

Introduction to Architectural Concepts



# Age Level:

Third grade and up

# **Subjects:**

Art Math Language Arts

#### Time:

15 to 20 minutes for Lesson #1 45 minutes for Lesson #2

#### **Materials:**

- 8 1/2 x 11-inch unlined paper
- Sharp pencil, not too short so hand tightens up
- Eraser, to be used sparingly
- 10 to 12 copies of the face drawing with the grid lines accented in red

# **Learning Objectives:**

- To increase the ability to draw realistically
- To learn the value of following instructions in order to produce a better product
- To learn measurement and estimating techniques

## **Design Professional:**

Experience has shown this drawing method to be effective in overcoming negative attitudes toward drawing. Since all students show some immediate improvement in their drawing ability, it is an excellent activity for the architect to conduct and thus be identified with a positive experience by the students.

## Teacher:

This may be the first lengthy activity to be conducted by the design professional. You should be familiar with it also, helping the architect make it clear to the students and monitoring the drawing steps.

#### **Rationale:**

Being able to draw realistically is very important to students aged nine to 11.

If things don't "look right," students of these ages often say they can't draw and quit, probably never to try again. They will then remain in this developmental stage in relation to drawing for the rest of their lives. Many adults still draw stick figures only because they have never learned how to do anything else.

This activity will demonstrate to the students that it isn't what you do with your pencil that determines the quality of your drawing as much as it is what you see when you look. Everyone can learn to draw if they practice looking at what is really there instead of what they think is there.

Drawing a face is a good place to start, because you always have your own around to check out the measurements, and it is seldom hard to find another one to look at. Being essentially symmetrical, the front view of a face lends itself quite easily to this technique.

# Extensions—Practice Drawings:

Divide the students into pairs and have them repeat this process while drawing each other's faces.

Send the students home with a grid-folded piece of paper with their oval drawn on it. Ask them to look in a mirror and draw their own faces.

In either case, display the anonymous drawings and have a "Look Alike" contest. Number each drawing and have the students number a sheet of paper to accommodate the total number of drawings. Have them write the name of the person they think it is opposite the number on their paper that corresponds to the number on the drawing. Some recognition for the one or two who identify the most faces correctly can make it more fun.

# **Presenting the Activity:**

#### LESSON #1

Suggested dialogue...

"How many of you would like to learn a way to make good drawings?"

Ask the students to raise their hands.

Introduction to Architectural Concepts



"Well, you know it can be done, and I am going to prove it to you. Of course, some people do draw much better than others. Often, because they have practiced. You know that you can't learn to play baseball, read, or play the piano until you first learn how it's done and have practiced what you have learned.

"Drawing is the same way. You need to learn some techniques that will help you, but it is even more important to learn how to look at things and really see them. We all tend to draw what we think is there, without checking carefully with our eyes to see if it really does look that way! I am going to show you what that means."

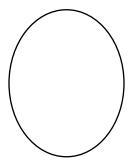
Give each student a sheet of unlined 8 1/2 x 11 inch paper.

Hold the sheet up with the short side at the top.

Give instructions slowly and repeat them as you go along.

"Draw a front view of a face, that is one that is looking straight out at you. The best way to start is to draw the outline of the face. Is a face shaped like a ball? A pumpkin? What is its shape? Right, it's shaped more like an egg. What do we call this shape? Yes, an oval."

With your hand, indicate an oval that fills the whole sheet.



"Notice that I am indicating an oval that fills this whole sheet of paper. Your oval should come almost to the edge of the paper at the top, bottom and on each side. It might help you to put a dot about 1/2 inch from the edge of the paper in the middle of each side. If you lay your thumb sideways along the edge of the paper at each of these points, it will show you about where to make the mark.

"Now you are ready to draw your oval, but do it very lightly in case you need to improve it. Hold your pencil loosely, it's hard to draw lightly if you are hanging on to your pencil as though someone is going to take it away from you! It's all right to draw several lines lightly and then pick out the one that makes the best oval and draw it a little darker. Don't worry about erasing the other lines. When you are sketching, the extra lines don't matter.

"Try to make your lines touch each one of your dots. Remember that an oval is a rounded form, so keep the lines between the dots curved. Your outline should look like an egg, not a diamond."

Discourage cartooning. The drawing is to look like a real person – no pumpkin heads or smiley faces. Explain that a good cartoon can only be drawn when you know how to draw a face correctly and then change it to make it funny.

As the students draw, remind them to include eyes, nose, mouth, ears and the neck. Add the hair last. Suggest they look at their neighbor's face to check where to put the features on their drawings. When most of the students are through (about 10 minutes) ask them to put down their pencils and fold their paper in half the short way (the hamburger way).

"Hold up your face drawings so I can see how they turned out.

"You know those faces you have drawn look a little strange to me. I don't think you have things in the right places! That doesn't mean you can't draw. It just means you need to learn where everything on a face should go. Let's try it again and I'll show you some things that will help you."

Introduction to Architectural Concepts



#### LESSON #2

#### Rationale:

Any drawing, map, photograph, poster, etc., can easily be reduced or enlarged by the use of a grid.

A grid is also a useful tool to aid students in keeping their drawing lines straight and the parts in proportion. It should be considered a beginning technique.

Put the copies of the face drawing up around the room so each student has a good view of at least one.

# **Presenting the Activity:**

Suggested Dialogue...

"Most people think drawing a face is a really hard thing to do. So if you can learn to draw a pretty good face, you can probably learn to draw most anything else!

"I am going to show you some tricks I think will help you draw some good faces. Maybe you will be able to draw your own face or a friend's face and have it recognized by other students.

"You will have to listen, follow instructions, wait until you are given each step and concentrate on looking carefully at what you are drawing. Let's give it a try.

"As you get into the activities in this program, you will be doing a lot of drawing of buildings. Buildings have mostly straight lines, and sometimes straight lines aren't too easy to draw, so you may need a little help in the beginning.

"You probably know what a grid is. You see grids on maps, graphs and many things where the lines can help you locate things or keep them organized.

"Grids also have many uses in making drawings. You will be doing a number of drawing activities that will use a simple technique for making a grid and using it to help you make your drawings."

Give each student a piece of the 8 1/2 x 11-inch paper.

"Hold the paper with the short side at the top. Fold the sheet in half the short way. Let's call it the hamburger way. As you fold, be careful to match the corners together. You will be able to do a better job if you do your folding on your desk or some other hard surface. When you have the edges together, hold one corner with one hand and press in the fold with the other hand. Run your fingernails along the fold to make it sharp. These fold lines are going to be the grid lines you will use to help you make your drawing.

"Now fold the paper in half again the same way. Don't unfold the first fold, just bring the folded edge up to the top of the sheet, matching the corners and the edges. Hold the corners at one edge again and press in the fold with the other hand. Run your fingernails along the fold to get a sharp fold.

"Open the sheet back up. Of course, you could make these next folds without opening the page up, but you wouldn't get good folds that way. So open the sheet up and smooth it out a little. Now turn it and fold through the center the long way. Let's call the long way the hot dog way. When you have the center fold pressed in, fold the sheet in half again. Be sure to keep the edges together evenly and press this fold in. Open the sheet back up.

"Unfold your sheet and smooth it out on your desk. How many rectangles are there on your sheet? (16) The fold lines are going to be your guidelines for your face drawing. Be sure your paper is placed on your desk with the short side at the top. Now we are going to try drawing a face again."

Hot Dog I	old	ס	
		Hamburger Fold	
		Натр	



Introduction to Architectural Concepts



Call attention to the face drawings that are placed around the room. Explain that the students are to look at them from a distance, just as they will be doing when they go out sketching in the community.

#### NOTE:

It has been found that this method is better than putting the drawing on an overhead projector while the students are drawing. The object is for the students to learn to make their own observations and to understand how some measurement techniques can help them.

"You notice that there are drawings of a face taped up all around the room, so each of you can see at least one easily. The red lines on the drawing are the same as the fold lines you have just made on your paper, so you do not need to draw them on your drawing.

"Let's start by drawing the oval again. Remember to draw lightly so you can make corrections. Put a dot on the middle fold at-each of the four sides about 1/2-inch in from the edge, as you did before. Draw curved lines between the dots to make a nice rounded oval, as you did before.

"Now, about these eyes being in the middle of your face. Do you believe me when I tell you that? Well, let me prove it. Put your finger in the corner of your eye near your nose. Put your thumb under your chin. Slowly pull your hand straight out from your face. Hold the finger and thumb in that position and slowly raise your hand until your thumb is in the corner of your eye and your finger is on top of your head Hey, don't stick your finger in your eye! Press your other hand flat on the top of your head and it will meet the tip of your finger if you held your hand very steady.

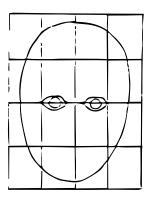
"So it is the same distance from your chin to your eye as it is from your eye to the top of your head The eyes are in the middle!

"So now we know that the center hamburger fold on your sheet will go through the center of the eyes. Look at the drawing. Where is the outside corner of the eye? Yes, it is at the intersection of the middle hamburger fold and the outside hot dog folds. Make a dot at each of these intersections"

As you go through this activity, indicate each instruction on both your face and on a piece of paper that you can carry around the room to show the students what you are talking about. You might do the drawing on the chalkboard, also.

"That was pretty easy. Now how will you figure out where the inside corner of the eye will go? That is going to be a little harder. You will have to do some estimating. You often have to do that when you are drawing, so this will be good practice. You will need to divide the space between the two marks you just made for the corners of the eyes into three equal spaces. Carefully mark the dots with your pencil as you see them on the drawing. Make each space as close to the same as you can.

"Draw the eyes in the two outside spaces."



Indicate these spaces on your own face and on the drawing. Walk around the room helping the students get the correct location for the eyes, because the following steps will build on this.

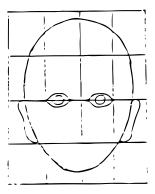
"You will need that space between your eyes because that is the space where your nose goes. Feel your nose between your eyes. Look at the drawing as you draw the eyes. Remember, the middle fold goes right through the middle of the eyes. Don't make the eyes too small, they must fill those two outer spaces.

"Now let's do an easy one, let's draw the ears. Get out your fingers again! Put your fingers at the outside corners of your eyes and move them straight out to the side of your face. What did you hit? The tops of your ears? Most often the ears are drawn as though they were alongside

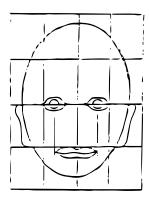
Introduction to Architectural Concepts



the chin or the forehead Now put your fingers on the top of your upper lip and move them out to the side. What did your hit this time? The bottom of your ears? So, the ears will go between the centerfold and the bottom hamburger fold. Are you surprised that your ears are so big?

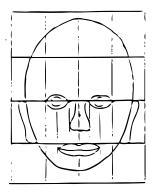


"The next thing to put in is the mouth. Notice that the top of the upper lip is on the bottom hamburger fold. Does the mouth look like the kind that you usually carve in a pumpkin? It does turn up at the corners a little bit, but where the lips come together, the mouth is pretty much a straight line. If you look at each other as you make as big a smile as you can, you will see that the mouth never can really look like a smiley face.



"How can you tell how wide to make the mouth? There is another trick that will help you. Close your eyes so you don't poke your fingers into them. Put your fingers on the center of your eyes and then down your cheeks in a straight a line as you can. Your fingers will end up at the

corners of your mouth. Do the same thing with your pencil the drawing. Mark the edge of the mouth with dots and then draw it. Look carefully at the mouth in the face drawing as you try to make a realistic mouth and get it in the right position in the face. Your mouth is bigger than you think it is, isn't it?



"Now we will do a hard one again -- the nose. This will take some more estimating. The nose is about one third of the way between the mouth and the middle of the eyes. Make pencil dots along the center hot dog fold to divide the space into three equal parts. The bottom of the nose will end on the dot one space above the mouth. But how wide should your nose be? Put your fingers on the inside corners of your eyes. Draw them straight down your face. What do you come to? Right -- the edges of your nose. Run your pencil down from the eyes on the drawing in the same way and make dots for each side of the nose.

"Notice the shape of the nose in the drawing, it has two nostrils. Only animals have little button noses! Remember, the nose is in the middle of the face. You should draw the half that is easiest for you first. Then look at what you have drawn very carefully and draw the same thing in reverse for the opposite side. Be sure the nose is centered on the middle hot dog fold.

"Now you can go ahead and give the face some eye-brows and whatever kind of hairdo you would like. However, be sure to remember this is to look like a real person, not a cartoon. You could look at someone near you and draw their hairdo."

Introduction to Architectural Concepts



When the students have finished, have them hold up the first drawing together with the second. There is always considerable improvement. This reinforces the concepts that learning the techniques for doing something assures better results, and that drawing is more a matter of seeing what is actually there than it is what you do with your pencil.

Compliment the students, as they are almost always very pleased with their improvement.

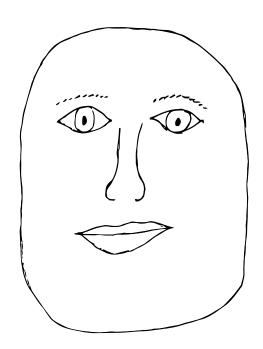
"I told you that everyone can learn to draw better! I don't see any of the second drawings that aren't better than the first ones. Now, when you make a drawing, what are you going to think about?" Answers should include...

"Draw lightly so you can make corrections and your arm and hand will stay loose."

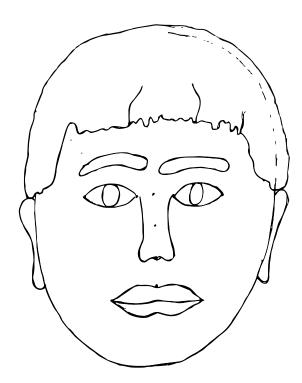
"Look carefully at what you are drawing. Don't just guess."

"Draw the outline first so you can be sure the parts will end up in the right places and it will fit on the paper nicely."

"Make some folds in the paper to help keep things straight and in the right places on the drawing."



FIRST DRAWING



SECOND DRAWING
(30 MINUTES LATER)

Introduction to Architectural Concepts



