UNIT 7

THREE-DIMENSIONAL FORM

Lesson 1

SENSORY PROPERTIES OF THREE-DIMENSIONAL FORM
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GUIDED PRACTICE SHEETS

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Lesson 3

A HISTORICAL LOOK AT THREE-DIMENSIONAL FORM
GUIDED PRACTICE SHEETS
CONCEPT: Basic forms are found everywhere in the environment and are the building blocks of every three-dimensional object. The form of an object is either a simple form, a compound form, or a complex form.

FORM SCALE

Forms range from basic to complex. The form of every object can fit into one of four major categories: (1) basic, (2) variations, (3) compound, and (4) complex. A sphere, cube, cone, pyramid, and cylinder are the basic forms. All other forms are either variations or combinations of them. These simple forms are the building blocks of all other forms. Learning to draw the basic and secondary forms and their variations is the foundation for drawing any subject having three dimensions.
WHAT IS FORM?

1. Forms are objects that have three dimensions: height, width, and depth.

Shapes are flat (two-dimensional) while forms have depth (three-dimensional). Part of what it means to draw a form is to show two or three sides of the object.
2. The five basic forms are a sphere, cube, cone, pyramid, and cylinder. All other three-dimensional forms are either variations or combinations of these. Secondary forms are longer, shorter, wider, or narrower versions of the basic forms.

Learning to draw these simple forms from every imaginable viewpoint can help you develop some very valuable drawing skill. Practice the basics and you will never regret it. Everything else is made up of these basic forms.
3. Many objects have simple forms. Examine the illustrations below and notice how these common objects have simple, basic forms.

It is just like it was with simple shapes—start with the things you can draw and build up to the complex subject matter.
4. Variations of simple forms are those that are bent, dented, tapered, sliced in half, etc. Variations include forms such as a bean, hemisphere, horn, and conic section. The forms illustrated below are only a few variations of the basic forms.
RECOGNIZING OBJECTS HAVING VARIATIONS OF SIMPLE FORMS

5. Many objects have forms that are variations of the sphere, cube, cone, pyramid, or cylinder. Examine the forms on this page and notice how they are related to the basic forms.

Practice identifying and drawing objects on your own that are simple forms. Understanding how to draw simple forms can help a great deal in being able to draw objects that are a variation of the simple forms.
6. Basic and secondary forms can be added together, or combined, to make compound forms. The word *compound* means to be made up of separate elements or parts. One object can be made up of many small forms.

When you can see the simple forms in complex objects, you are well on your way to being able to draw anything in the world.
RECOGNIZING SIMPLE FORMS IN COMPOUND OBJECTS

7. Many objects have compound forms. Part of visual awareness is to recognize the simple forms that make up objects having compound forms. Seeing these forms in objects can be helpful in drawing them accurately.

Practice, practice, practice. None of us gets good at anything without a lot of practice. Keep trying until the lines come easy for you.
RECOGNIZING SIMPLE FORMS IN COMMON OBJECTS

Many objects have compound forms.

Keep at it—you are right on target. You cannot do it if you do not work at it.
8. Basic and secondary forms and their variations can be added together to create complex forms. Recognizing the simple forms in complex objects can help in drawing them more accurately.

In the drawing above, the elephant is made up of mostly spheres and cylinders. In the drawing below, the girl's head is a sphere with a conelike form for the chin. The neck is a cylinder. (Notice the angle where the neck attaches to the head.) The nose is like a wedge. Examine the illustrations below and notice the other simple forms that make up the girl's head.

It can really be fun to make up your own imaginary objects in your own imaginary world. You can do it by combining the basic forms.
9. Many objects are complex forms. Notice the simpler forms in the building and the landscape.

When you can see the simple idea behind complex things they become easier to understand. Keep looking and practicing drawing the objects you see around you.
RECOGNIZING SIMPLE FORMS IN COMMON OBJECTS

Examine the basic forms used by Degas in his painting *The Dancing Class.*

Are you seeing things differently now? That's what it all about. It is great isn't it? Don't take your sight for granted and remember, we learn more form sight that by any other sense.
FORMS HAVE AN AXIS

10. All forms have an axis. An axis is an imaginary line that runs through the middle of an object, like the axis through the earth.

The axis is important in drawing compound and complex forms. Giving the proper alignment of axes can help make the objects appear natural. Forms can tilt toward or away from the viewer, or lean to the left or right in space. The axes of compound and complex forms should be aligned properly in order for the objects to look correctly drawn.

ALL THE BASIC FORMS HAVE AN AXIS!

Axis shows the alignment of things or the lining up of an object’s parts.

Here is the axis idea again. This is an important idea to understand well. Somehow, somewhere, an axis is used in some way.
11. Compound and complex forms have simpler implied forms. Implied forms can be used to block-in the essential form of the object. This can help establish the correct proportion of the subject.

Implied is when it is there when it isn't. NOTE: Sometimes people use the word inferred to mean the same as implied.
The blocking-in process can help in drawing forms. Identifying and drawing the major, overall form(s) first can establish the correct size and proportion of the subject.

The subject is shown at the left. (1) The first thing to do in the blocking-in process is to identify and draw the largest, most essential form of the object. (2) Second, begin breaking down the major form into its secondary, or smaller, forms. (3) Last, draw the smallest parts of the forms and add detail.

Blocking-in is a way of planning a picture, and good planning is important in everything you do.
Harnett has created a realistic picture of common objects that he loved. His picture appears realistic, yet it is actually composed of the basic forms. Notice the illustrations below. Many of the objects are variations of the cube, some are cylindrical, and a few are spherical. Other pictures may have more complex forms, but they are also constructed of many smaller basic forms.

GENERAL INFORMATION

My Gems by William Harnett 1848-1892

William Harnett, an American still life painter during the Civil War period, is famous for painting men's articles of the day in startling lifelike form.

HISTORY

William Michael Harnett was born in Ireland and brought to Philadelphia while still a baby. The family was poor, and his mother had to work as a dressmaker. Harnett began painting when quite young, starting with fruits and vegetables. He was asked why he didn’t paint live models. He answered that dead ones were cheaper; besides, they could often be eaten afterwards.

Later Harnett’s subjects changed from food to nonedible objects. He was interested in popular men’s articles, such as pipes, matches, books, musical instruments, guns, and beer mugs. He arranged them in different combinations and positions. He also invented the writing table picture, which contained inks pots, quill pens, letters, envelopes, and newspapers.

STYLE AND WORKS

The style of William Harnett is first recognized by its unbelievable realism. He enjoyed trying to fool the eye of the viewer. To do this he had to take a great amount of time to produce a lifelike effect, the form of objects, textures, and positions. All this was done to make the viewer actually think he could see the inch of air between an object and another behind it. It also made objects such as matches and newspapers look as if they came out from the canvas into the room.
HOW MASTERS USED 3-D FORM

Dali's picture may appear as if it is composed of only a few large cubical forms and two figures. He has used several of the basic forms in the picture. The "floating" figure is made of cylindrical forms and the standing figure is basically a cone. There is a striking difference between the simplicity of the cubes and the complexity of the figures. Yet, each figure or object is essentially a basic form.

GENERAL INFORMATION

The Crucifixion by Salvador Dali (Sahl-vah-DORE Dah-LEE)
1904-1989

Salvador Dali was a Surrealist painter. He was born in Spain but spent several years living in the United States. He is probably the most controversial painter of the Surrealist method. He achieved bizarre effects either by placing real objects in unrelated situations or by distorting a real object until it became extremely different from its normal appearance. These images were meant to have symbolic meaning drawn from Dali's subconscious mind.

HISTORY
Salvador Dali was born in Figueras near Barcelona, Spain, on May 11, 1904.

In 1928 Dali went to France and joined the Surrealists. That same year he married Gala Eluard, who appears in many of his paintings. The Surrealists prided themselves on being different, but they frowned on Dali when he insisted on combining Surrealism with the style of the Italian Renaissance painters. They declared it to be a backward style, and, once again, Dali was rejected.

STYLE AND WORKS
Most of Dali's work deals with Surrealism; that is, he paints nightmares, hallucinations, delusions, and other fantasy-type scenes with photographic exactness. Dali once explained his style by saying, "As a Surrealist myself, I never have the slightest idea of what my picture means. I merely transcribe my thought and try to make concrete the most exasperating and fugitive visions, fantasies, whatever is mysterious, incomprehensible, personal and rare that may pass through my mind."

Student Material \ Unit 7 \ Lesson 1 \ MASTERS \ SENSORY PROPERTIES OF 3-D FORM
This practice sheet provides an opportunity for you to practice using simple forms to start and complete a drawing. Notice how the hammer is drawn in the example below. Use the same idea to complete the marker and the stapler. Be sure to use simple forms and follow the instructions in each box.

The Subject

1. Draw the implied form or the most simple form of the subject.

2. Repeat step 1 and add smaller shapes.

3. Repeat steps 1 and 2 and complete the drawing by adding the smallest forms and detail.
Below is a still-life drawing of a chair. The illustration has implied forms, axes, etc. Use the blocking-in process to redraw the still-life picture. Do not erase any lines you draw. Leave all the lines drawn during the blocking-in process. Darken the final lines of the drawing.

1. Draw any implied forms that may be helpful in placing the forms in the picture. Also begin by drawing the simplest forms in the picture.

2. Repeat step 1 and add smaller forms to your drawing.

3. Repeat steps 1 and 2 and complete the drawing by adding the smallest forms. Also add any detail needed.
EXPRESSIVE PROPERTIES OF

3-D FORM

CONCEPT: Form has expressive potential and can portray ideas, moods, feelings, and values. Understanding the expressive properties of form can help you evaluate and appreciate works of art.
EXPRESSIVE QUALITIES OF FORM

SIMPLE TO COMPLEX

SHAPE
- FLATNESS / Pictures that employ strictly shapes without the illusion of three dimensions can appear flat and non-dimensional.

SIMPLE FORMS
- SIMPLE / Pictures that have been drawn with simple forms such as blocks, spheres, cones, and cylinders can suggest things such as common, easy, typical, uncomplicated, a toy, familiar, plain, or basic.
- FUTURISTIC / Simple forms and their variations are sometimes used to portray the future with its simplicity and aerodynamic qualities. Such pictures can suggest the future, coming event, advanced, or modern.

COMPOUND FORMS
- TYPICAL / Compound forms are the type of forms we are accustomed to seeing, because many buildings are compound forms. They can suggest things such as typical, everyday, functional, or manufactured.

COMPLEX FORMS
- NATURAL / Humans, animals, and other natural objects have complex forms. They can suggest things such as natural, organic, earthy, or complicated.

OPEN AND CLOSED

OPEN FORMS
- AIRY / Some forms may be constructed so that they are airy or open. The Eiffel Tower is such a form. These forms can suggest things such as airy, ethereal, intangible, light, inside out, or exoskeleton.

CLOSED FORMS
- SOLID / Forms whose sides enclose its interior are referred to as closed forms. They can suggest things such as solid, compact, firm, dense, hard, substantial, secure, a haven, a fortress, guarded, or protected.
EXPRESSIVE QUALITIES OF FORM
REALISTIC TO ABSTRACT

REALISTIC
- NATURAL / Objects drawn so they appear realistic can suggest things such as being natural, exact, true-to-life, as things really are, factual, accurate, literal, or true.

NEW FORMS
- UP-TO-DATE / Objects whose forms are new to our experience can suggest things such as new, fad, contemporary, up-to-date, current, or fashionable.

EXAGGERATED OR DISTORTED
- STRANGE / Objects that have been drawn so their forms are exaggerated or distorted may suggest things such as strange, unusual, deformed, novel, peculiar, rare, eccentric, weird, alien, or exotic.
They may also suggest things like mirage, vision, phantasm, hallucination, deformed, warped, maimed, alien, foreign, or wondrous.

NON-OBJECTIVE
- TEXTURE / Images that do not appear to represent any natural object are referred to as non-objective (no object).
These kinds of images can suggest things such as texture, paint, composition, curious, strange, odd, illogical, impractical, or absurd.
CRITICAL PROCESS

Using an art criticism process to describe and analyze a painting can help you better understand and appreciate works of art. The intent of the critical process is to gather specific facts necessary to make a general, accurate statement about an artwork's meaning and value.

The four steps in the critical process:

1. DESCRIPTION
   Accurately report what you see in the artwork. Describe what is immediately visible in the painting. Take an inventory of what is visually present in the picture. The description should include real and abstract characteristics of the artwork.

2. ANALYSIS
   Explain the relationships among the items listed in the description. Explain how the things are organized and their behavior in the work. Explain what effect the objects and elements have in the painting.

3. INTERPRETATION
   Finding the overall meaning of a work based on the information gathered in the description and analysis stages of the process. Give a possible interpretation of the painting. Explain the theme of the work. Explain what problems the picture tries to solve.

4. JUDGMENT
   Make judgments about the work. Rank the quality of the work against other works by the same artist. Compare the quality or importance of the work against works by different artists. Judge the artistic merit of the work.
ART CRITICISM PRACTICE SHEET

NAME ___________________________ PERIOD _______ DATE _________
TITLE OF WORK ______________________ ARTIST ____________________

Select a painting by a master and describe its contents by completing the sentences below. Be as accurate as you can. Write statements that are factual and descriptive. Additional comments may be written on the back of the paper.

**DESCRIPTION**

People and objects

________________________________________

Shape

________________________________________

Space

________________________________________

Value

________________________________________

Size & Proportion

________________________________________

Line

________________________________________

Linear perspective

________________________________________

3-D Form

________________________________________

**ANALYSIS**

People and objects

________________________________________

Shape

________________________________________

Space

________________________________________

Value

________________________________________

Size & Proportion

________________________________________

Line

________________________________________

Linear perspective

________________________________________

3-D Form

________________________________________

**INTERPRETATION**

Describe the effect the elements have in the picture.

________________________________________

________________________________________

________________________________________

**JUDGMENT**

Make a judgment of the artwork.

________________________________________

________________________________________

________________________________________
Examine the two pictures illustrated above. If both artists intended to portray a feeling of simplicity in their picture, which one do you feel is more successful? Circle the letter on the first line below and explain your answer in the space provided. Additional comments may be written on the back of the paper.

Picture A. Picture B.
CONCEPT: Artists in each major art period used form in their own way. How form has been used in an artwork can help identify a specific period of time, culture, or artistic style.
THE ANCIENT WORLD

EGYPTIANS, SUMERIANS, AKKADIANS \ FLAT • Much of the art of the ancient world was flat and lacked the appearance of three dimensions. The Egyptians purposely designed their figures to be flat. Remember, the Egyptian art was mainly for writing or communication purposes and had no intentions of portraying three-dimensional form. The Sumerians and Akkadians drew figures that were similar in appearance to the Egyptians and also used flat shapes. The figures on a sound box from Ur show flat shapes rather than three-dimensional forms. Minoan artists also drew flat shapes.

GREEK \ STAGE PROPS • Greek and Roman artists drew figures that show more depth and form than almost all of the art that was previously created. Some portions of the figures from the Villa of the Mysteries are foreshortened. With all the three-dimensional devices the Romans used, the figures still retain a flattened appearance. Some figures have an appearance of flat painted cardboard much like the shapes used as stage props.

INDIA • Much of the artwork from India shows only a slight amount of three-dimensional form in the drawings. The figure on the left (Beautiful Bodhisattva) uses value changes to give the illusion of form. Overlapping and the use of contour lines help to give the picture a sense of form.
MESOAMERICA \ SHAPE • Most of the artwork from Mesoamerica shows figures drawn as shapes. Many figures are drawn from a front or side view which limits the illusion of dimension. Some figures are drawn in poses where the figures turn, bend, or twist giving them an appearance of some degree of depth. Overlapping of figures also helps portray depth. However, most examples emphasize shape, and the overall appearance is essentially flat.

Lintel from Piedras Negras, Mayan, c. 501.

THE MIDDLE AGES

EUROPE \ "FLAT" FORMS • Overlapping body parts and wrapping cloth around them helped create an illusion of depth; yet with all the three-dimensional devices that were possible, many figures still retain a flat appearance. Both humans and animals are essentially flat shapes.

From The Bayeux Tapestry, 1073—1083.

EUROPE \ INCONSISTENCIES OF FORM • Many illuminated manuscripts and figures in wall paintings or mosaics contain figures with inconsistently drawn forms. The sides of many objects such as boxes and tables do not appear parallel in many pictures. Exterior and interior views of houses are inconsistent. Examine the illustrations below and notice the kinds of "perspective" problems artists had in drawing forms during the Middle Ages.

The Building of the Tower of Babel, early 12th century.

The Limbourg Brothers, February, 1413—1416.
THE RENAISSANCE

EUROPE \ LINEAR PERSPECTIVE HELPS IN DRAWING 3-D FORMS • The invention of linear perspective had a great effect on how three-dimensional forms were drawn. Linear perspective can be used to plan both geometric and organic forms and help make their spatial relationship appear correct.

EUROPE \ COMPLEX FORMS • Whereas the forms of many subjects were simplified and flattened during the Middle Ages, the Renaissance artists began to draw the human body with accuracy and to record all the muscles and bones that went into it. Within a short number of years, artists were drawing the complex human form with great skill and portraying its three-dimensional forms convincingly. Along with the ability to draw the human figure, they could also draw any other forms to show dimension and three-dimensional form. During the Renaissance, artists painted pictures of landscapes, still-life subjects, and buildings, all having a convincing appearance of three-dimensional form.

EUROPE \ VERY COMPLEX FORMS • By the end of the Renaissance, during the Baroque period, artists were creating pictures where the subject matter was portrayed as very complex forms. Notice how the artist has composed the three-dimensional objects in the picture with many small parts. The appearance of most things in the picture is one of great complexity.

Andrea Mantegna, St. Sebastian, c. 1455—1460.

Antonio del Pollaiuolo, Battle of Ten Naked Men, c. 1465—1470.
CHINA • Drawings by Chinese artists show objects as three-dimensional forms. Buildings have two and three sides visible. People are seen in natural positions, contributing to the illusion of depth and form. Views of buildings and interiors of houses were often drawn with isometric perspective, giving them their typical Oriental appearance.

PERSIA • The picture at the right shows the influence of Chinese artwork. Persian artists also drew pictures that showed a degree of three-dimensional form. People are seen in natural positions, which helps give a realistic appearance.

THE MODERN WORLD

EUROPE \ SPECIFIC FORM • Throughout the Renaissance, portrait painting was an important part of the art field. It continued into the modern world, but the invention of the camera soon changed the tradition permanently. Jean Auguste Ingres (1781-1867) can be considered the last great portrait painter. Even though the camera was considered the "pencil of nature," it could not create the illusion of form, depth, and aesthetic quality that were present in so many of the portraits made before 1840. Even today when an official picture of a king, queen, or president is desired a painting is preferred over a photograph.
EUROPE AND UNITED STATES \ RISE OF REALISM • During the beginning of the modern world, artists found that the tradition of art branched into two different roads. One road was associated with optical realism—it was related to science, photography, and objective observation of the external world. The second was associated with the psychological and the spiritual—the recording of the “inside” world. The examples below show the continual interest and continuity of the representation of realism.


EUROPE \ BACK TO FLAT • Another aspect of the modern world is the interest in abstraction. The examples below show the continual flattening of three-dimensional form. By the early twentieth century, artists had deleted almost all dimension in the picture plane.


EUROPE \ BACK TO BASICS • The trend to simplify objects to basic shapes and basic forms began in the late 1800s. The picture below by Pierre Puvis de Chavannes (1824-1898) shows a girl’s head drawn with a graceful simplicity. Notice how detail and the complexity of form have been beautifully simplified.

Pierre Puvis De Chavannes, Study for a Woman’s Head, c. 1870.

EUROPE \ SIMPLIFIED FORM • Paul Cezanne may have been the first modern artist to work consistently at simplifying the forms in his paintings. He believed that all natural objects were combinations of basic forms such as cubes, cones, and cylinders. Since the time of Cezanne many others have continued to explore the possibilities of Cezanne’s ideas. Several artists in the modern world painted complex objects as very simple forms. Artists such as Fernand Leger (1881-1955), Grant Wood (1891-1941), and George Tooker (1920-) capitalized on using basic forms to create a unique look in their pictures. Leger painted plump and chunky figures with a simplified use of light. Wood simplified people and landscape forms to create a wonderland appearance. These simplified images of nature look as if trees, mountains, and clouds were redesigned to appear somewhat aerodynamic. Tooker simplified the form of human beings to create an automaton-looking race and then placed them in strange settings to create a very unusual appearance.

Grant Wood, Stone City, 1930.

JAPAN \ 3-D FORM • Japanese artists have continually drawn objects having the appearance of three-dimensional form. Many wood prints show objects with tops, sides, and fronts—which show form. People are drawn in natural poses rather than from orthographic views which limit the appearance of dimension. Wood-block prints are usually presented as line drawings with solid colors filling the shapes.

Tatekawa at Honjo, 1829.
CONCURRENT • The pictures below are segments of pictures found on the TIME LINE. Find them on the TIME LINE and write four important historical events or people concurrent with the artwork next to the picture in the space provided.

a.  
1.  
2.  
3.  
4.  

b.  
1.  
2.  
3.  
4.  

c.  
1.  
2.  
3.  
4.  

d.  
1.  
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3.  
4.  

e.  
1.  
2.  
3.  
4.  

f.  
1.  
2.  
3.  
4.  

g.  
1.  
2.  
3.  
4.  

h.  
1.  
2.  
3.  
4.