

BASICS: VOLUME — ROUNDNESS

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An Art Skills Tutorial

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GEOMETRIC SOLIDS

For the following lessons a set geometric solids will come in handy. They are usually available for purchase at a teachers store.

Values will be somewhat clearer if they are white, however, if they are wooden, you will still be able to see the differences in value.

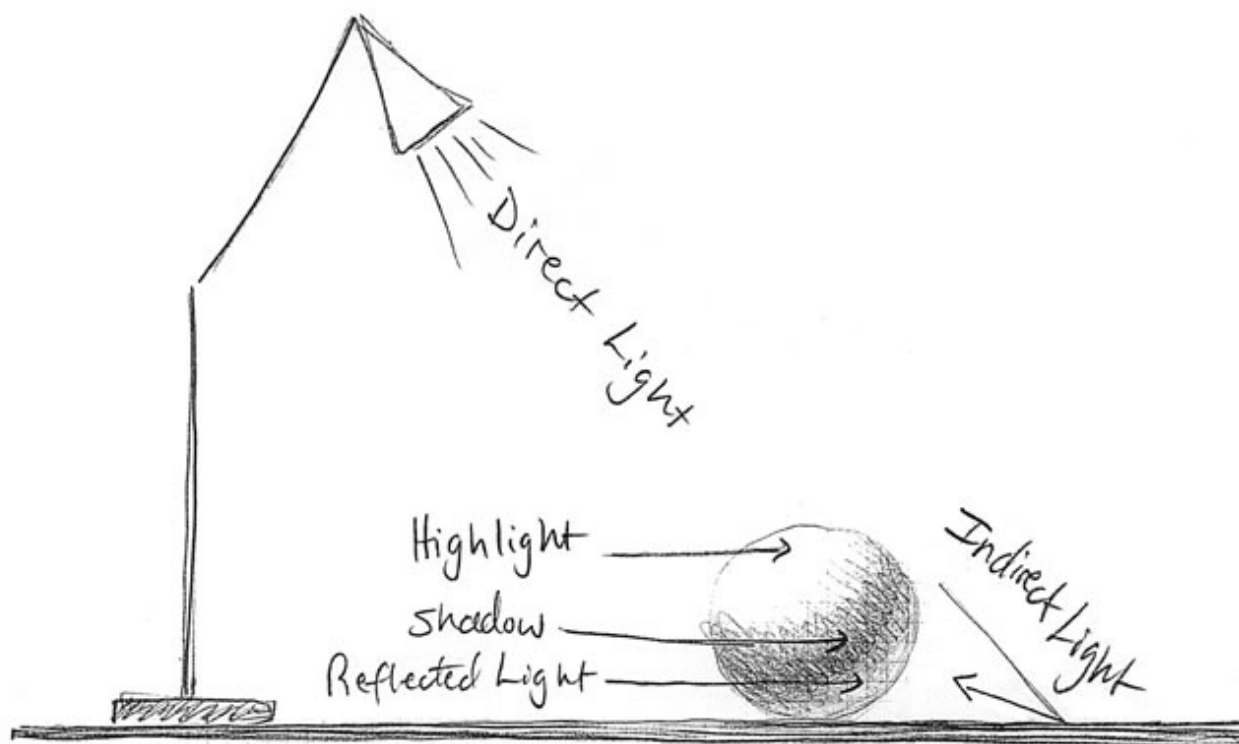
If you choose to spray paint them if you cannot find them in white, I suggest an eggshell finish. Eggshell finish is a better place to begin with students.

To avoid confusing reflections and highlights in your initial studies do not use a high gloss finish.

LIGHTING SET-UP

It is best to have one source of light to shine on your solids.

This alone will simplify matters greatly.



If you are not able to set up an artificial light, try setting up in a room with one window, next to that window, for strong directional lighting.

You will still be able to see the principles involved, even if your set up is not ideal. However, increased clarity for your students is well worth the extra effort.

SPHERES

Hold the pencil half-way back for a light touch.

Use a broad sweeping motion to quickly sketch the circumference, i.e. a circle.

If done lightly, it is easier to adjust any parts that appear too far off.

Be patient.

This is probably not something that you do every day. It will take practice to get closer to a regular circle.

The outline should be light, almost invisible.

Take a look at your sphere.

Where are the darkest shadows on its surface?

Where is the lightest area?

Start to build up a middle gray, except in the lightest area. Continue to build, overlaying, to build up the darkest shadow slowly, avoiding hard edges.

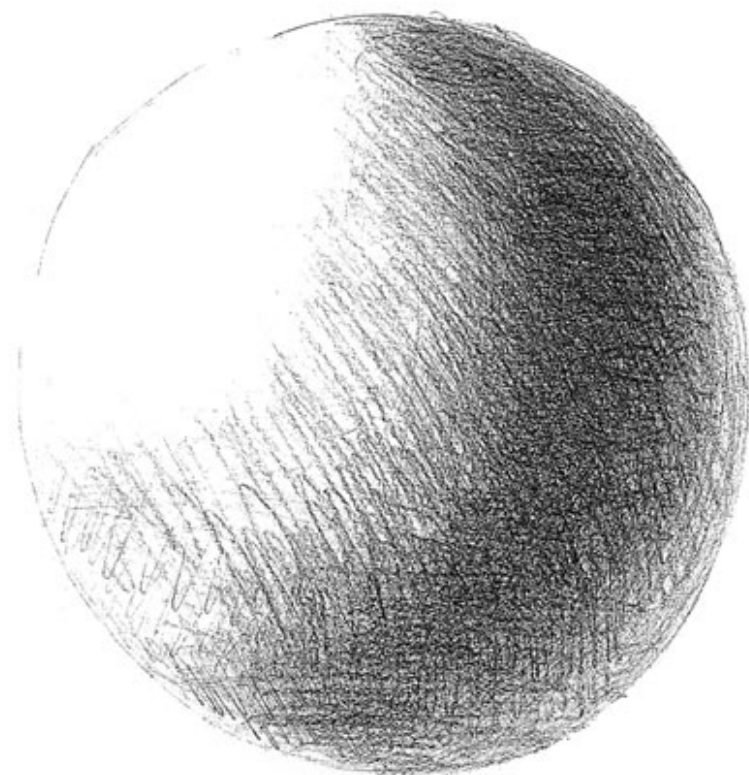
Turn the paper to make it easier to keep your shading regular, more like hatching.

Try using the side of your pencil for soft broad areas.

Avoid dark outlines.

Go up to the edge, but do not draw the edge with a line.

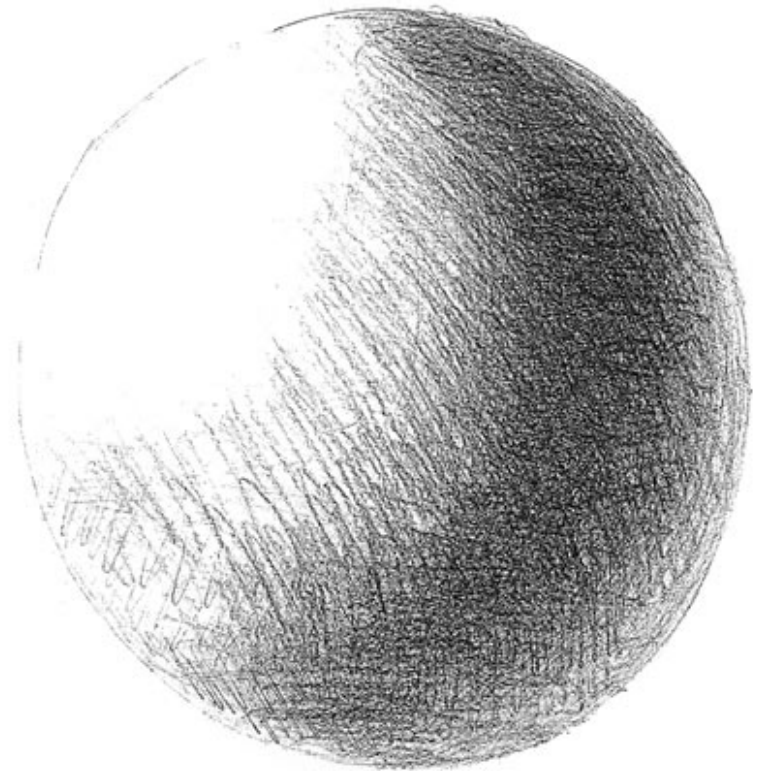
Dark outlines will flatten your form.



If you find that you have created hard edges within the rendering of your sphere, you can ease the transition areas by building up the grays.

If you find you have invaded the lightest area, you can use the wide side of an eraser to pull out some of the graphite.

Notice an area on the left that is lighter than the dark band of shadow where the sphere turns away from the light because of its curvature.



This lighter area is caused by light reflected from above and to the right of the sphere. The light from the surface on which the sphere rests will reflect light onto its left lower side.

While it seems a sphere is light on one side and dark on the other it is not that simple.

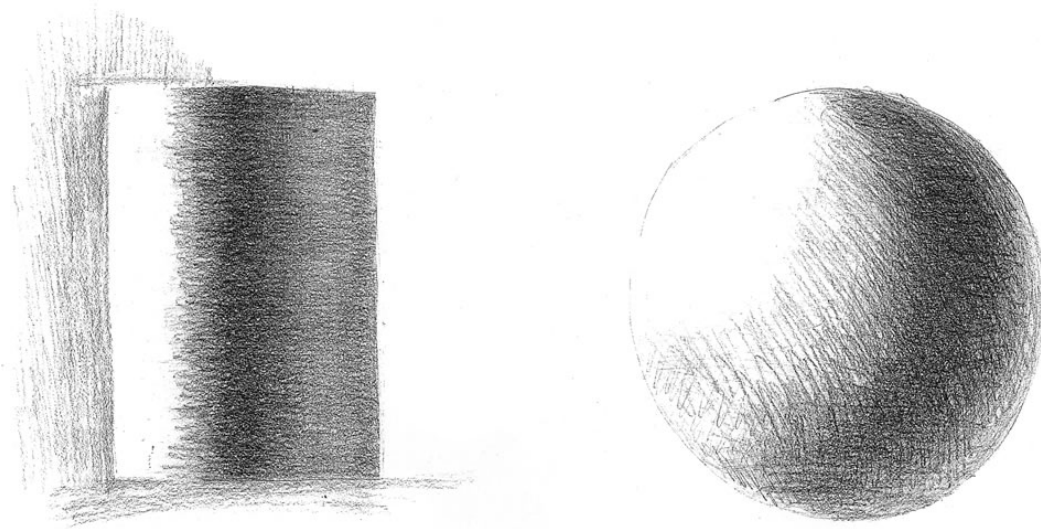
You may prefer a schematic approach to simplify its rendition.

CYLINDERS

Set up your solid with one strong source of light. Set yourself at eye level.

This was not important for the sphere. Why?

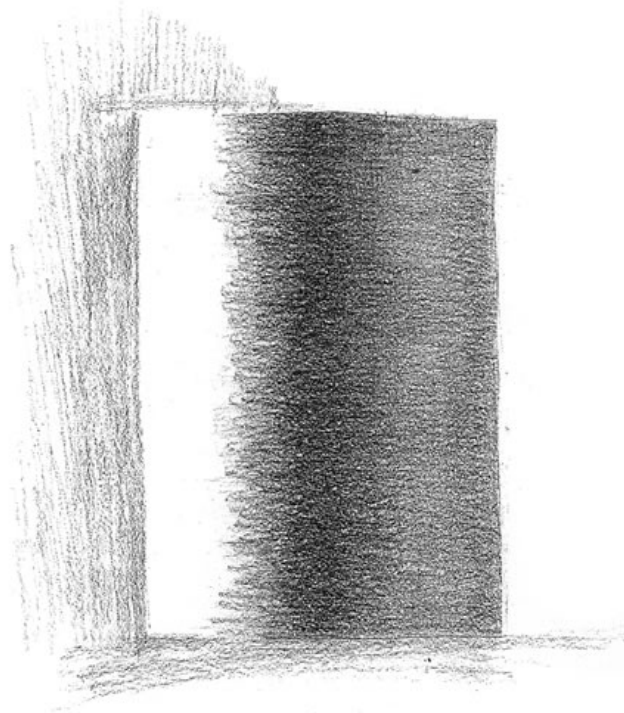
This view will simplify matters for now, enabling you to concentrate on the shading and creation of the illusion of volume.



How are the areas of value similar to the values of the sphere?

Why?

Like the sphere, the cylinder has a curved surface and the darkest area appears next to the lightest.



To the left there is an area where reflected light lightens the shadow.

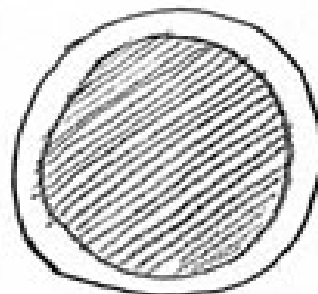
In this drawing you are seeing the cylinder at eye level.

Try looking at the cylinder from slightly above.

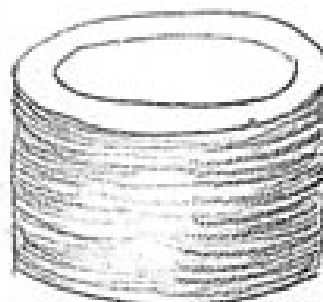
What do you notice?

How does the top and bottom line of the shape change?

Hold any cylinder in your hand, look at it from the top,

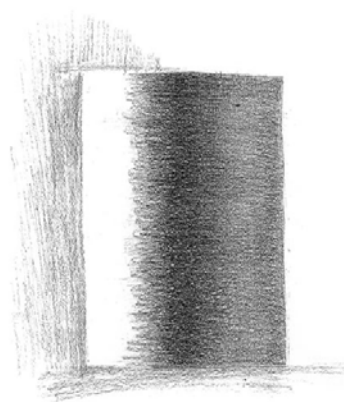


tipped slightly away from you, then at eye level, and lastly



held above your eye level.

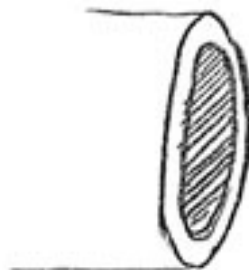
You will see that the cylinder (a tube can work nicely to demonstrate this) will look circular from the top or bottom.



In other positions the top and bottom will either look like a straight line, if they are at eye level, or curved, depending on its orientation to you.

After making these observations, try some quick schematic drawings using outlines, without concerning yourself with volume.

This will help you draw convincing shapes of a 3-D cylinder on your 2-D surface .



EXAMPLES OF ROUNDNESS

