

Unit 2: Preparation

Description: In this unit, you will gather all the resources you need for the project. I will show you the tools you will use and how to sketch your future sculpture.

Episode 1: The Materials

Description: In this lesson, I will guide you in gathering your source material as well as the tools you will need. The principal material you will need is cardboard; I will briefly delve into the specific properties I prefer.

Transcript:

In this course, you're going to learn how to make a cardboard sculpture. I'm going to make a cardboard bear, but you can make pretty much anything using my technique, as long as it's hanging against a wall. In this lesson, we're going to look at the material you'll need. You're going to need a glue gun. This glue gun is a little big, but you don't need it to be this big. You can use anything that is at a general store. You will need scissors, any scissors as well work. Don't need to be this big. This is like fabric scissors, which work really well. But anything will work. There's also a knife. Be careful. And this is the glue sticks. Make sure you use the glue sticks that fit with the glue gun you have. You will use cardboard. Please use whatever you find at home. I like to use like a thinner type of cardboard this way, you can apply it easily and turn it and curve it the way you need. I cut it about this size, maybe five centimeters, one inch width, but it depends on the size of the sculpture you'll make. When I cut my pieces of cardboard, I like to cut them in the direction of the cardboard. You'll understand better when I'm doing it. Also, don't forget, don't cut all your cardboard in strips. You will need to keep some large pieces of cardboard in order to make a sketch. You will need paper, pencils or pen and you will need a measuring tape to measure your small sculptures and your big sculpture. You will need varnish. I like to use high gloss varnish because it gives that little sheen at the end that makes the sculpture looks finished and nice. But it's optional. It is important to use a water based varnish. I've tried to use oil based, and it destroys the cardboard, so do not do that water based or polyurethane works. Also, this is optional, but you might want to have brushes and paint that you will apply before the varnish. Now that you have all the material you need, in the next lesson, we'll pick a model and start sketching it.

Important Screenshots:

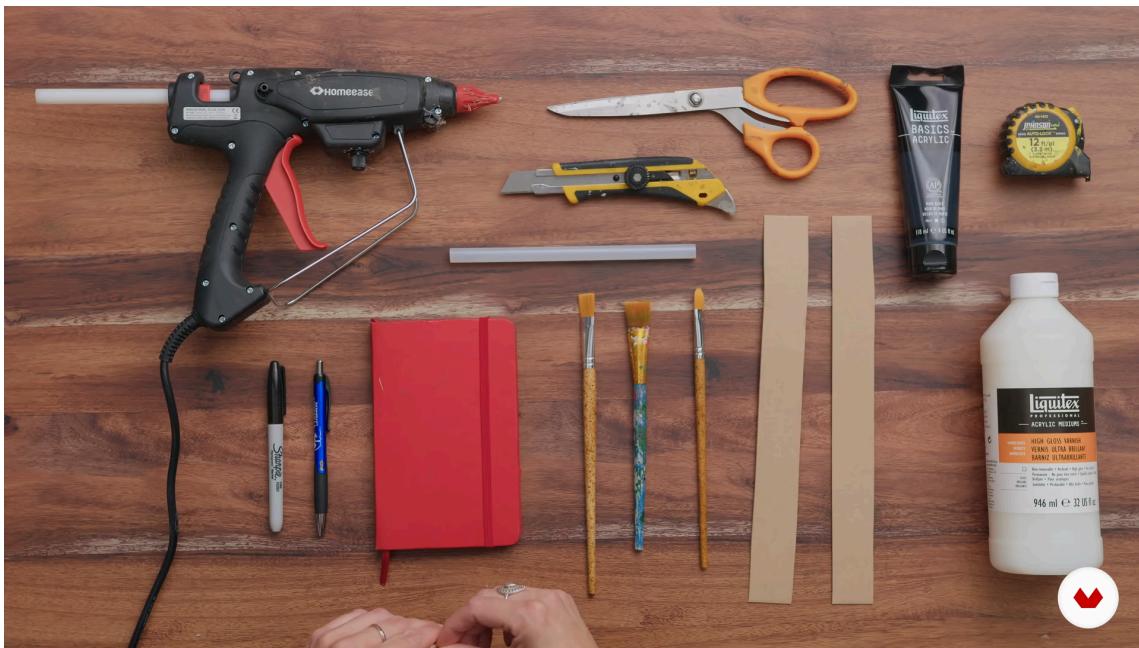


Photo of all materials needed; varnish (bottom right) optional

Episode 2: Picking a Model and Sketching It

Description: Once you've prepared your workspace, you will choose the subject of your sculpture and prepare to start. In this lesson, I will walk you through the sketching process.

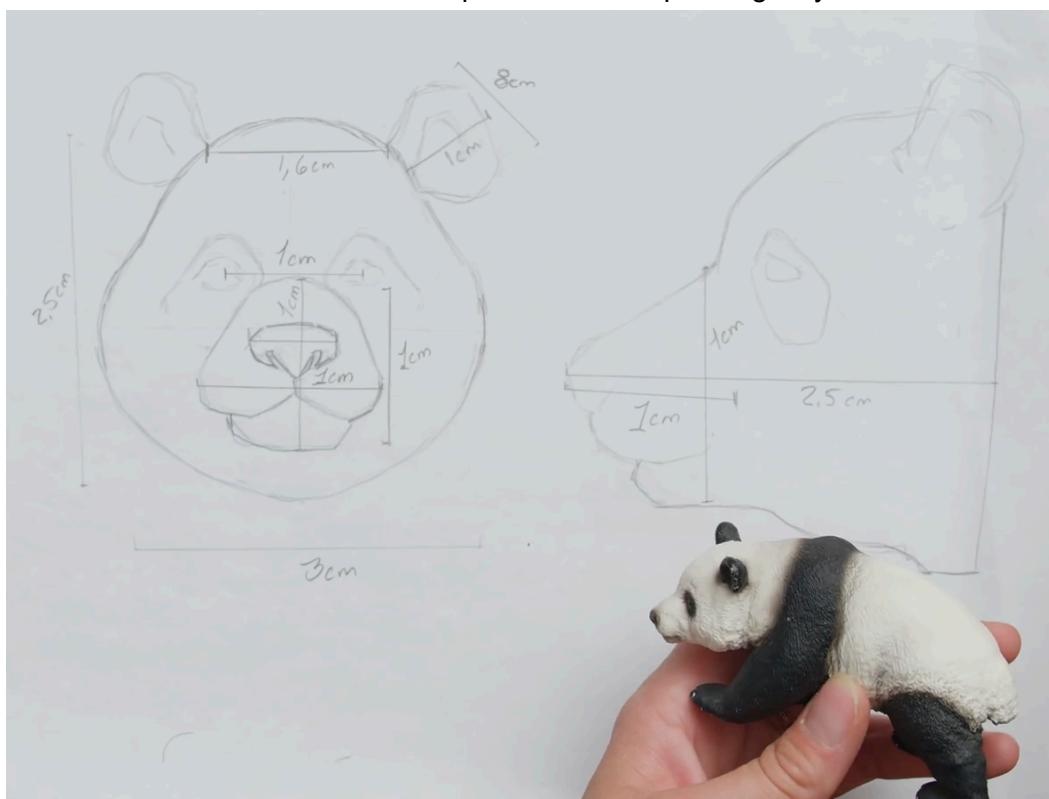
Transcript:

In this lesson, you will pick a model and sketch it. It's important to choose a 3D model to base your future sculpture on. If you only choose an image, you will not have the right proportions. You can use images as references, but it should not be solely based on them. It should accompany you the model. I like to use toys and little objects that I like to base my sculptures on. Like in this project, we will use a panda bear here that I find pretty accurate. When I can't find a toy or an object that inspires me, I make it myself out of clay. I have a model here, and sometimes I use this one instead of whatever toys I have. Now it's time to sketch your model. It should not be pretty. It's just to give you references. Make a drawing of the front and of the profile. Now you will take rough measurements of your little toy. So let's say you measure the width three centimeters here, and then you'll take the measurement between the eyes, and then the length and the width of the ears. Now you can see, I wrote eight centimeters. It's actually point eight. Now you need to take measurements of the profile of your sculpture. So here is 2.5 the length of the muzzle, the width of it, and you can take more measurements if you need to, however you feel. When you start sculpting in cardboard, you can always go back and measure some more. Now that we have our model and we have our sketch, in the next lesson, I'll show you how to scale your sculpture.

Important Screenshots: Front view of a clay bear model



Sketch of front and side profile of corresponding clay model



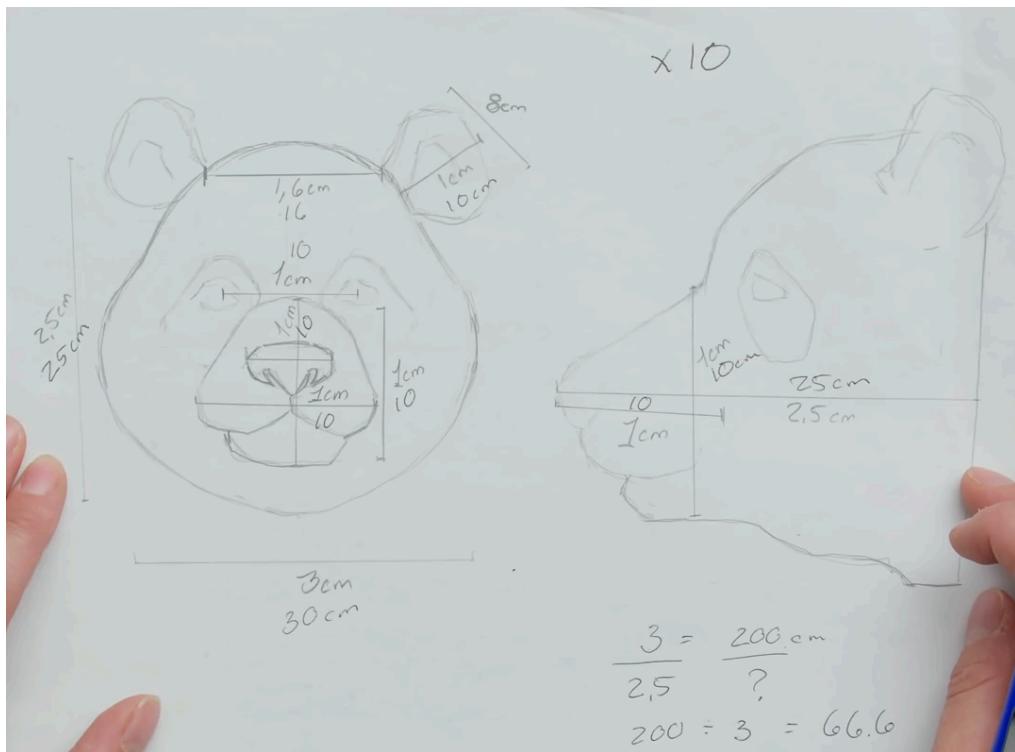
Episode 3: Scaling a Model to Fit a Specific Area

Description: Now, I will teach you how to scale your sculpture to any size you wish. How can you adapt your measurements while keeping everything in proportion? Let me show you!

Transcript:

In this lesson, you'll learn to pick a space and scale your model according to it. If you're following this course, you probably have an idea where you want to place your sculpture. In this case, I'm going to use this wall right there. Measure the space you have. Keep in mind that a sculpture takes more space than a pink thing, so if you have a 60 centimeter wall, I suggest you scale your sculpture to about half of that. Now it's time to scale your model. Let's say we want our sculpture to be 30 centimeters large. Well, that is pretty easy because it's three centimeters large already. So it's like by 10. You should write down your new measurements everywhere if you took measurements already. You mistake it was point eight. But well, now it's good, pretty good. It's eight centimeters. Sometimes you have bigger measurements to measure, and it's not that round of a number. In this case, the way to do it is the rule of three. Let's say you want your bear to be two meter large. Three centimeters equal 200 centimeters. So let's see how big would be the height. So it's 2.5 by 200 divided by three. And you can do that with every measurement. Another way to do it is to take your 200 and divided by three, it equals 66.6 so then you'll have to multiply all your measurements by 66.6. Now that we have all our measurement, in the next lesson, you'll learn how to create the structure of the sculpture.

Important Screenshots: Scaled up version of sketch to fit area with new and old dimensions



Unit 3: Shaping the Sculpture

Description: In this unit, you will create your larger-scale sculpture with cardboard. First, you will make the core structure. Second, you will glue the cardboard strips onto it

Episode 1: Creating the Structure of the Sculpture

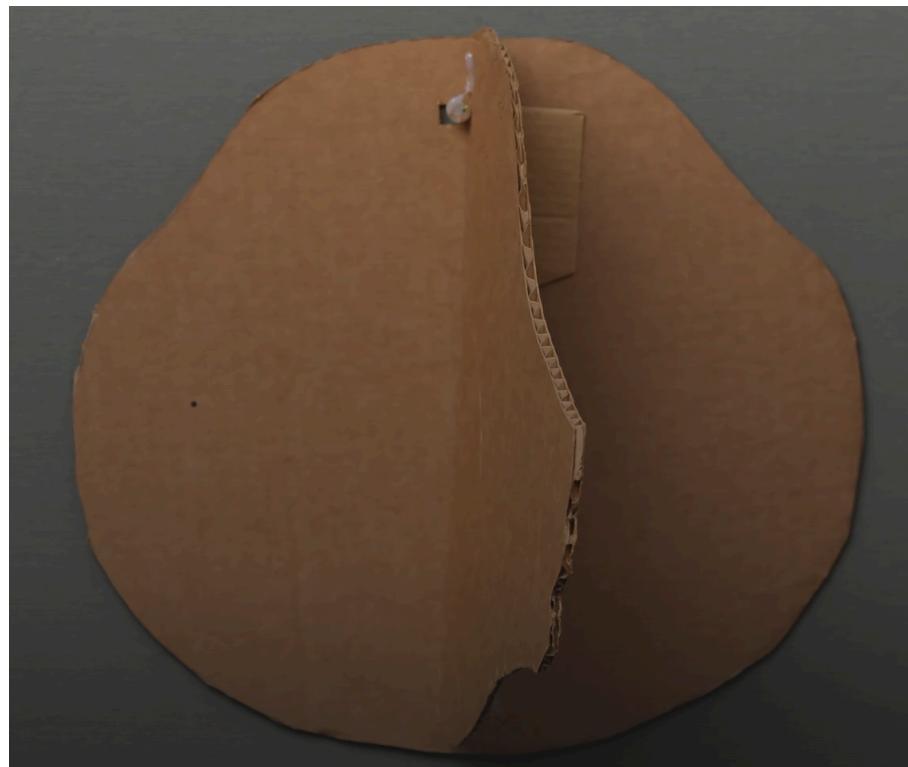
Description: It's time to bring your sketch to life! With my help, you will create the inside structure of your sculpture. I will show you my step-by-step process, working from the back to the front.

Transcript:

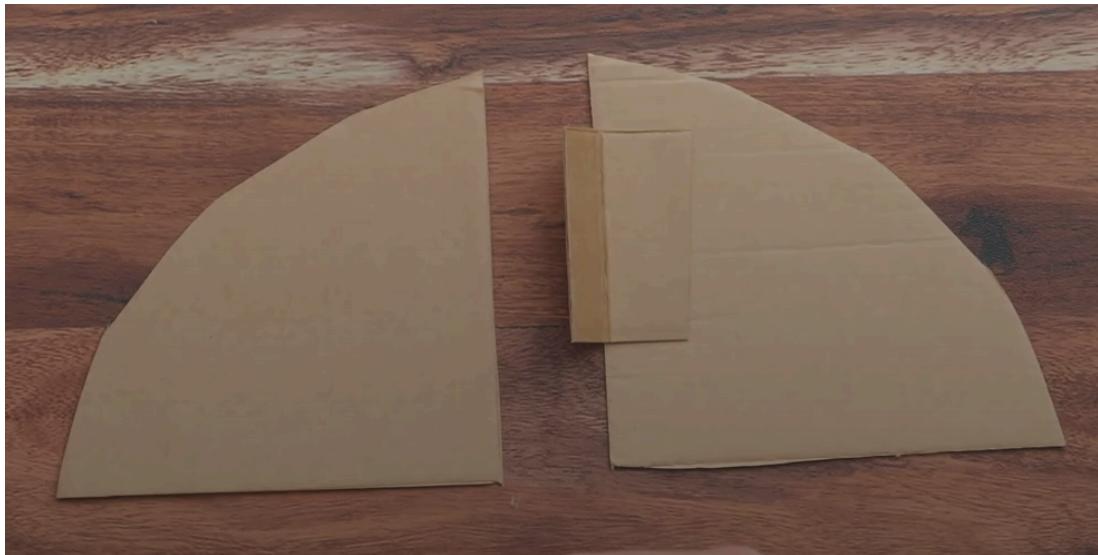
In this lesson, you will learn how to make the structure of the sculpture. The structure is necessary to make the sculpture stronger, and it will also give you a rough idea of where the details go. You will start by measuring the background of your sculpture. Pick a large piece of cardboard where you'll draw the head of your sculpture. We said that the background was 30 centimeters by 25 centimeters before you draw on your cardboard. Help yourself with your measurements. Now I'm going to draw the head, what I imagine the background should look like. I should use the sharpener, so I think. Now this part will not show on your final sculpture, so you can redo it, draw on it, paint on it, do whatever you want. So now cut it. Once it's cut, you need to make a hole in it so you'll be able to hang it against a wall. Now you're going to draw the profile. Always help yourself with your little sculpture. Don't forget to always have your measurements beside you. Now to draw this, I need to take more measurements than I did earlier. Now that you have cut your profile, you need to glue it on the wall. To help yourself, you can make little pieces of cardboard. Now you're going to draw the high points of the face. I like to make the eyebrows and the cheekbones, do so by drawing them against your model. Now trace them double, because we are trying to make it as symmetrical as possible. Again, to glue them, help yourself with little pieces of cardboard. I usually work against a wall, because when you work on a table and you're not straight up in front of your sculpture, it might not be as symmetrical. I got caught once making a sculpture on a table in front of me, and once I put it on the wall it was completely crooked. So it's always better to be able to place it on the wall, to work directly on the wall, and even to be able to take a few steps back so you can look at it from afar and see if it's exactly how you want it. Now you're going to draw the cheekbones. In the case of our bear, the cheekbones are about at the same level as the eyebrows. They don't go really further or back, so this is going to help us to draw it. So now the cheekbones, just like the eyebrows, are double, so we trace it. Now you're going to draw the width of the muzzle. We want it to be 10 centimeters large so you can help yourself by measuring your piece of cardboard before you draw it on the structure. Because it's half at the time, I measure five here, so I have an idea how far it's going to go. I want to draw it at the base of the muzzle, not here, not too close, but more here, because over there we're going to make the mouth and the snout, and there's a lot of details, so you don't want your structure to be in the way. When you make a mistake, you can always go back and cut and glue and cut again and glue against this cardboard. It's not marble. Now I'm finished with the structure. This is how much structure I need to do a cardboard bear, but you might want to put more structure to help yourself better.

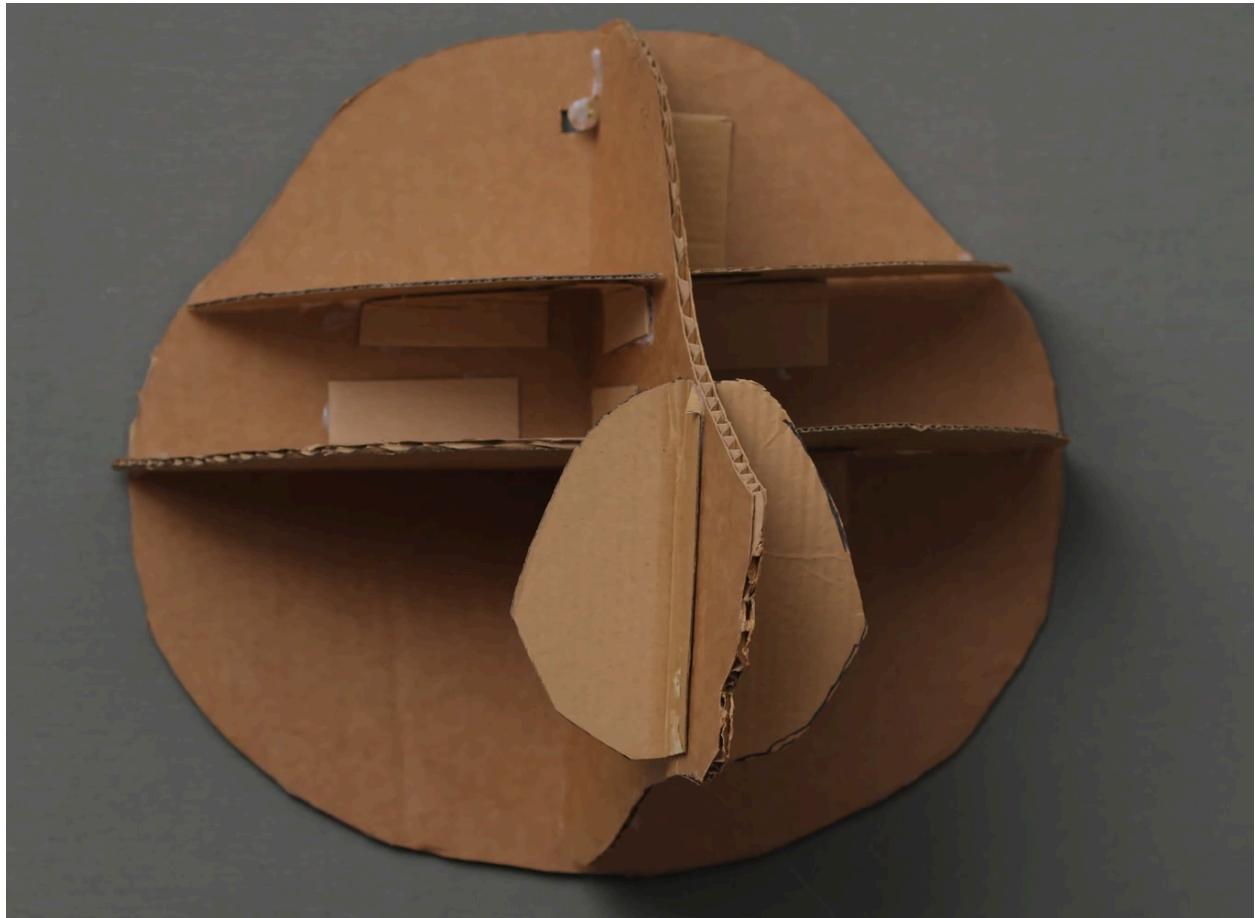
As you go along, you'll understand why I use this technique, and you will probably adapt it to your own needs. In the next lesson, we'll learn how to make the surface of the sculpture.

Important Screenshots: Side profile cardboard cutout of the panda head / 3D correspondence



2D eyebrow cardboard cutouts / 3D correspondence





Final 3D model of the structure with side profile, eyebrows, cheekbones, and nose

Episode 2: Making the Surface of the Sculpture

Description: With the core structure built, in this lesson, you will learn how to apply the strips of cardboard to your structure. This layer represents the skin of the model.

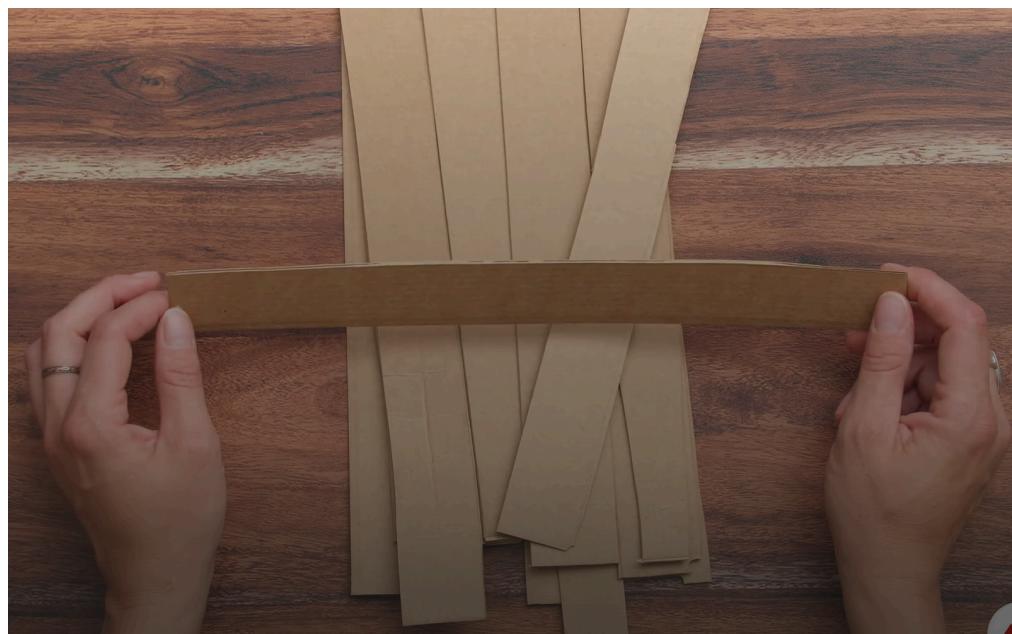
Transcript:

In this lesson, you'll learn how to make the skin of the sculpture. I said earlier you needed to cut strips of cardboard. So you need a lot more than you think. I like to use, like I said, thinner pieces of cardboard for this part. And I like to cut my cardboard in the sense of the cardboard, meaning cardboard is corrugated. I like to go in that direction. For example, in this piece, I would not go this way. I would go this way. For the purpose of the class, I've cut already a bunch of pieces. So you should glue your first pieces of cardboard along the ridge of your structure. I always like to apply my cardboard before to make sure it's smooth and round and in the other direction. Before I put some glue on it, I like to try it on the sculpture first. Now I need to cut it here. Do the same thing on the other side, this strip of cardboard will go on the profile. Sometimes you have to hold it there for a few seconds. Now that I put a strip of cardboard on

the forehead, on the eyebrow, I find that it's not exactly the shape I want, so I'll go back and cut it the way I want it. Here, I find that this part is too round. I would like it to curve more inside, so I'm cutting little by little. What I don't like about what I drew is that the eyebrow part was too far outside, the forehead of the bear here is smaller than its cheekbones, so it came out too much, and I didn't realize it as I was drawing it because I didn't have the skin on it. But now, when I saw it, I want to change a little bit, which is going to happen the whole time I'm building the sculpture. I'm always trying to plan ahead what I need to do, but sometimes I can't, and you always have to follow your feelings and your guts. Anyway, like I said, it's cardboard, so you can always take some part off, glue back some other parts. It's made to be a whimsical process. Now it's not exactly symmetrical, but it doesn't really matter, as long as when you look at it from the front, it looks all right. So keep going with the gluing of the strips. For the mouth, I'm going to help myself and make a little nudge. This is going to help me put the cardboard inside here. Now you're going to cover the rest of your sculpture using the same technique, but you will leave the areas with details empty. So we're not doing the eyes right away or the nose. We're just, for example, filling up the forehead and the cheeks. Your structure guides you how to build the forehead and the cheeks, but you can always look at your model to really know where you're going. The direction of the strips or how you place them is not important. There's no pattern that I'm following or anything. I'm just trying to create a 3D version of this as close as possible. On my model, my bear has big cheeks. And anyway, I want to make it a little bit cute. So I want to give him nice, round cheeks. This moment is the time to choose bigger cheeks or smaller cheeks, either like this or like this. So now you fill up your sculpture with the pieces of cardboard. Now you have your structure. It's quite clear where you're going, and you just need to keep on filling up with strips. Now I'm going to keep working to fill up this sculpture, except the details. Now I have finished making the skin of the sculpture without the details. As you can see, I've used different colors of cardboard. I use whatever I have on hand, so I didn't cover the eyes and the mouth and I didn't make the ears, because this is what we're going to see in the next lessons, starting with the eyes.

**Important
Screenshots:**

2D Strips used to build
the surface



3D model with the 2D strips applied on eyebrows, cheekbones, and nose (stage 1)



3D model with 2D strips fully applied; (final stage of surface minus eyes and nose)



Making the Surface of the Sculpture

Top view of 3D model



Unit 4: Working on the Details

Description: Let's move on to the model's features! In this unit, you will learn how to create the eyes, nose, mouth, and ears of your animal. At this stage, you can start to instill a sense of personality into the sculpture.

Episode 1: Making the Eyes

Description: Are you ready to progress to the features? I will show you how to form a cavity and create an olive shape with cardboard to make an eye.

Transcript:

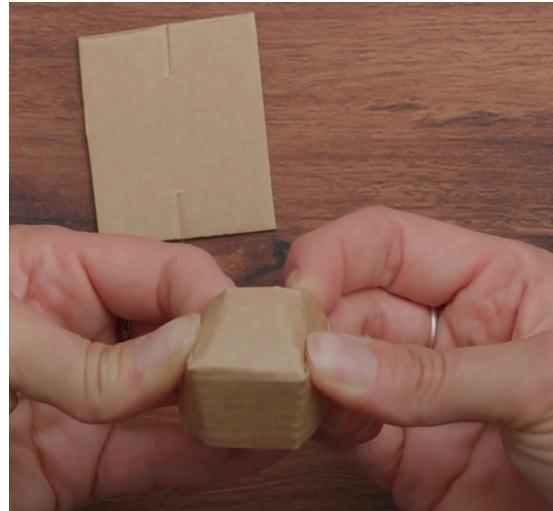
In this lesson, you're going to learn how to make eyes. I already cut my cardboard. I'm going to make the eye socket. I'm going to start by putting the strip of cardboard in between the eyes to make sure they're not too close to each other, to separate them the way I want. So here we're trying to make a cavity, pretty much like the eye socket, what's behind the eyeball? I'm going to use the two structures that I made to hold the piece of cardboard and push the middle inside like this. Do the same thing on the other side. I'm trying to make the cavity as big as possible. You can always add more, but it's annoying to have to carve out if it's too small. Most of the time my eyes are too small. The more details you work on, the smaller your pieces of cardboard will get, just because if you use a very large piece of cardboard, it will take away some details. It will take away the shape you want. I like to cut my pieces of cardboard smaller, and sometimes I even cut them thinner in the other direction. For example, when I do a crease, I pinch it in half, and then I will place it where I need. This way it will glue well where I'm holding but it won't elsewhere, which helps the piece of cardboard glue really well. I will cut a little bit like this, and then like this, it'll fit perfectly. This is really an intuitive process. There's no order to what I'm making. You can start by the ears. You can start by the eyes. You can start any other way, and you do not have to do it exactly like I'm doing. The important part is to look at your little sculpture, at your model, and try to recreate the shape that is on the model, pretty much. So in this case, I don't want to make too big of a cavity, because pandas have kind of small eyes compared to the rest of their skull. I also want to make him really cute, so I gave him big cheeks and a big nose. When I add the eye in it, I'll also be able to change the shape around its eye to give him an expression. Now that we have made the cavity, we're going to make the eyeball. To make the eyeball, you'll want to use a piece of cardboard that you will cut at about the size of the eye socket. Because my bear will have somewhat small eyes, I won't worry too much about making it too big. So I think that's the right size. Make two. Now, to make kind of a ball or a half-ball, I'll cut on each side, bend every side and bend it at two. You will glue together each side like this, and now I'm going to check again on my sculpture if it's the right size. Yeah, let's do the second one. I usually like my eyes rounder than that, so I'm gonna make two more incisions. I like to bend the back of my little piece here like this, so it will give us a surface to glue the eyeball in the eye socket. All right, now we have our two eyeballs. So this is the part where you'll realize that what you made is not symmetrical at all, and it's okay. You'll have to just make the best of it. But the eyes will make the whole thing not look symmetrical. If you don't place them at the same time, you don't do one eye completely and finish it with the eyelid and everything, and then start the other eye. It's really important to place the two eyeballs at the

same time. So you place them, and if that satisfies you, move on. Now it's time to make the eyelet. Take a piece of cardboard and bend it in half, give it a nice round shape like this, and then place it on the eye to see what it looks like. If it's a little too thick, cut the inside part like this. Make another piece exactly the same for the other eye, and then glue it. Now that I made eyelids, we'll make the bottom eyelid, actually the less important eyelid, but very important in the sculpture. When I make the bottom eyelid, I usually make them smaller, thinner, and then I try them. When both are done, your eyes are pretty much finished, and you can just add the eyebrows or an expression to them. If you want it to look cute or friendly or even sad, you can add a piece of cardboard here which will give him an expression. If you give him a smile, then it's happiness. If you don't give him a smile, then it's a little sad. You can add a piece of cardboard here which will make him look a little bit angry. If you close the front part here, it will make it look more fierce, more angry. In my case, I want him to look a little cuter. Now that we have eyes, it's time to go to the next lesson, where we're going to learn to make the nose and the mouth.

Important Screenshots: 3D model with eye sockets filled in



2D and 3D model of an eye



Front view of the 3D model with the eyes put into place

