eyes

The eyes are always fun to make, containing many different parts and many different options. I commonly use a sideways oval, but many use perfect circles for the outer eye. The pupil works best when it's a perfect circle, but some artists prefer sideways ovals. Finally, a black circle for the pupil is a standard.

When you design a character's eyes, regular white (#FFFFFF) is a good way to go. For the iris, most artists use a solid fill, but I like to use a radial gradient with the pupil at the center. With blue eyes, for example, I will blend RGB blue (#0000FF) with an offset lighter blue (#00B7FF) and set the gradient to radial. This gives an interesting blend from one blue to the other, and the transition isn't too distracting as most of it takes place hidden behind the pupil. Choose more distant shades of color to make the transition all that much more powerful.

Eyeball detail

Finally, on the pupil itself, you can add a very small, white, sideways oval and adjust it to cover the top ¼ of the pupil. This will serve as a highlight from a light shining in the eyes of our character. Test out your drawing with the highlight, then without and see how great of a difference there is in the overall face.

Noses

A nose can be drawn almost any way you want. From basic shapes to objects to random squiggles, it's all been done. I like to do either a pointed nose (basically a triangle minus one side) or a curved nose (basically an oval without one side). The big decision to be made is with the bridge of the nose. One interesting way to do it is to draw a line directly up from the upper corner of the nose to the eye. You can go up to the bottom of the eye, or the top, or beyond, it's up to you. You can even leave this feature out if you wish.

Ears

Ears may seem like an uninteresting part of the drawing, but there are many different styles to choose from. For the most part, they are circles, but ovals, squares, triangles and almost any shape that's reasonably familiar will do. Most important of all is how to add detail within the ear. Take a look at any number of animated shows and you will see that sometimes they design a character to have a "3" in their ear, some have a "6", and others have a "T" or a "J", while others have nothing at all. Depending how authentic you want to be, look at your own ear in the mirror and try to figure out what the best shape would be. The basic rule is that it will be one or two simple lines, nothing too detailed.

Mouths

Mouths are very simple most of the time, and have basically two styles: a simple line for guys and lips for girls. Using the pen tool in illustrator and drawing a straight line with 3 anchor points will give you plenty of versatility for smiles, frowns and blank looks.

For lips, an extra anchor point is needed, having 2 points near the center and one on each end. Just curve the outer points upward to make a semi oval on both sides of the center points. Use the center points to create a small line and that's it. For the bottom of the mouth, three points is all you need. Just curve the center point and pull it down to make another semi oval stretching the length of the mouth.

Drawing the body

The body is clearly the area that will take the most time. Or is it? Chances are, as long as you keep it simple, it really shouldn't take as long as the face. All you need is a neck, a body and arms.

Those are some of the ways I go about designing a character. There are many methods and it's up to you which ones you choose. Remember to just have fun when drawing a new character. There is no right or wrong ways to do it, just a few ideas on how it's been done before. Enjoy yourself and be sure to share your work for others to see and learn from as well.

For the neck, I like to use a tall rectangle with the sides curved in. The key is to hide the top and bottom of the neck behind the head and shirt, respectively. It's a very simple part of the drawing and very quick to create a good one.

The arms

The arms are next; don't worry about the body yet. Draw a line almost directly outward from the neck, then curve down. Take a look at the head and neck to try and estimate how long the arms should be. A good measurement will likely be 2-3 heads for a long shirt, or 1 head length for a t-shirt. Continue the line across to create the sleeve, and

then curve back up to the armpit to complete the shape.

Secret tip Copy and paste this shape by going to Object --- Transform --- Reflect and choose "Vertical". Then, use the Window --- Align panel to line up the two shapes vertically. Place the new arm under the head and neck in about the same relative position as the first arm. This will keep things a bit more even and save a lot of drawing time.

The body

With the arms in place, drawing the body is pretty simple. Just draw a basic rectangle shape, with the sides "hidden" behind the arms. To make this easier, give the arms a fill color. For now the rectangle will be on top, but we'll adjust it later. Curve the top of the rectangle however you wish for the top of the shirt, depending on a t-shirt, V-neck, turtleneck or whatever style your character wants to wear. Finally, do the same at the bottom, again based on the style of shirt. Feel free to curve a few corner points to flare out the ends of the shirt, like we did for the shirt sleeves. You can even add anchor points all around the shirt and curve each one, moving them in and out from the body to add more flow.

The hand

To me, the hands are the hardest part to draw on a cartoon character. To make them look real AND simple is sometimes a tough task, especially when trying to draw them in a realistic pose. I like to do ovals for each finger and a circle for the hand, combining all the pieces into one shape with the pathfinder. Most characters have 3 fingers and a thumb to keep thing simpler, and to keep the fingers from looking too thin.

The wrist is a bit tough to figure out, but just remember that the line from wrist to thumb is more curved than the line from wrist to pinky. Thankfully, most of the wrist can be hidden underneath a long sleeve shirt. Some artists even have their characters cross-armed to hide the fingers.

The legs

Legs are about as easy to draw as the arms, maybe even simpler. I like to use a rectangle shape, curving a bit on its way down and flaring a bit on the end of the pants. You can also cover up the end of the pant leg with a rounded rectangle to give a loose, baggy look to the pants. Be sure to add a few extra anchor points and smoothly curve each one to make the material flow a bit more realistically.

Leg angles

Depending on the character's stance, you can draw both pant legs in a number of ways. For a straightforward stance, two rectangles side by side works very well. For a tilted stance, try drawing one pant leg longer than the other, with no division between them. Remember, the more distant leg will be a bit shorter than the other, as it is farther away from the viewer. Go back and draw a curved line up the center to show the difference between the legs. Don't forget to add some pockets as well.

Shoes

Shoes can get a little tough, but a basic sneaker works pretty well, especially if you hide the details behind the front end of the sneaker. Decide on the angle of the shoe and draw a basic rectangle that gets smaller towards the top. Adjust the lower anchor points based on the angle of the shoe and you have your base shape. Add a few lines and laces for the shoe. Draw a semicircle shape to cover most of the shoe's front end and finish it off with the sole of the shoe, angled so it tapers away as it goes farther back. This can be done simply with a shape that mirrors that of the main shoe, adjusted to sit underneath the entire drawing.

Other tips

After all of that is done, you will want to go back through and tweak little details here and there to make the lines flow better and look a little more "Cartoonish". Here are a few other tips for creating and editing your new character design.

Keep things even

When you design a character in Illustrator, the best way to keep things even in your work (or at last partially even) is to simply copy, paste and reflect your artwork. Once you have completed a part of your drawing, such as an arm, simply paste a copy to the other side of the character. Use Object --- Transform --- Reflect (vertical) to flip it. Tweak the anchor points a bit, place it a little off center and maybe even add an extra detail or two for a more natural look. Theoretically, you could draw one full half-person and use this method to develop the missing side, but it would look strangely perfect and not realistic enough.

Overextending lines

A classic cartooning trick is the overextended line. For example, take a look at some cartoons and notice that most of their ears are not simply designed of a perfectly attached circle. Rather, most of them have a little extra line

connecting the ear to the side of the face. Notice the inner elbow and knee when the limbs are bent and they will also commonly have this type of line. This style gives an extra little something to the overall drawing.

Adding shadows

A major addition to your character design should be shadows. Light shadowing can make everything pop a little bit more and if done right, will look very professional.

First, choose where your light source will be coming from. Draw a thin shadow on the side of the face and have the shadow come to a point at the chin, while getting wider and wider up to the hair. Add a rectangular shadow on the neck and curve the line inward a bit for a smooth, flowing look. Create a circular shape on the character's shoulder, representing their head and continue the shape down in rectangular form down the side of the arm. Another rectangle down the pant leg, bending a bit depending on the bend of the knee, will finish it off very well. Finally, if you like, you can add a curved shadow to the large top of the shoe as well.

When coloring the shadows, there are two options. If you will not be printing your work, the easiest option is to create black shapes with a lowered opacity. This allows the color of skin, material and anything else come through without having to perfectly match any colors. Unfortunately, most printers will not be able to figure this out and will pour one color on the page with black on top of it, making it look odd when the print is dried.

The other option is to match the color of the material, then use the color mixer to choose a slightly darker tone. The trick here is to make your color decisions in relation to each other. You don't want to imply a very dark shadow on the shirt, followed by a slightly dark shadow on the pants. A good way to figure out the colors when you design a character is to render a copy of your work with the faded black shapes, then open the JPG and choose the colors that appear when the artwork is flattened.

Offsetting shadows

To make this entire look a bit more natural, offset the connections between one shadow and the next. For example, the shadow on a t-shirt sleeve can be so wide, and then the shadow on the arm itself can be a bit thinner or wider so the two shadows don't match perfectly, giving a little more style to the drawing.

Cleaning up the edges

Finally, be sure to cover up the messy edges of your shadows. Zoom in close and let the shadows flow onto the object's outline, but not completely off the object. Then, copy and paste the main object on top of itself and remove the fill color. You will now have a perfectly positioned line sitting on top of the outer edge of the shadow, hiding the

messy edge. Go back through and delete any line segments that aren't needed and continue the process for all your shadows.

Clothing

Remember to keep the clothes a bit loose. Remember gravity when designing your character. If the arm is held upward, the sleeve would likely ride up a bit and be shorter, along with the top of the sleeve pushing right against the skin, while the bottom of the sleeve would loosely hang down below. Most clothes are not skin tight, so chances are that there will be some ruffles in the material. Just add a few lines here and there, primarily around elbows and knees, using solid black lines or use a darkened color based on the clothes.

Outlines

Have some fun with the outlining options. Try a number of different brushes and width weights, but try to keep all parts of your character similar with their outlines. A solidly outlined head will look a bit odd when connected to a paintbrush-outlined neck.

A fun trick for outlining is to copy the main object (the head, for example), and paste it behind the original artwork. Fill it with black and resize it to show out from behind the main head. Turn off the main head's outline and you can now widen and thin out any part of the outline you wish. Decide on a style (like having a wider outline when an area is closer to the viewer) and do this all around the character.

"Expand" and "Expand Appearance"

Another way to manipulate the lines is to select any object and choose Object --- Expand or Object --- Expand Appearance. These will allow you to change the outline from a stroke into a filled shape, which adds anchor points that can be bent around and placed where you see fit.

Character complete!

Those are some of the ways I go about designing a cartoon character. There are many methods and it's up to you which ones you choose. Remember to just have fun when drawing a new character. There are no right or wrong ways to do it, just a few ideas on how it's been done before. Enjoy yourself and be sure to share your work for others to see and learn from as well.