

Unit 2: Mechanisms and Inspiration

Description:

To start, we'll look at how to set up the workspace. I will tell you about the materials you'll need and the foundational pop-up mechanisms that underpin the project of the course. Having the right setup and materials will help you produce a professional-looking book that works well and will last.

I will also show you how to gather inspiration in order to help you create your designs.

Episode 1: Materials, Tools, and Workspace

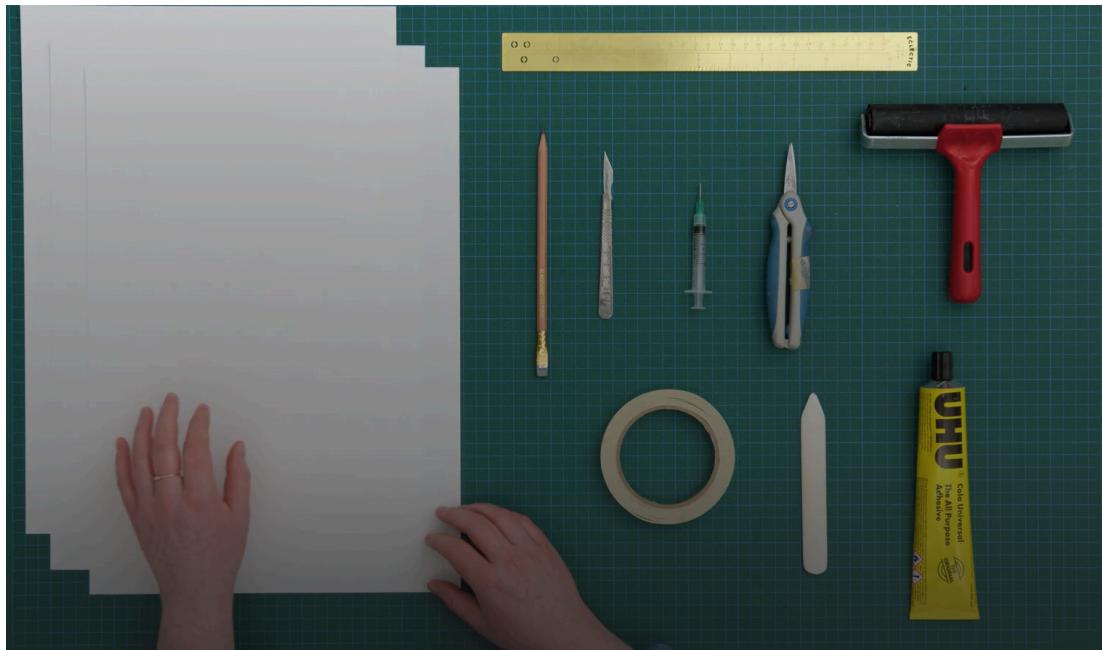
Description: What will you need to make the project? After explaining what the project of this course will be, I will take you through the materials and tools I use in order to create your own pop-up book.

Transcript:

In this lesson, I'm going to introduce the final project and go through the materials and tools that I use to create a pop up book. In this course, I'm going to teach you how to make a three page interactive pop up book with a twist. I'm making beautiful pop ups of London scenes and adding light to bring it to life by adding light in different ways. I'm going to show you how to show you how to make each spread pop. Each landmark will use a different pop up mechanism, and you'll be taught the basics so that you can customize them later if you wish. I chose to make this project because I specialize in interactive and puzzle books, and I wanted to show you how to use other mediums, like light to add to the book form. In terms of techniques, you'll learn how to create a box, pop up a V fold and a floating platform, and how to combine them. I'll walk you through my process in Illustrator when designing landmarks, before showing you how to bring them to life in 3d when assembling. Lastly, we'll bind the three pages and turn them into a book. Now that we've looked at the course, final project looks like materials that you'll need to make this happen. Let's start with the paper for this project, I'm using three weights of paper and card. 270, which is for the base page, 175 which is for the mechanisms that need a little bit of strength, but not we don't want too much light to show through. And then 135 GSM, which is the lightest one, which is to create kind of a diffusion effect. And the paper I'm using for this project is color plan by GF Smith. It's very smooth paper, and it's very easy to work with, and it's easy to cut. One thing to note when you're looking at paper is that all paper has a grain direction. So it might be short grain, which means the grain runs along the short edge of the paper, or it might be long grain, which means the grain runs along the long edge of the paper. And the reason it's important for us to know which way it's going is that if you're folding your paper, you want to go with the grain, not against the grain, because if you're creasing across the grain, you can end up with cracking. And the easiest way to see which grain your paper is. If you have a spare piece of paper, you can tear it and the side the direction that tears straight. That's the grain direction. But you can sometimes see by sort of bending your paper like this, just to see which way it goes more easily. And this paper is long grain. Some papers, when you buy them, actually, they'll tell you whether they're short grain or long grain, which will help you out. So it just means you can orientate your paper. Orientate your paper in the best way possible when you're making all of the paper and card I'm using in this project is long grain. It's not the end of the world if you don't know which grain direction your paper or card is, but it can just help you out. And it can be one of the reasons if you just discover that you're getting cracking when you're making work. I've chosen to use an off white for this project, and the reason for that is I really like working with a single color, especially we're using light, so we can use the light in the shadows rather than the color, to create the kind of the textures and the depths in our project. I'm using a black wing natural pencil for this project. And I think the main thing to consider when you're choosing a pencil is that you probably want to work with quite hard lead. The pencil leads come in a range of hardness ranging from HB is in the middle, and then B is soft and H is hard. And so the harder your lead, it just means the less graphite will get onto your paper. And so it can be easier to rub out and create a lighter line, so that you've got less to deal with later. The main tool we'll be using is the scalpel. And I use Swan Morton scalpels. They have replaceable blades. They're very easy to use, and their blade doesn't ever come off. The reason I'm using a scalpel is because it makes it much easier to get the delicate shapes that we're looking at in this project. I do have scissors, and I use them sometimes, but scalpel is best for when you want precision, and especially if you're working on the interior of some paper, and it's very difficult to get your scissors in. And the scalpel that I'm using is a swan Morton one, and you can get lots of different types of blades, and they're pretty easy to get on and off. So on and off, and it's very hard wearing, and it's pretty cheap to glue the project together. I've got a few different tools. The main one is a glue syringe. And these are used by model makers, and the reason for using it is to get a really precise glue so you can almost draw with your glue. You can't use every type of glue in these syringes. The glue that I use is Yoo hoo. It's a solvent. It's not a water based glue. And it's great because it gives you a little bit of time before it dries, so that you can get things perfect, but then when it dries, it's very strong. And because it's not water based, it doesn't wrinkle your paper. You can use PVA, but you have to be quite careful, because it is water based, it can get into the paper and it can cause that wrinkle. So if you're

using PVA, what you want to do is use a very, very thin layer. Of glue. And I don't think you'd be able to use a syringe with that, but if you don't have a syringe, what you can use for you, who is a toothpick, you can use it to pick up some glue and then get very, very delicate gluing patterns with it. And you could do the same with PVA, or you could use a spatula to get a very thin layer of PVA. So I do have some double sided tape, which I won't be using for the pop ups. I'll be using this for the book binding at the end, but you could actually use this for pop ups if you wanted. It's pretty good because it doesn't wrinkle the paper. There's no water involved, and it's very strong, but it can be a little bit fiddly, and it can also be more expensive than using glue. So this will be using at the end, but you could use it for sticking together your pops if you wanted. So I do have scissors, and mostly I use these for if I'm doing something quite rough and quick. Sometimes you want to just get rid of some excess paper, or you just want to chop something in half, and you don't need to be very precise. I don't really use it for actually making my final pieces, but they're very useful to have around anyway. This is slightly unusual in that you don't open and close them yourself. They're sprung so. And I just find that these are great for really precise work, because it means that rather than having to control the entire motion, you've got a really smooth opening close on them. They're also great for if you need to travel with them, because you can keep them closed. Another crucial tool is the bone folder. We'll be using this to create all the creases in our project. It's just a very blunt edge, so we'll be using it with the ruler to create what is essentially a dent in the paper so that it folds where we want it to fold. If you don't have a bone folder, you can use something like a stylus with a metal ball on the end. Or you could even use an empty ball point pen. You just want sort of a small surface that is smooth and is not going to mark your paper. So obviously, make sure your pen's finished. If using one of those, the roller is a really good tool for when you doing pop ups. You want to make sure that everything is stuck evenly, and so you can just use it to roll over your project to make sure that the glue is all spread out evenly. If you don't have a roller, you can also just use your fist to create a similar motion. Or you can even put something like a book or another piece of card over the top of your project and rub it so you don't specifically need a roller, but they're pretty helpful. Okay, so the ruler is pretty basic. Any metal ruler will do. You can also, if you find that your ruler is slipping, it can be helpful sometimes to put tape on the back. Masking tape works really well. Anything with a slightly rough surface will stop it sliding across the mat. And then finally, there's the cutting mat, which is the best surface to cut on. This is a self healing cutting mat, so you they last quite a long time, and you can use them over and over again, and it means it's safer to cut on. If you don't have a cutting mat, you can use something like a really thick card. You just need to be careful that you're not slipping or going through to your table. Below this cutting mat has grid lines, which are really helpful, especially if you're not designing your pops on the computer, because you can use them to get angles. You can use them to get angles. You can use them for very quick measurements. You don't necessarily need to use your ruler. You can use them to check that something is in half before you fold it. These are really handy. I'll be using Illustrator to design my project. It's a vector based program, and you don't necessarily need to use Illustrator. You could use any vector based program if you want to design a computer. But everything we're doing today can also be done manually with your pencils and rulers, so you don't have to use the computer if you don't want to. The reason I choose to use it for my projects is because it's a very quick way of getting very accurate designs pop up. Is a lot of measurements in some mathematics, and it just makes life a lot easier in that sense. Now you've been introduced to the materials that you'll need to create your pop up. Let's move on to the next lesson, where we'll be creating a box and a floating platform.

Important Screenshots:



Episode 2: The Box and Floating Platform 1

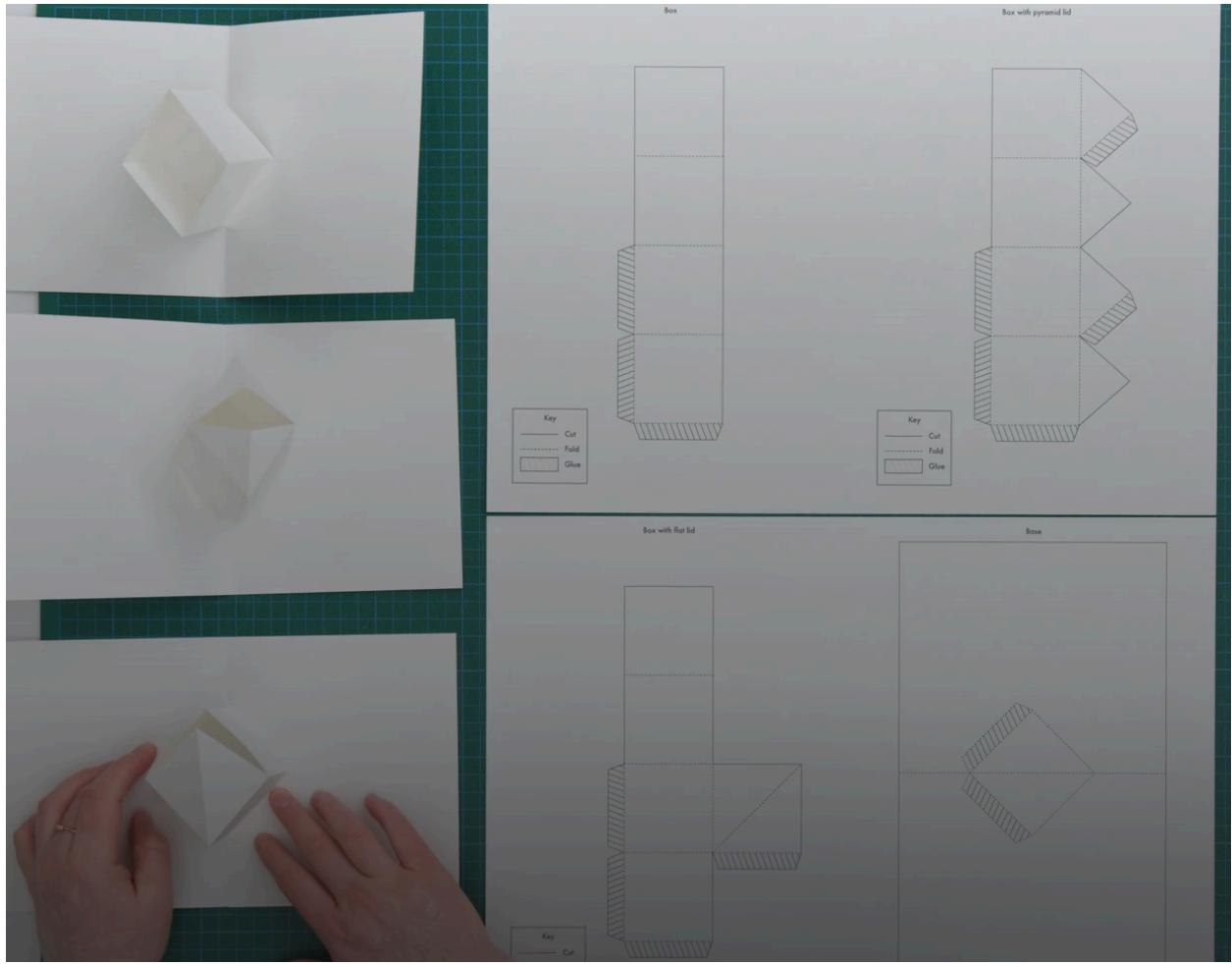
Description: The second mechanism I will demonstrate is the Floating Platform. This mechanism creates a nice effect of weightlessness. You can also use it to insert a light beneath it.

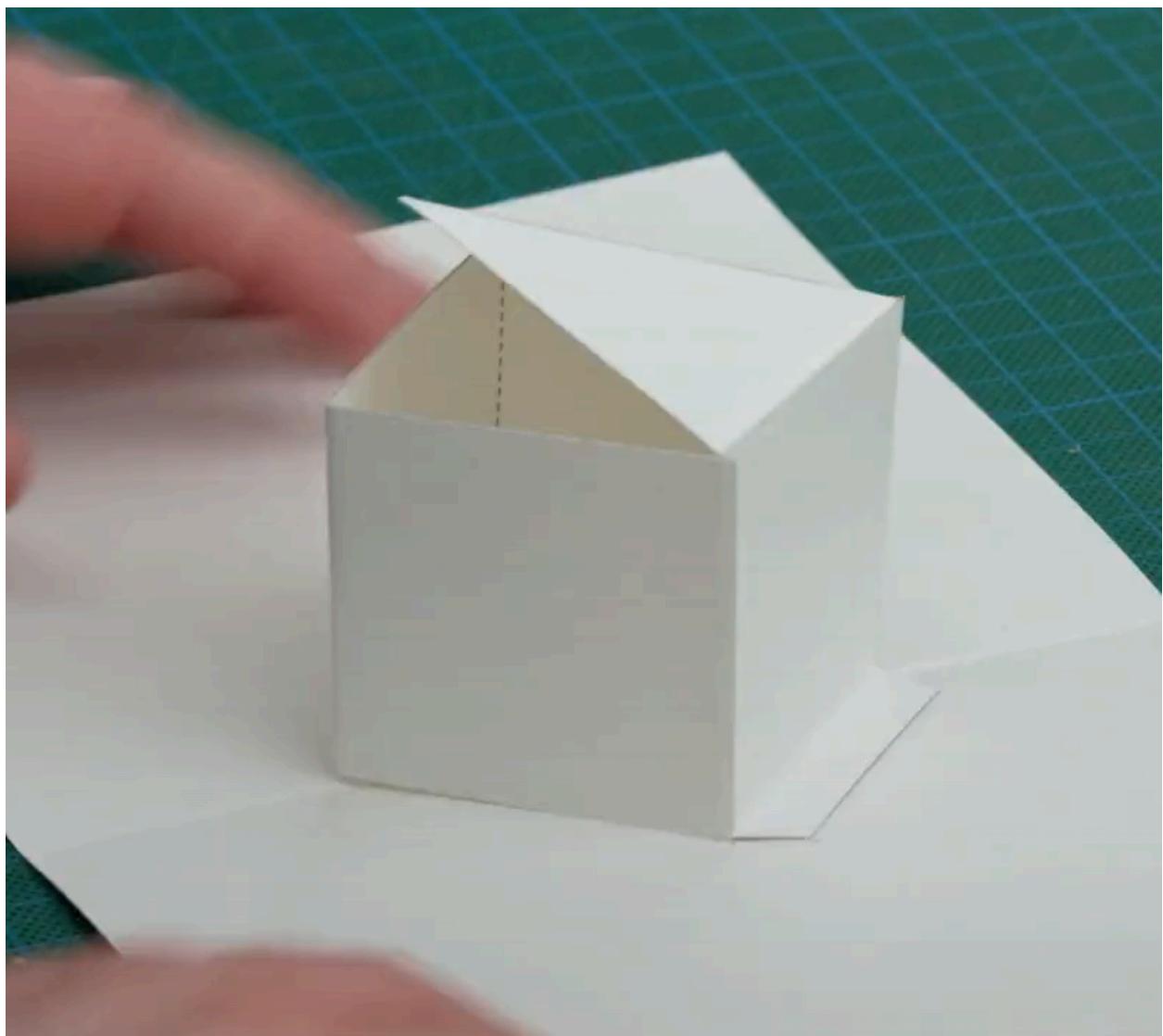
Transcript:

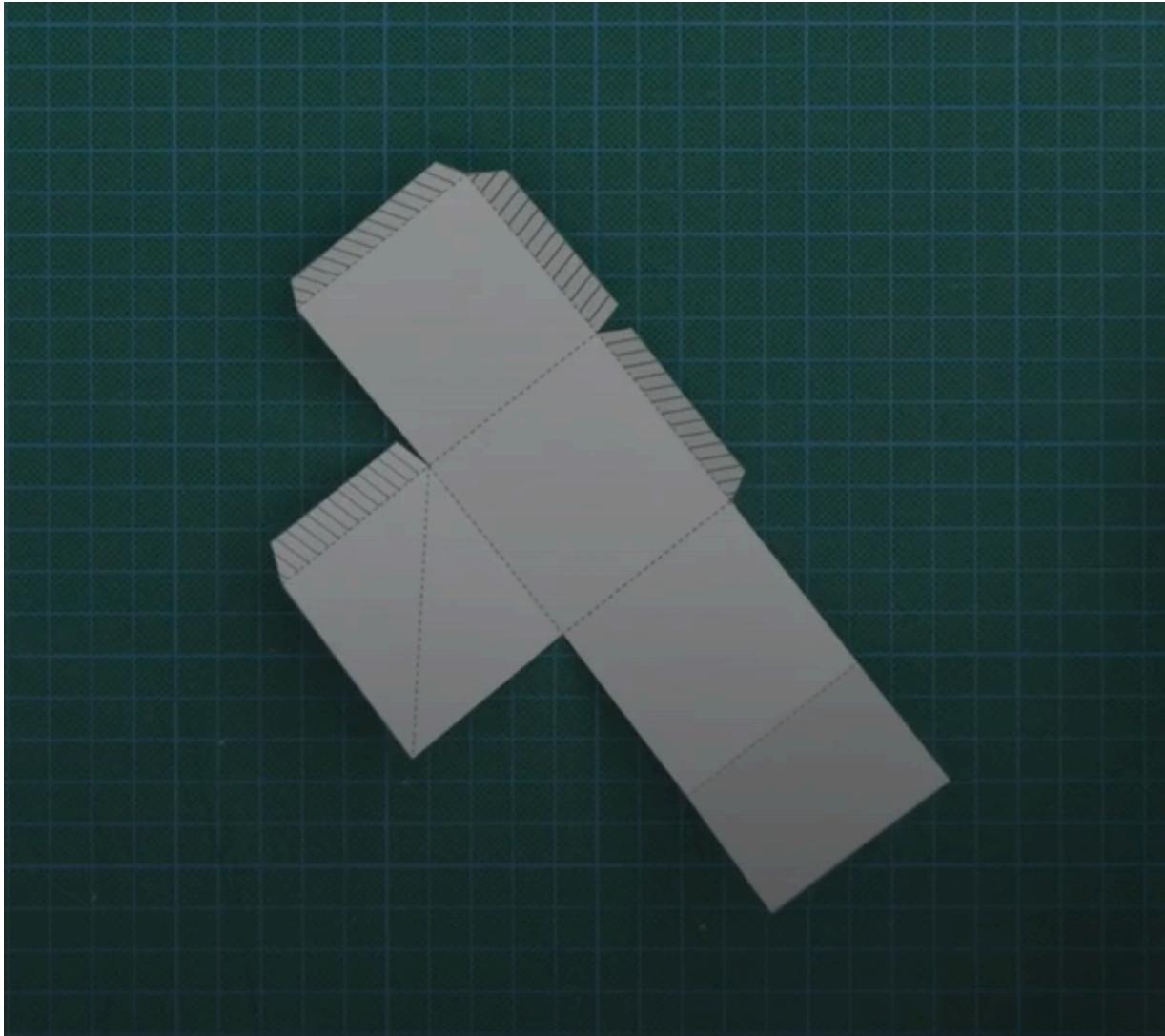
In this lesson, I'll be sharing two key mechanisms, the box and the floating platform, and they're going to form part of your book. And once you know how to build these foundations, you'll be able to adapt and customize them for your own projects. Let's look at what's on the table. I've got my materials that I've already introduced to you, and I've put glue into my syringe with a piece of card underneath to stop any drips. I've printed out my templates, and these are available to download at the end of the lesson. And you can print these onto a three or a four, whatever size printer you have. This is for the box. And we've got the different variations of lids. And our base page, these are the made up templates, so I've already pre made each one, and we've got the basic box mechanism with no lid, and that is this template. We have the box mechanism with a pyramid, and that's this template. And we have the box mechanism with a flat lid, and that's this template. And then you have the base page, which is the same for all of them. If you're new to this, I've put some a key on each of the templates so you can see where you need to glue, which is the hatch lines, where you need to fold, which is the dotted lines, and where you need to cut, which are the solid lines. And because we're working on whites, what you might want to do, if you're able to, is reduce the opacity on your templates. So if you want to make sure that you absolutely can't see any lines, you can really bring that down so that you can only just see where to cut. But I've printed them 100% so that you can see what I'm doing. Okay, let's start by moving the things out of the way that we don't need right now. So I'm going to start with just the basic box, and this is the foundation that the other adaptations are built on. So once you know this one, the other ones are pretty easy. So let's start by cutting our base page. So the first thing I actually want to do is get rid of anything that I don't want to cut. So it makes it much easier. We'll start by doing the fold. I always crease everything before I do cutting, because it's best to do that when you've got as much paper or card as possible. So because my bone folder is a few millimeters thick, I need to put my ruler few millimeters away from my fold line to make sure that it lands on the line. And then you want about a 45 degree angle, one smooth motion, and you'll be able to feel the dent in the paper so that you know that it's worked. And then we need to cut out the outsides. So best cutting practices, you want to make sure that you're always cutting towards yourself, don't move around, always move your paper, not yourself. And you want to make sure, obviously, you've got no fingers over the edge of the ruler, and that you're cutting again at about a 45 degree angle. It should always be comfortable if something's uncomfortable. Cool, then it's potentially dangerous. So make sure that you're comfortable when you're cutting. If you're cutting your template on white, and you want to make sure that you haven't got your lines, one of the things you need to do is make sure you're cutting just inside the black lines. And then you end up with a nice, clean template. Once you got to this stage, you've already got your crease. We want to fold it in half. You want to keep one half of the paper down, and then just fold it gently. And you should be able to feel where the crease is so it will fall naturally where it wants to once you've got it to about here, you're holding it down, you can use your fingers and then get your bone folder again, and you can run it down the edge, and that creates a really sharp crease. And sharp creases are what will make your pop up run smoothly. I'm just going to do some tidying up and get rid of the things that I don't need on the table. So I have my base page and I need my box template. The same rules apply with folding. Fold First, cut second. Make sure that you're a few millimeters away from your ruler, so that your tool is right on the crease, and the quickest way to do the fold lines is to do everything running in one direction at the same time. So rather than rotating your paper all the time, you're getting everything in one go, then you can rotate and get everything in the other direction. Okay? So you can feel all your creases. And I would do the same thing with cutting. Cut everything in one direction. I'm not cutting all the way down that one because I want to leave some paper for me to hold. I don't want to get rid of all the bits that I'm holding on to, these blue tabs come in slightly, and the reasons for that are that partly you want them to look neat, so you want them out of the way, but you also don't want them hitting each other, so it gives them a little bit of space to move. Space to move. And those you can just cut by hand. They don't need to be perfect, and this can be quicker than getting the ruler out. And then want to fold your piece, and what you'll probably find is that it's easier to fold inwards towards your creases, and that's because you're denting the paper in the top, so you're creating a kind of a gully, which allows your paper to move. And actually, that works quite well for us with this, because then we can hold hide the crease lines inside. Okay, so our piece is ready to glue together, so I pre filled my glue syringe with some glue. And the rule with glue is less is more. So you want to use as little glue as you can get away with. So I'm just creating a zig zag, and this will spread itself out. When I glue it together, place it quite gently onto the other piece, and then you're pressing just a little bit, and then this pop up is going to fold in this direction, so when it's closed, it will look like this. So the best way to have the glue set is how it wants to be when it's closed, so that you can get a nice flat finish, and then you can use your roller. What you also want to do is to make sure that you haven't got any glue coming out of your tab while it's still drying, make sure that you open and close it gently, so that you know that you know that it's not stuck together. And that's our piece ready to stick to the base page. So you can either fold these glue tabs in or out. Usually we'd fold them inwards to hide them on the final project, I'm going to be folding them outwards because we don't want them to interfere with the light. So that's what I'll be doing for this one as well. And this pop up is attached to the base page by two points, so you have two parts of your square that are stuck to the base and two that are free to move, and those are what allow your mechanism to close. And there are a few tricks for gluing pop ups. If you've got something that's symmetrical, you can use the pop up itself. Once you've glued one side, you can use the pop up to get the perfect glue on the other side. So you start by gluing just one side. If you

pop that little bit of glue, and then you want to add it to this glue. Tap here. This is at 45 degrees. You can experiment with different angles. It doesn't have to be 45 degrees, but this is a really good one to start with. And you want to make sure that this line where it's creasing is directly over the center crease of your page. If it's off center, you'll find you have problems. It won't fold properly. So make sure that's exactly over the middle, and then I can close my pop up. That's how it will be when the page is closed. And you can see you have your glue tab, a little bit of glue. Do. And then the easiest way to do this is then to simply close your page with your hands a little bit, use your roller give it just a few seconds to dry, and then very gently, open it up if it starts coming off the page as you open it, close it again, allow it to re stick, and then try again in a few more seconds, and that's it. The box is one of the most basic pop up mechanisms, and that means it's great for building other mechanisms onto or expanding. It's brilliant if you're doing something like buildings. It's a very solid shape, and it's it has a lot of power. So you can see that this sits really nice and flat on the page when it's open. So that gives you a lot of scope to do other things with it. And you've also got all of these different planes that things can come off. I'll talk a little bit more about that later, but you can always you can cut into it. You can add to it. There's an awful lot you can do with it. So now we've done the foundation, we're going to look at two different adaptations that we'll be using in our project. So the first one is adding a pyramid roof. And this is great if you're trying to create a house or a building with pitched roof, and it just creates a bit more interest in your pop up. So when it's open, the two halves come together and create a pyramid shape. And this is the template we'll be using. The base page is exactly the same for this pop up, and the process is the same. Start By folding or creasing you tabs don't need to be neat, but you do need to make sure that you cut right into the corner of the crease so as long as you Start in the right place, you'll be fine. And then, and then folding exactly the same principles. Do it quite gently until you can feel where the crease is, and use your thumbs to create a really nice sharp edge. You can use the bone folder here too. And then when it's closed, you'll look like this. You have a few more tabs in this one. So what you can do is the same thing, put some glue onto your end tab, glue the main body together, and actually you can squash it down, and then you know that it will lie flat when your page is closed. These ones, you've got creases so you can fold half of it back a little to apply the glue, and then just fold it back down. You might find that occasionally things don't match up exactly. You can see there's just a tiny bit of overlap there. It doesn't matter too much if you really, if it really bothers you, what you can do is kind of shift it a little bit and then reset some of your creases, and it should solve that problem. And then just make sure that it's not sticking together. And you can see that these two triangles are on opposite sides, so effectively, the two sides of the pop up work independently of each other, so one is not stopping the other from moving. And then the same thing with your glue tabs, you'll fold them out on this one, exactly the same base page. It's the same mechanism, just with an adaptation. And then I'm just gluing it on one side. Make sure this is over the crease. And I've pre cut and scored this base page. And actually you can create folds with your knife as well. So this one was created by just drawing the knife really gently along the crease. And when you use a knife, when we're using the bone folder, the crease wants to fold towards us. And when you use a knife, the crease wants to fold away from you. So in this case, we've cut here, but we want it to fold towards us. So the easiest way to do that is to fold it away the direction that it wants to go, and then fold it back, and you get a really sharp line. You Jo, once you know that it's not sticking together, what you can do is leave it under a book for a little while, just to keep make sure everything's nice and flat. That's the second adaptation of the box, and I will show you one final one. The final adaptation is a box with a flat lid. It doesn't sit completely flat. If you push it down, it would, but it gives you kind of the closest impression of a flat lid. Again, exactly the same base mechanism, and we're adding one extra piece to create the lid you You always make sure you crease everything before you start gluing. It makes it much easier. You don't want to have something half glued and then be trying to fold it. I've just missed a crease there, but That's fine. You can go back. I You so I've put that in, and it's a little bit tight on this corner, and I can see it's because the crease is overlapped a little bit, so there's too much material where I don't want it to be, and that's really easy to fix. We can see where it's damaging part of your card. So I'm just going to take off that edge and can see that fits in much more neatly. It just gives it a little bit of space and you you so that's the third adaptation of the box. We'll be using both the pyramid lid and the flat lid in the project.

Important Screenshots:







Episode 3: The Box and Floating Platform 2

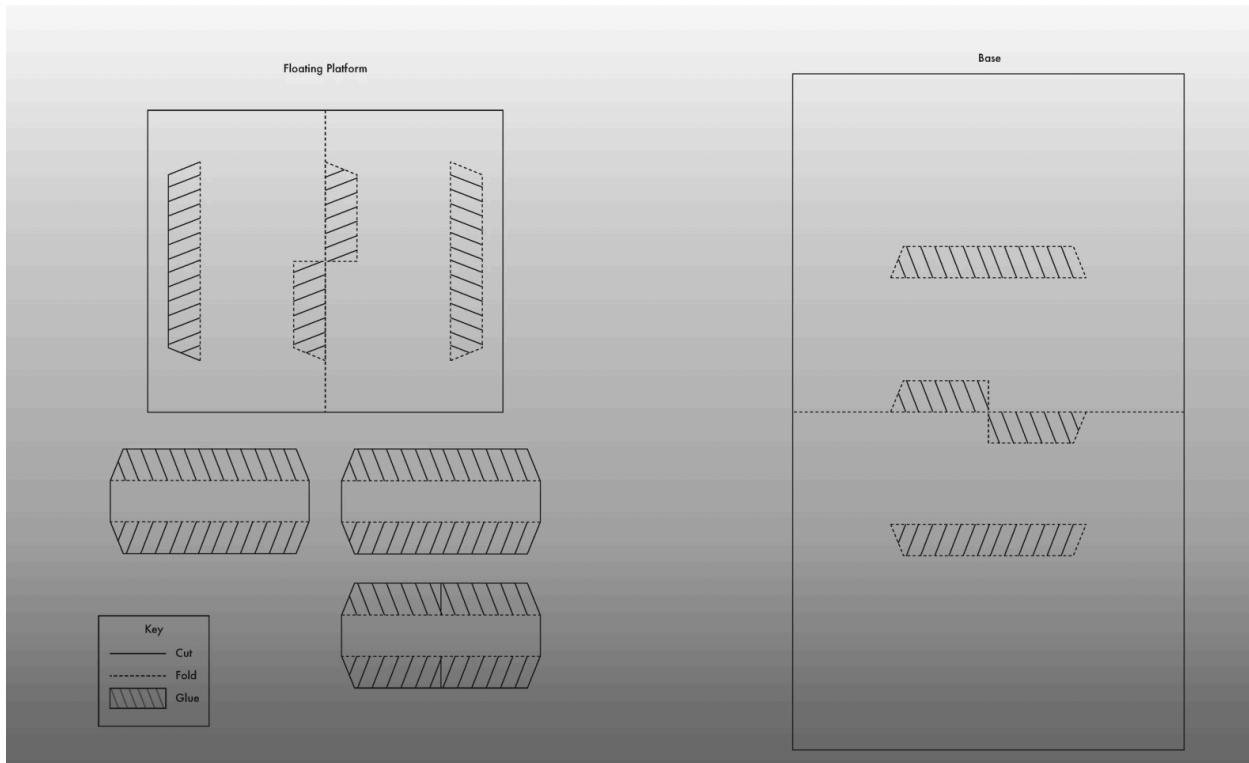
Description: The second mechanism I will demonstrate is the Floating Platform. This mechanism creates a nice effect of weightlessness. You can also use it to insert a light beneath it.

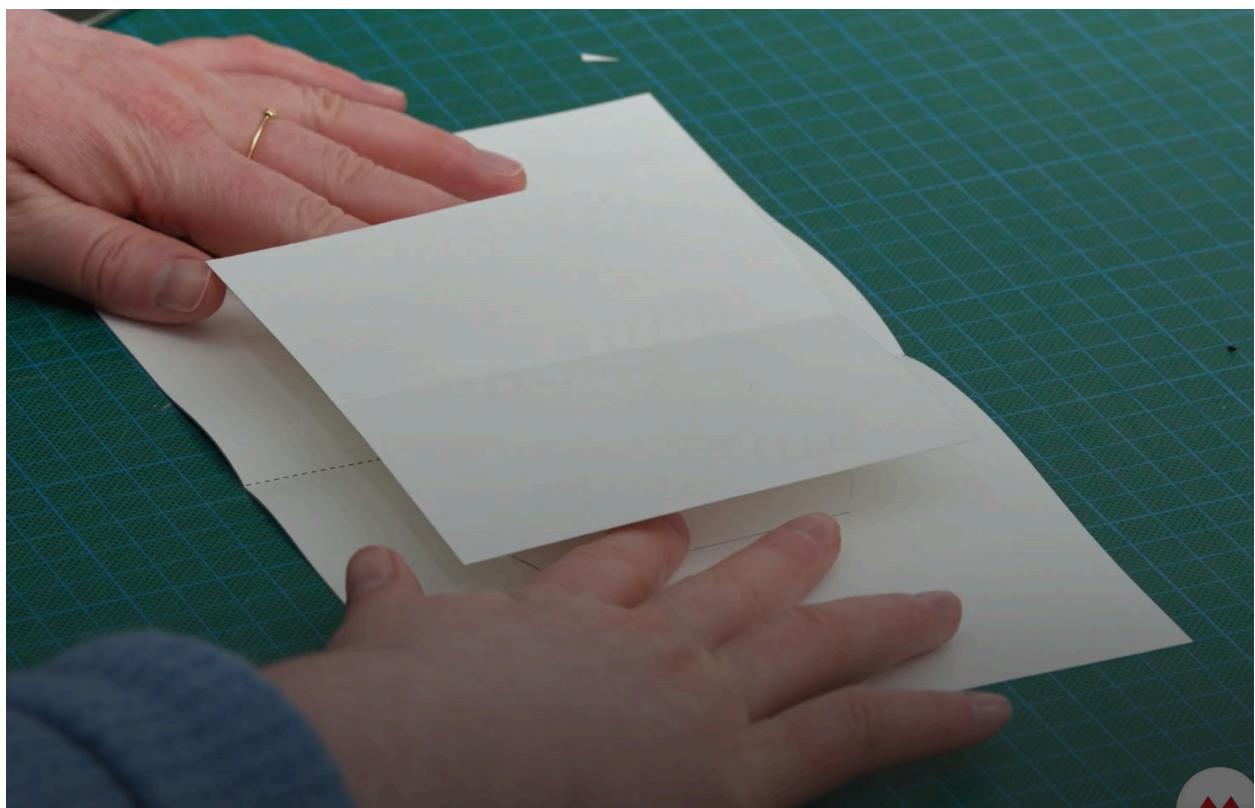
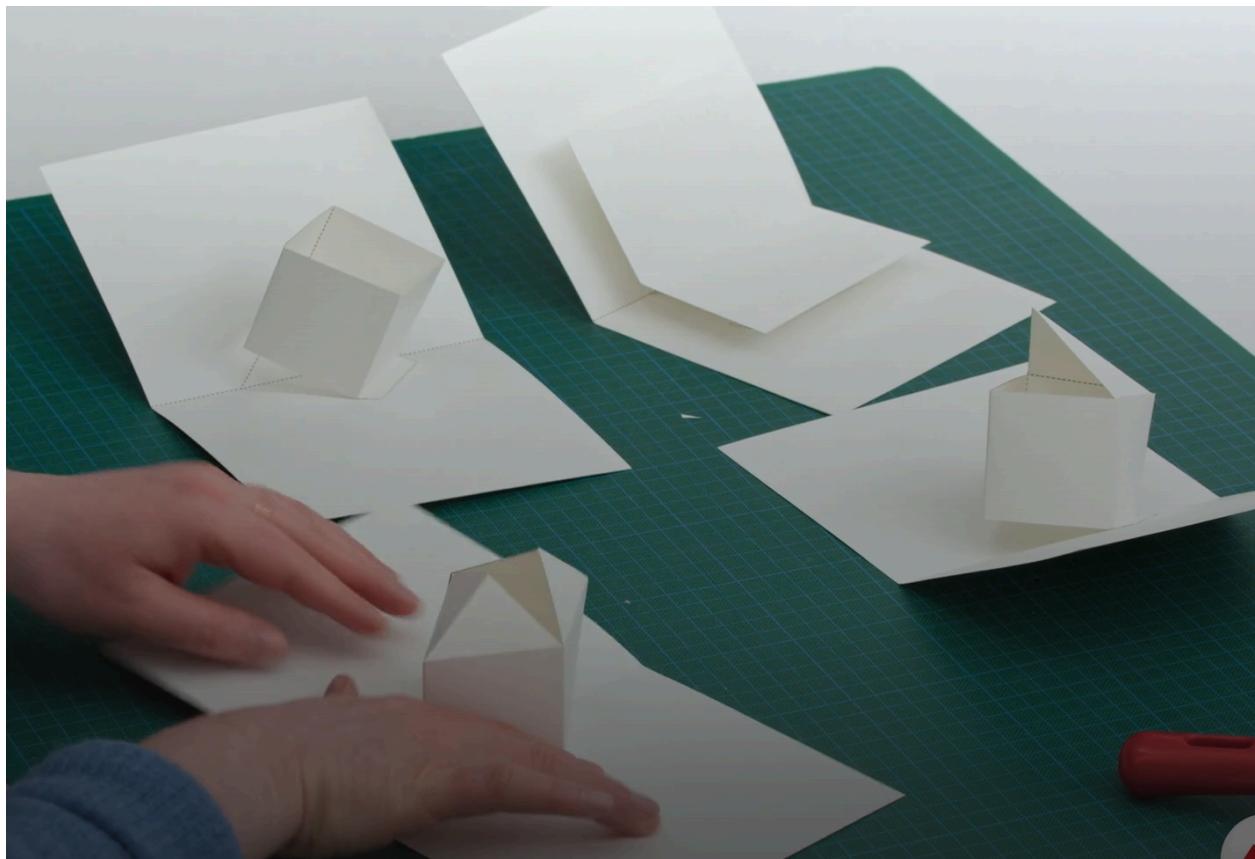
Transcript:

So the second mechanism is the floating platform, and you can see this creates a really nice effect. And if you're looking at it from the top, it appears to float above the page, and you can see it from quite a few different angles. Creates a really good effect. It also allows us to put light underneath it to create a backlight effect. So the way this mechanism works is using three posts, one down the center and two at the sides, and the central one remains straight always, and the two side ones pivot out. So as you close your book, they're pivoting like that to go flat, just like the box. There's lots of different ways to adapt this. You can layer it up so you can create the same mechanism, and you can keep stacking them up. What you have to watch for is that you have the most power on your base layer, and the more layers you create, the less power you'll have. But you can just experiment and see how far you can push it. It's great for being able to cut through so you can create depth effects. And it's a very versatile mechanism. It's exactly the same as the box template we have cut, fold and glue. So you know what you need to do with all the different lines you like the box. This is our base page. Created a center crease. When you're creating your own designs, you can save yourself time by lining them up, so that when you're coming to do your crease lines and your cut lines, you can just run all the way down two pieces you're not

having to move around. I Oh, I Okay, so we have all of our pieces. This one need to fold the platform itself so we know where the center is. It's going to be folding up, just like our page, but we want the glue tabs underneath so that we can't see them. The central one, I'm cutting my tabs in half, and the reason for that is so that one can go one way and one can go the other way, so you end up with a very even movement, and that helps keep it stable. Just like the box, it's really important that you're going directly over the center crease. You want this line to be exactly in the middle. You can make sure by creasing it while the glue is still drying, just to make sure that everything lies flat. And then you add your outside posts, because these ones only go in one direction, we don't need to worry as much about having the split in the glue tabs and I'm gluing one of these on before I put it onto my base page, because it is much easier than when you have it attached. As soon as you start attaching it to the base page, things get trickier once that glue is dry. We'll start by gluing the central post. Don't worry about the two outside ones. Yet, once you've got the center they'll find their place naturally. So it can be easier sometimes to glue this with it folded so that you can see what you're doing. So I can see there that I'm right on the center line. Off, and then we can do the same thing we did with the box, is use the natural positioning of the base page to glue exactly where we want it to be. You just want to make sure that this is pointing towards the center and not away. If you glue it like that, it will work so just make sure that hasn't stuck anywhere we don't want it to that's fine, and while that's drying, we can do the other side. You. You do the same thing, check that nothing's glued in the wrong place, and then leave it straight for a few seconds. And once it's dry, you can open it. You can see it's a really solid mechanism. It doesn't have much movement from left to right, and it opens very flat as well, and that's it. We've got the floating platform. We've got the box with a flat roof, the box with no roof, and the pyramid. So now we've learnt the first two mechanisms for our final project, and now we've warmed up our fingers. We'll move on to creating a V fold and looking at how to combine two different mechanisms to create a different effect. Join me in the next lesson to learn how.

Important Screenshots:





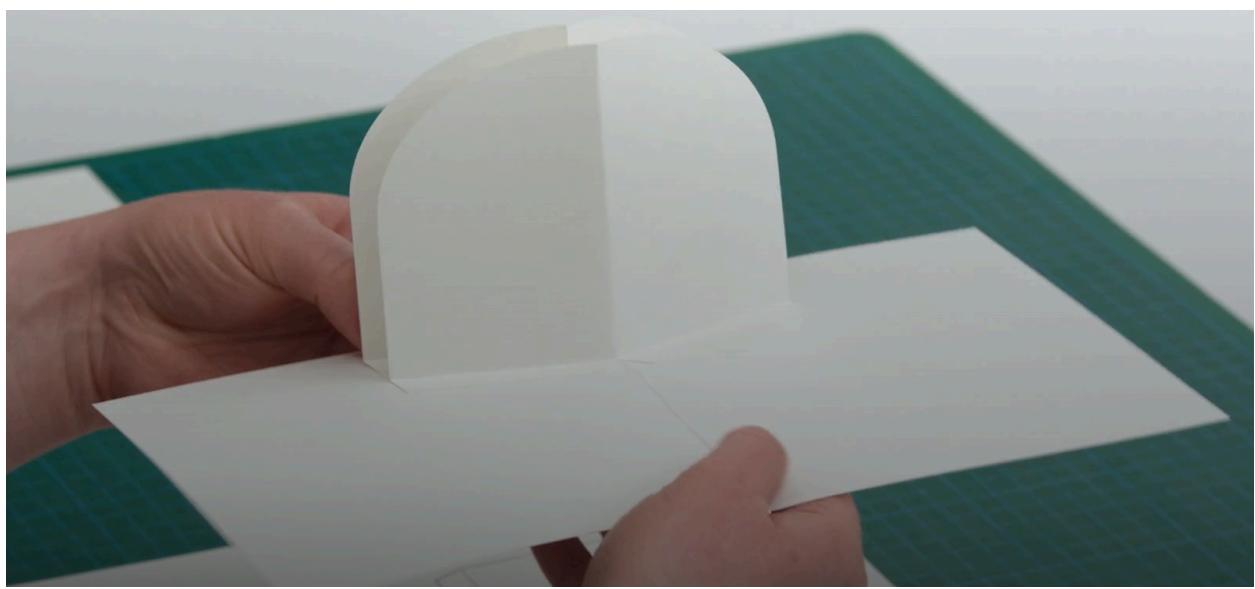
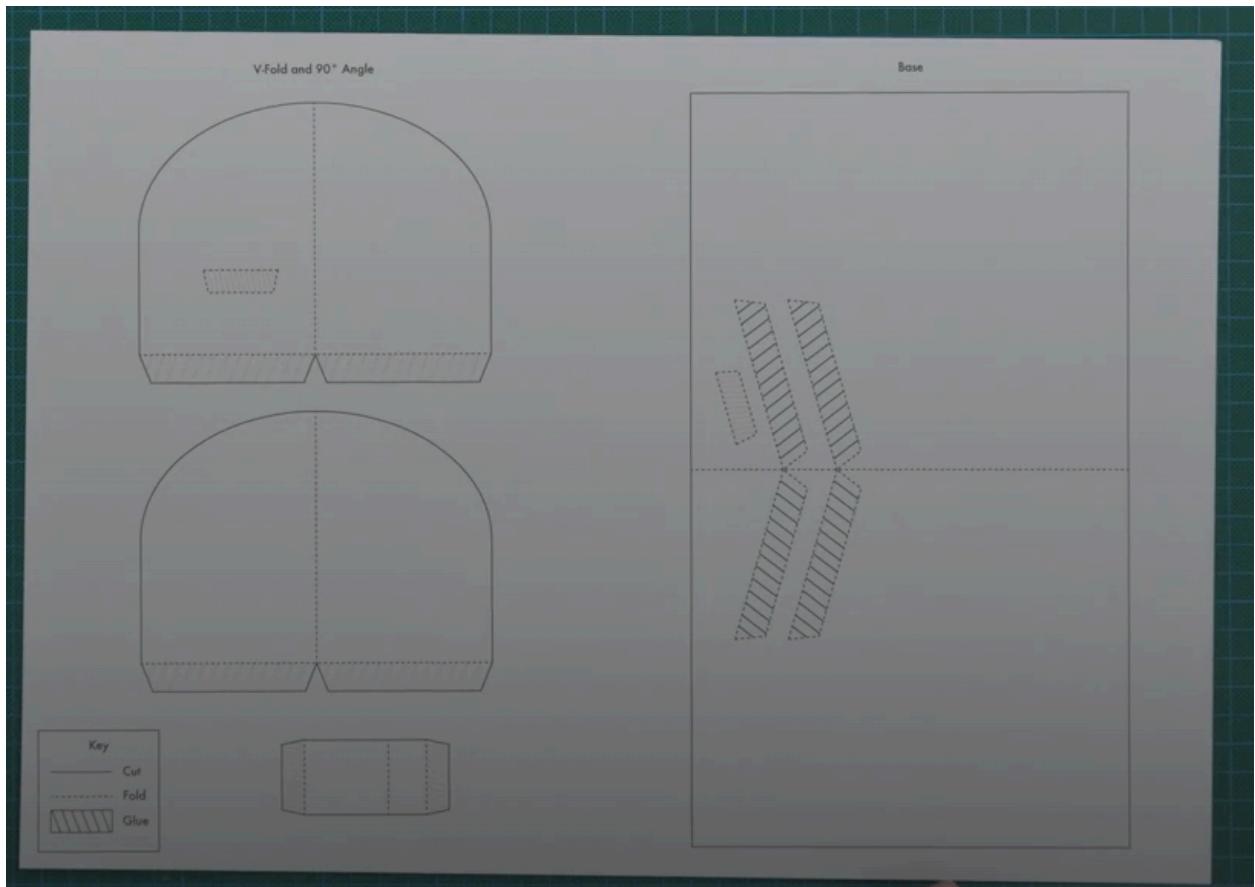
Episode 4: The V-Fold and Combining Mechanisms

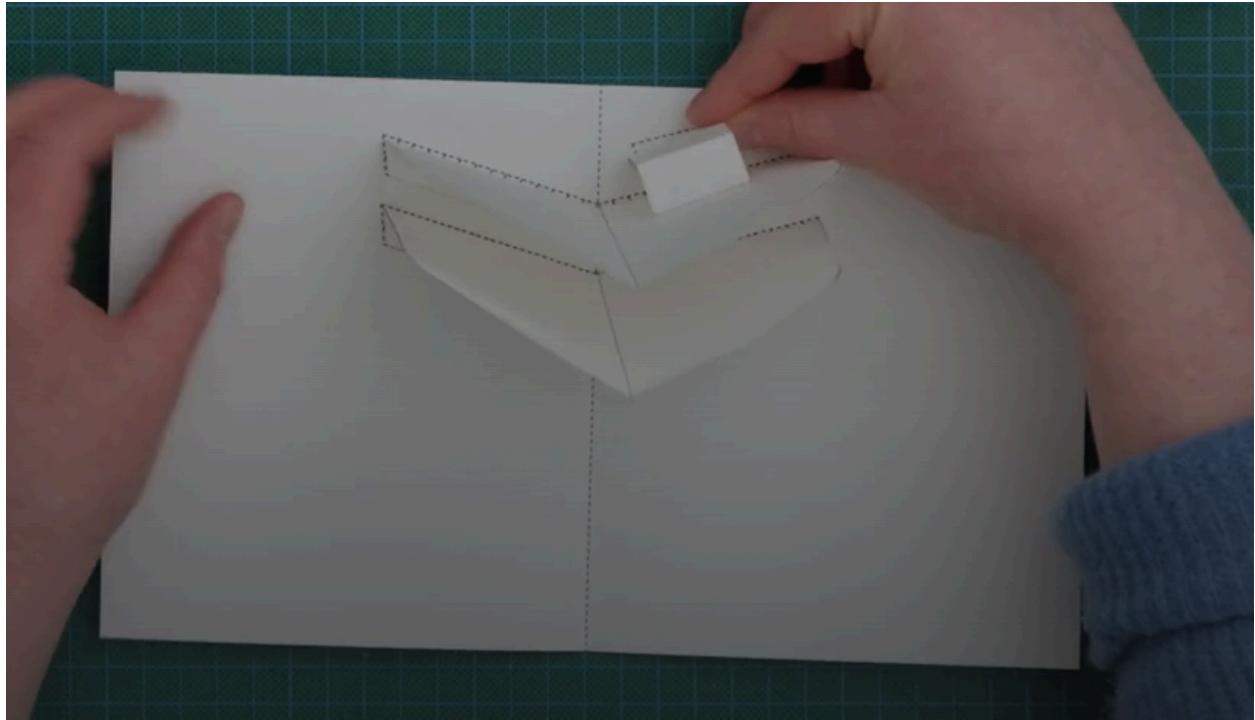
Description: Our fingers are warmed up. I will share with you two other pop-up approaches that will be crucial in the creation of your book: the V-Fold and the 90-Degree Angle mechanism. These two are really useful and simple options you can learn to create pages that are kinetic with power.

Transcript:

In this lesson, I'll be sharing some of my top tips for working with a V fold and combining it with the 90 degree angle for this lesson, I need the same tools as I used the last time, and I've got my template, which has my V fold and my 90 degree angle pieces on the base page is the same size, but we'll be gluing it in a different way. This is one I've already made, and we'll be using the V fold in this way that it's layered. So we'll be cutting through so that we can shine light from the back and create a kind of diffusion effect. And V folds, you could add as many as you wanted back here. Restriction is that you don't want them to stick out of the page, but you can keep layering them up as much as you like. What we'll also be doing in this lesson is looking at how you can combine the V fold with the 90 degree angle. It's called the 90 degree angle. You can see because it comes out at a 90 degree angle. And this is a great way of adding extra shapes. Because not only can you make this box shape, but you could stick something on it to add additional shapes. You can change the angle of the V fold. So I've picked an angle, but yours doesn't have to be that. Again, you can experiment. You can have a much narrower angle, you can try a wider angle. In general, the wider your angle, the straighter it will sit on the page. So you can't have it 180 degrees, because you don't want it to fall over. But anything up to 180 you'll get a very flat, solid base. The V fold is a really key mechanism in pop ups. A lot of other mechanisms are built from the V fold, and it has a lot of power. It has a lot of stability, and there's an awful lot you can do with it, to cut pieces away, add pieces to it. So it's a really versatile mechanism. So let's cut out the pieces for this mechanism. You Jo, this is the first time we're cutting a curve shape. When you're cutting a curve, you don't want to try and go all the way around. You want to cut as far as your movement allows, without kind of hunching or making it difficult for yourself, and the way to do that is to cut several times to get the curve. So I'm cutting as far as I can go without moving my elbow in an odd way, and then I'm just allowing my knife to go straight, so I end up with part of my curve, and then I can remove the excess so that it's not in my way. And then I go back, I turn my paper slightly, and I do the same thing, and then you end up with a really clean curve. And you and then finally, the 90 degree angle piece, which is a really simple piece, this one will start glueing, and will glue from back to front. And whichever way you glue this, you're going to end up kind of coming to a slightly tricky point. But if you glue from the back, at least you're working, you're kind of keeping your way clear as you come back towards yourself. You so we'll start with the piece. We'll put the piece where we're glueing our 90 degree angle to one side, and we'll start with this piece. And. And exactly the same as the previous mechanisms, we'll glue one side first. And if you're wanting to experiment with different angles, what you can do is pick whatever angle you like for your first side, and then you'll know it works if you just close your page because it'll be symmetrical, making sure that the point is over the crease and and then closing the page on it. If you find when you open it that it's not quite right, you should still have a little bit of give left in the glue so that you can shuffle it around so it sits nicely, and then close it again, open it again. Just do that to make sure that it's all okay. So that's our first layer done. We are going to add the 90 degree angle piece to this piece first before we put it on the base the reason for that is it's almost always easier to assemble things before you attach them to your base page, because once they're on the base page, you've got less wiggle room, and it's harder to move things around to see what's going on, and because it's symmetrical, we'll fold this one in so you can't see the lines on it as well. I've already added a glue point for you. And the reasoning behind the glue points is the same distance from the base of your piece as this side of your mechanism piece. So if you look at it from the side, you're creating a rectangle. You want everything to be in parallel. So you want this top piece to be at a 90 degree angle from your V fold. And you can change those measurements so you could have it so that it's longer on this side, longer on this side. And you just need to keep moving it to make sure that it remains a square or a rectangle, and it will always work, and that's glued to that piece. So we'll bring back our base, and we'll start by doing the V fold piece, so that we can use that as a guide for glueing the 90 degree angle piece. This one can be a little bit trickier, because we can't use the same technique of doing one side. So this is where it can be really helpful to have some marks on your page to see exactly where you need to put it, and once you've got it in about the right place, you can do the same thing, fold it in to check that everything's working correctly. And just fold this piece, the 90 degree angle piece, so that it goes flat, so that it doesn't interfere with anything. That's our 2v fold layers done. So now we just need to glue this final tab of the 90 degree angle piece to secure it to the base page so that it can move when you close the page. If I hold this here, as I'm closing it, it wants to pull flat, so we just add add some glue to the tab, and then it's really useful here to have your measurements already drawn out so you know exactly how far away it needs to be from your V fold piece to work, you can see, actually, it's not sitting exactly on my mark, and that's fine. It's one of the reasons why it's more useful to kind of use the page to help you figure out exactly where it needs to be. It might not be exactly where your measurements say, but as long as it works, it doesn't matter. And that's finished. So now you have two mechanisms in one so now you've created a V fold and learn how to combine it with a 90 degree angle. We know all of the mechanisms that we'll be using in the final project. In the next lesson, we'll be looking at gathering references and places that you can find ideas.

Important Screenshots:





Episode 5: Finding Ideas and References

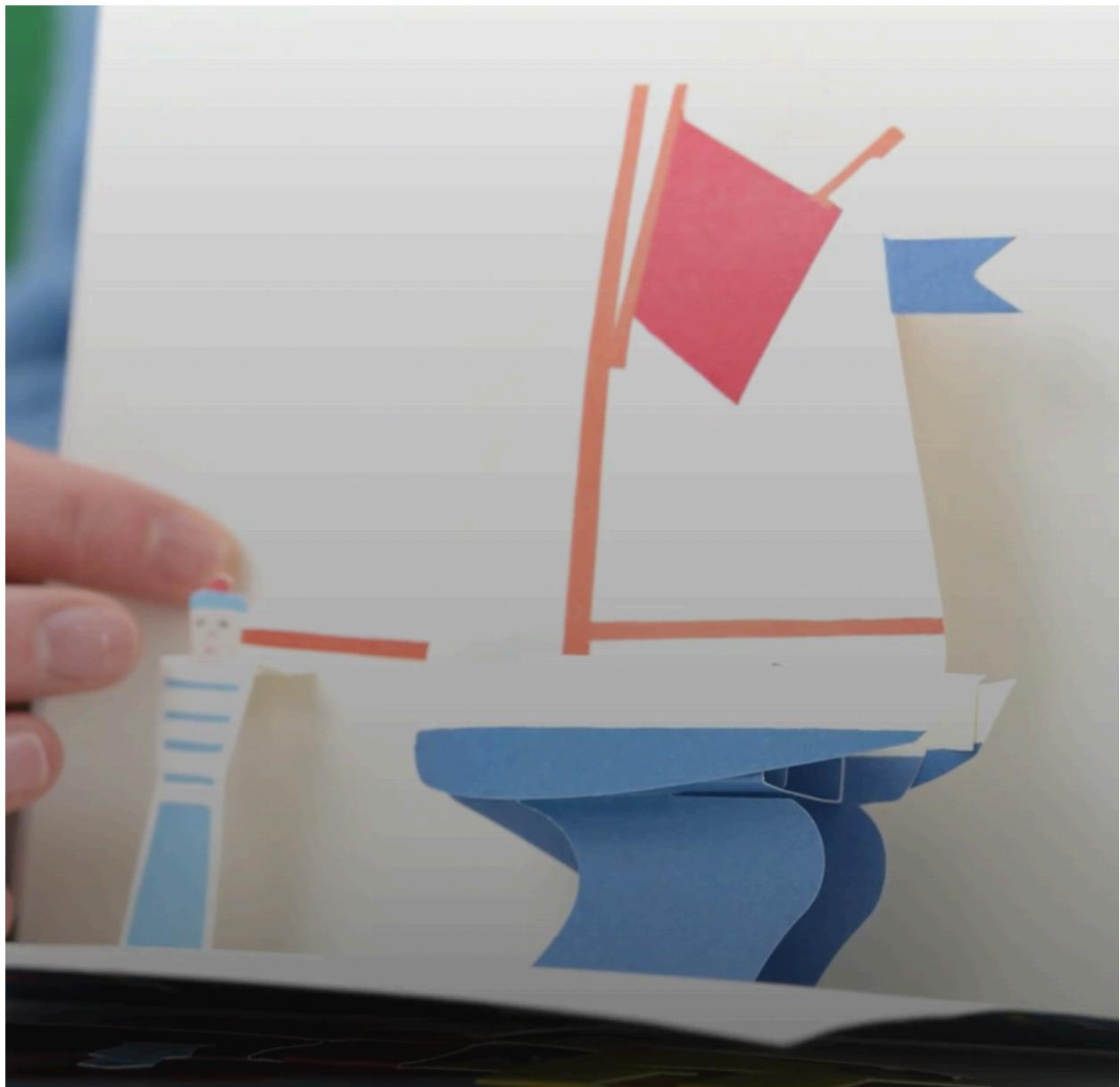
Description: In this lesson, I will explain my process for finding ideas for books, and I will show you where I gather reference material when starting out.

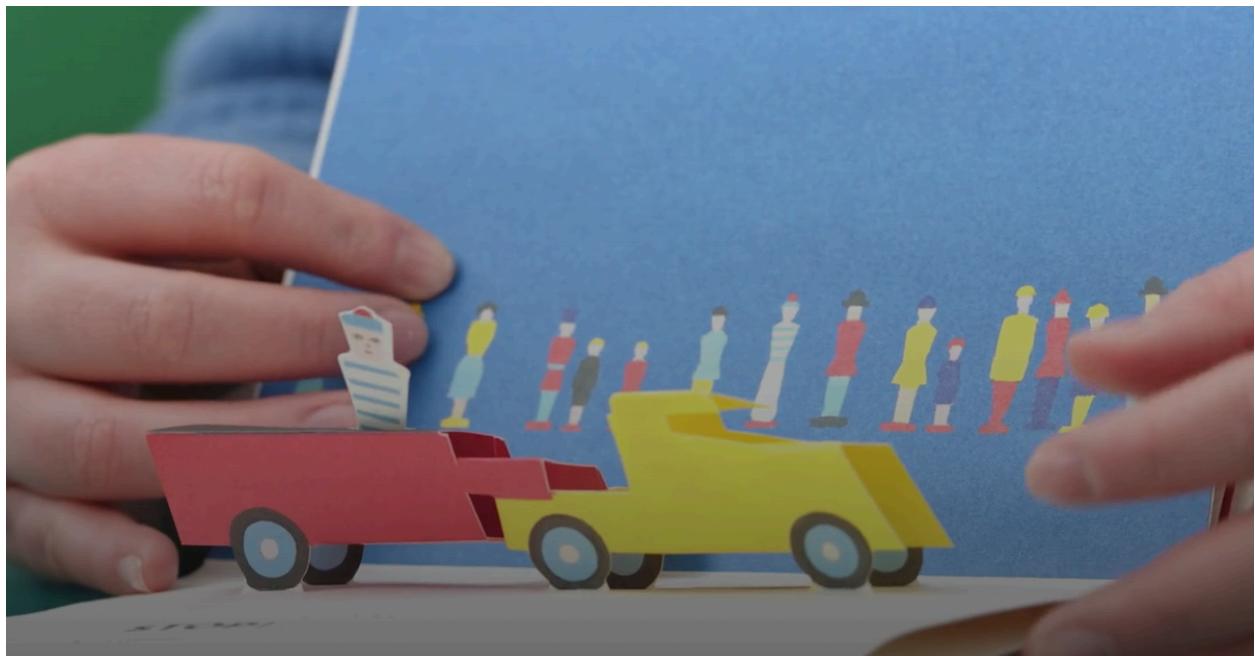
Transcript:

In this lesson, I'm going to show you where I find ideas for books and how I gather references and ideas. Storytelling is a really important tool in pop up books. Almost all books, regardless of whether they're fiction or non fiction, have some kind of narrative threads, and it's that that keeps your reader engaged and moving through your book. I've gathered some books that I think are really inspiring to show you what I mean. This one is all about toys, and each page seems like almost a standalone in itself. Each one is about one of the toys. Sometimes the toys move from one page to another, like one of the firemen in this page ends up in a pram. But actually, the real narrative is that you're moving through the toys almost as if they're real, until you get to the final page and you discover the messy room full of all the toys that you've seen on the floor. It's a really nice way of tying the book together and giving a reader a bit of a surprise at the end. Another book that uses narrative in a really interesting way is this one about weather. You start by looking at weather around the globe and use that as a narrative thread through the book with some amazing pop ups to demonstrate how weather affects different people in different places. So although there's no story per se, we understand the theme and we follow the thread that the author wants us to follow. This is something you can do in your own designs. You can take a narrative thread and run with it, looking at different times of day, different times of year, different places. There are lots of ways to use that. Storytelling is something I really like using in my own work. Those. Is books by other authors, and the books that I create, I often like to use interactive elements to create storytelling and a bit more interactivity with the reader. This one midnight monsters is a shadow pop up book, and the concept is that the pages look reasonably interesting to the reader, but to really get the full benefit of the book, they have to get their torch out. Especially, I always recommend a phone torch, and they need to move that around, and they create shadows on the wall. And when they get their phone to a certain point and the light is hitting the book at just the right angle, then they'll discover the shadows of the monsters in the book, hiding in their different habitats. So monsters was my narrative thread for this book, and the way I decided to organize them was by habitat. I thought it'd be interesting to look at monsters that come from different folk traditions, different cultures around the world, and bring them together so that they might all live in the same place. So this spread contains monsters that live in the woods, things like Bigfoot and Headless Horseman. And when you shine your light through here, you'll be able to create the shadows on the wall of those monsters. These all live in the creepy caves, things like dragons and goblins. And so even though it isn't really a story, the reader understands what's going on, and they can follow the thread through your book. All of the books we've looked at have the same various running through them, and it's really important to have that top line idea, something that your reader can instantly look at and know what you're talking about. That's what I wanted to

create for my final project, to take people on a walk through my home city of London. Ideas for stories can come from anywhere. Often the best ideas come from outside. Similar work, they're looking at books, articles, other images and making connections between things that you might not always have thought about before. I keep a folder of images. They can sometimes be related to my practice, but not always. Sometimes they're just images that I'm drawn to. When you've been collecting images for a while, you'll start to build a picture of what you find interesting. You'll start to see themes emerge in the images that you're collecting. You can keep these images in any way you choose, on a Pinterest board, in a journal, on the Notes app on your phone. It really doesn't matter how you keep them. The most important thing is that you're building up. Your own archive. I keep my images in a folder on my iPad, just to keep them all together on my iPad. I've got a collection of images that I brought together for this project. The first one was the image that inspired me. It was an accidental image. I was creating a piece of work that was 3d buildings, and I happened to have my phone out, and I wonder what would happen if I put one of them over the light on my phone, and it created a really lovely effect. I've also been collecting images of London, and especially the way that London lights up at night. There's lots and lots of lights, different colors, different angles, creating different moods. Over the last few years, there's been some really amazing light festivals in London, and those are also really inspiring for a project like this, looking at ways that the city comes to life when you add light. Big Ben is such a key landmark of London, and it's one that I want to include in my project, and I need to look at how I can use light to enhance it. Hyde Park is somewhere that I've spent a lot of time walking, and I love the light in the trees, and you get beautiful sunsets and sunrises there. Letter square is always busy. It's always light. It's known for its bright lights. Sometimes there's film premieres there, and it just has a buzz about it. And the lights really enhance that. I'm choosing these three landmarks to represent London. I think they were a really good spread of what I find interesting about London. Once you put together a mood board, you need to start thinking about how the images you've collected are going to translate into sketches and then later on, into your final designs. Let's take Big Ben as an example of how I'm going to sketch out the different landmarks. So I'm moving over to the procreate app and bringing in my reference image. And I want to look first at the different shapes that are in Big Ben. It can be helpful, sort of finding the design elements pop up. There's a balance to be struck between your design and how complex you can make something before it becomes unusable. To pop up, you need to remember that you have to cut it so you don't want to take in too much card away. You need still for it to be structurally sound. So you want to find the elements of the design that are absolutely crucial for somebody to recognize it as the object. Recognize it as the object that you want them to recognize, but without making it too complicated or taking too much away so that you can't use it as a pop up and so Big Ben is things like the clock face is absolutely essential. The clock hands, the square around the clock face. These are all the kinds of things that you need to be looking for. You've got two lines here which you might not be able to use, because if you cut across, then you're going to cut your pop up. I think even without having the tower, you can sort of start to recognize it as what it's supposed to be with just a few elements. So you can see it really doesn't take much to make me then, even in a really rough sketch, these kind of preliminary sketches are really important before I start getting into the design properly. They really help me understand what elements that I need to use to convey the thing that I want to convey. I've done sketches already for letter square in Hyde Park. Let's have a look at those. I'm using these preliminary sketches to make sure that they're going to work. I know from doing these that I've got the right layers. I'm even using dark backgrounds and light pencils to try and emulate what it might look like when it's lit up. So I can understand where to use negative space I want to add light to tell more of a story than you'd get from just a pop up page. So adding light is something you can add another layer to your work. You can convey more emotion. And I think it's really important for the story that I want to tell on this walk through London, that you can show people different times of day in the city using white card is something I really like to do in my work. I like that you can use the lights and the shadows to create your design rather than the colors of the card. And it's something that's fairly minimal when you look at it just laid out, but as soon as you add light and you create layers, it's something that's really beautiful and complex. So for this project, I've decided that I want to use entirely white card and paper, and I'll let the light do the talking for me. I've also decided that I don't want to use any words in my pop up book. I want the images to speak and. And I've decided that adding typography would actually take away from the design I want to convey. So I hope you can see how gathering inspirational images is really useful when honing ideas for a pop up book. In the next lesson, we'll be getting started on our final project by working on our first page. Please join me there to get started.

Important Screenshots:











Unit 3: Designing and Assembling the Pages

Description: Here is where we will begin the creative process of making our pop-up book come to life. Having defined our creative vision previously, I will show you my process when it comes to designing each individual page in Adobe Illustrator and then assembling them in situ. For this, I will utilise a different mechanism tailored for each landmark.

Episode 1: Designing Page 1: Big Ben

Description: For the first page of the book, I will be using a box mechanism with a pyramid lid and a flat lid to create Big Ben. Arguably the world's most famous clock, I will first establish its shape and then hone in on capturing its iconic silhouette.

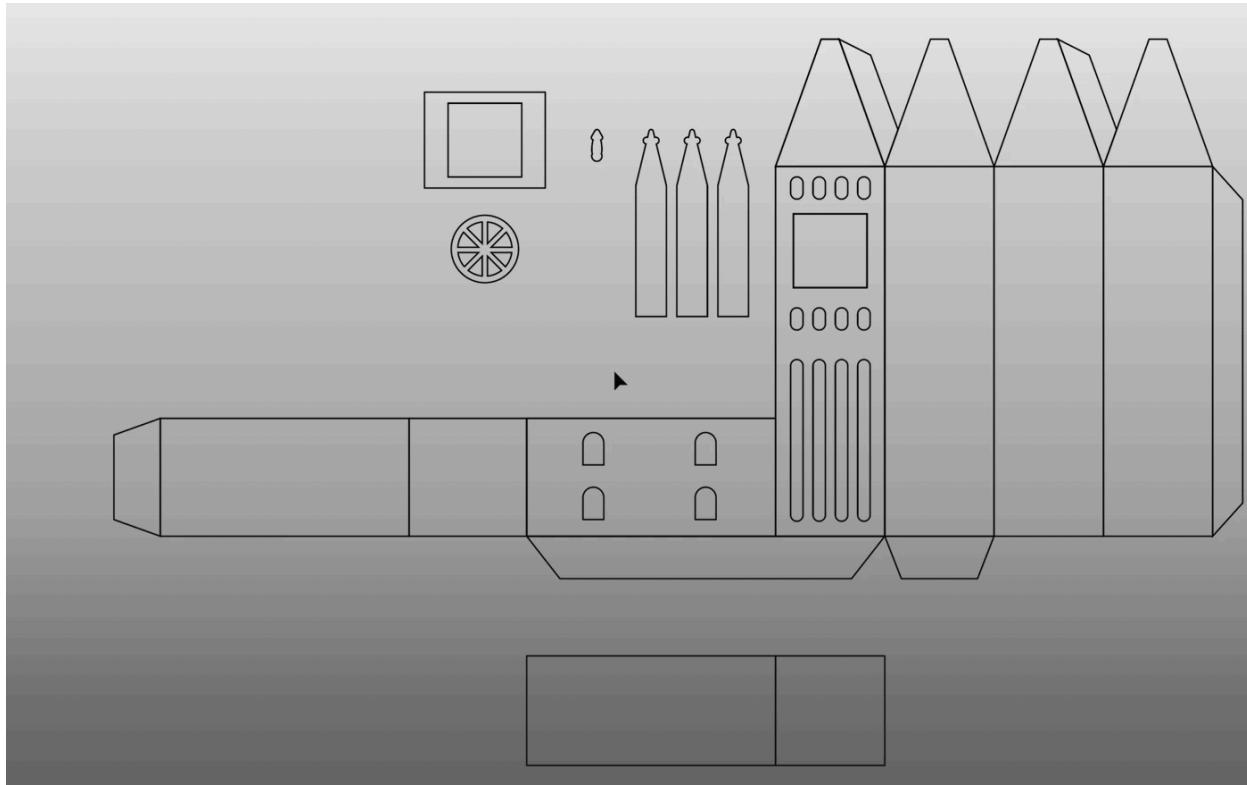
The key here is to think about how to translate the main design elements that make Big Ben instantly recognisable, but also distill these into simple forms so that it's suitable for a pop-up. Let's go into Illustrator!

Transcript:

In this lesson, we'll put together the first page of your book Big Ben using the box mechanism that we looked at in an earlier lesson, using the pyramid lid and the flat lid. Big Ben is an incredibly famous clock. Everybody knows what it looks like, so our job is to take this iconic shape and distill it down into a form that we can use into a pop up. Let's go into Illustrator and start the design process. I'm using Adobe Illustrator. This is the program that I design in, but actually you can use any Vex program, and you could also do this by hand with a pencil, ruler and a protractor. So there's no need to use the computer if you don't want to. What I really want to show you in this lesson is how I take a subject and simplify it so that it's suitable for making it to a pop up because there are quite specific things that we need to do before it's workable as a pop up shape. We're going to start by creating the foundation shape, which the basis of our design. You've already looked at the box, and it's the box that we'll be using as the foundation of this pop up. And we'll be using both the pyramid lid and the flat lid. So I've gathered these references and some illustrated, some a photographic and I think it's always a good idea to kind of get a range of views of your subject. Views of your subject. And it also helps me see how other people have tackled the design challenge of Simplifying Big Ben, which is quite a complex shape. The first thing I want to do is just draw out Big Ben and houses of parliament, just get the very, very basic shape. And we don't want to make it too tall and thin, because the taller and thinner shape, like this gets a box, the less power it has at the top, so the harder it is for the page to be able to open the shape fully. So I've created a Big Ben hazard environment. You can see that it's slightly different proportions to the real one, but actually, it doesn't matter. I think we'll be able to convey the important design points that make people recognize it as Big Ben anyway. So the next thing we need to do is check how it's going to fit onto our base page. And the way we do this is by drawing our shape to see where it's going to sit. Obviously, you could just test this out if you wanted to, but sometimes, if you're designing the computer, it can be easier to just check it out on the computer very quickly, and then you can resize your shape without having to remake it. So what I'm going to do first is see where my pop up is going to sit, so we know that we want big Ben to be a square, so that gives us the depth of pop up. And then I do the same with a rectangle tool for the Houses of Parliament. Houses of Parliament, take that shape and grouping it so that they stay together, putting it onto a 45 degree angle, and then making sure that these points are over the central fold. That means that the pop up will work correctly. That's your pivot points. And you can see that this sits fine onto the base page. But what we really want to know is what it will be like when closed, because you don't want any pieces sticking out. And we'll do that by drawing out exactly where Bob is going to be when it's closed. And we're going to take our shape, let's flip this and then put it on the same 45 degree angle. And if you look at your box templates that you've created, you'll be able to see where the shape is bending from. And in this particular mechanism, it's along these two front edges. The two back edges are not attached to the card, so that they can move freely. But we want to check that nothing's falling outside of the page, and it's not. And you can see that you've got a little bit of wriggle room, so you can move it forward and backwards a little bit if you wanted, but you don't really want to keep a little bit of space. You don't want too close to the edge. So that's looking great. So let's get rid of that, and then we're taking the space piece, and actually it's going to help us with our template. So we've got a templates here, but we're creating a rectangle, so we're adapting it slightly. So we can see here, actually I want to have four sides for my Big Ben, because I want to block the light between these two pieces. I want to do it without creating two separate pieces. So what I'm going to do is take my big Ben so ungroup these so that I can work separately, and I'm going to create four of those copy paste, so I can see that four of these, so the fourth one will come around and connect here. So that one's got to have a tab, and the tab it will be connecting to here. So sometimes I find the easiest way to create tabs is to put them where they go into glue, and then move them to where they ultimately sit. So we've got our first tab, and we also need another tab, because we need this shape to connect to the back here. And so we've got the front piece one, and then we know we need a square there, and then we need a repeat of this shape, and that takes us round to connect with the back, and then we create another tab. So let's move on to the roof of Big Ben. I've already created a pitch on my roof, and you need to remember that the triangles that you create will not be as tall as they appear in your drawing, because they're going to bend inwards. So I would always create things slightly taller than you think you want them, and they should end up about the right place. And we need to connect these slightly differently. These will be connected in 2v shapes. If you look onto your template, you can see what I mean. And so I find the best way to create a tab is to create a rectangle. And then obviously, we don't want to overlapping with this shape. So move that up. We. The reason I taper the glue tabs is just to make them neater. For one it stops them banging into other pieces, but it also makes it easier to see where you've got to fold something. So if your fold line is not quite crisp, as crisp as you'd like it, it makes it easier to see where it should be. And then I can copy and paste that. So I don't want these two middle ones to connect. I want the two front ones to connect. I want the two back ones to connect. So that's great. Now we have our base shape, and we need to add some glue tabs to be able to stick it to the page. So let's do the same. And we need it on this front piece, and we need this piece. So that's this, and that's it. That's the basics of your pop up for this page. Next, we'll have a look at adding the design to make life simpler. To start on design going to move away from the shape, and we're going to go back to the basic shape we drew at the beginning. And now we need to look at what the design elements are that make Big Ben. Big Ben, we also need to start thinking about layers, because we're going to be adding light, and you need to remember that the fewer layers, the more light we'll get through. The more layers, the less light we'll get through. So you need to think about where you want the lights to appear on your shape. And Big Ben, the obvious place is the clock face, which is lit up. But actually, I think what I want to do is add light to these vertical lines down the middle to just give us a bit of extra interest to the design. So I'm going to start by drawing my clock face. I Bo let's add this to the power shape that we created, copying and pasting, just so I can keep a copy of it down there, and you can see that if it's nicely over here. So let's start separating the shapes that we don't actually want Incorporated. Want incorporated into this piece. And that's things like this. This is separate, as is the clock hand, but these pieces we all want cut into the piece. And the Houses of Parliament actually going to get rid of those, merge that shape, and then we need three of it, but we want the windows cut into the pieces. Into the pieces. The very last thing we need to do is make sure we can add light to our piece. So we've already removed all of these shapes from the base,

protecting those and what we're going to do is join this one final shape. And usually you'd put tabs under so you'd be sticking them inside your shape to hide them. But because we want the light to come through here a bit like black. We can't stick there, so we're going to be putting our tabs outside, which is why we made sure we move the pieces around the outside away so we can remove this fold line here, and that's all your pieces ready to fold and cut. Now that we've created the internal shapes of Big Ben and transformed it into our own design, the next thing we need to do is combine it with the shapes that we'll use to make our pop up. So there we go. We've managed to create the foundational shape of Big Ben and designed it along with the Houses of Parliament Westminster and bustling traffic along the Thames. Let's take this design and make it 3d by assembling our first page. Join me in the next lesson to learn how.

Important Screenshots:



Episode 2: Assembling Page 1: Big Ben 1

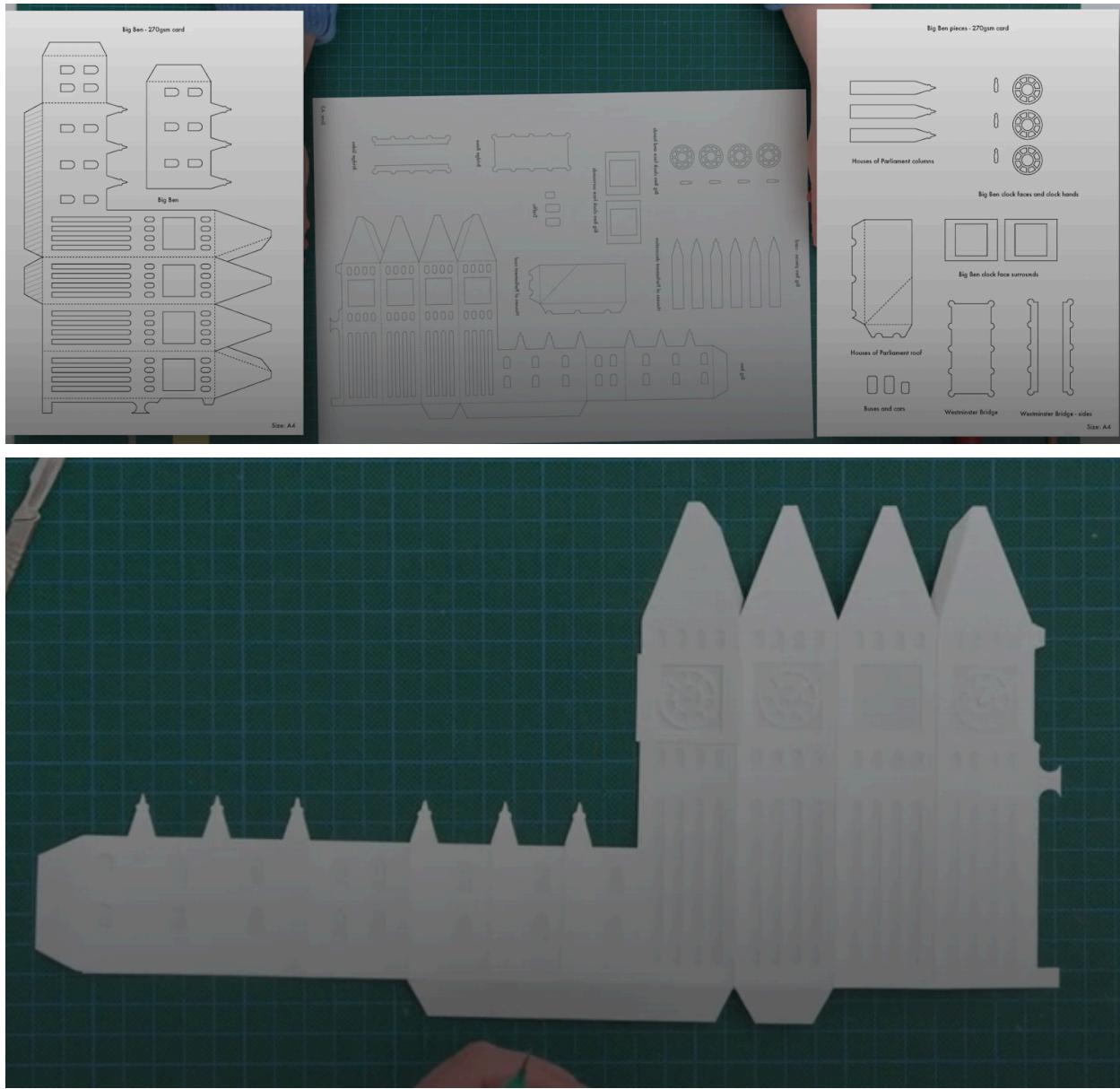
Description: I can now put together the first page of the book using a box mechanism with a lid. I will do this in two stages. The first one will consist in cutting the Big Ben model.

Transcript:

In this lesson, we'll be putting together the first page of our book, Big Ben, using the box mechanism that we learned about previously. We'll be doing this in two stages, first cutting out the pages of our model and then gluing it together to create something 3D on the table. I've got the tools that I've used before, the scalpel, the ruler, the glue and the glue, syringe, roller, pencil, Bone Folder and scissors, and I've printed out my templates onto a three, but there's also a four, if you have an A four printer. And let's look at the templates. I've got three templates here, and remember that these templates are available at the end of the unit and the additional resources. The first page is the base page, and this has been printed onto a 270, GSM card, and that's because we need a lot of strength in the base page. We need it to support everything else. And we've also got a cut out in this one, which we're going to use to use to shine light through and create a really fun effect. The second page is printed on slightly lighter paper. It's 175, GSM, and we'll be cutting out these shapes and layering them onto the base page to create that kind of texture and kind of give the impression of London from the air. So using quite simple shapes to create a lot of interest in the design. This one's been printed on 235, GSM, the lightest paper. And this is because this is going to go behind big Ben's piece, and we'll be using it to create a really nice diffuse glow when we shine light through Big Ben, this will give give us that glow that we want. And the final page is printed on 175 gsm paper, and that's because we want a little bit more strength from it. But when we combine it with 135 GSM, we don't want it

to end up too thick, so we've got enough strength, but without ending up with too much thickness. In our final paper, we have all of our elements printed out on the sheet, and many of the elements here are the same as the box foundation. So you have your fold lines, you have your cut lines, and a lot of them are straight lines. So you know how you need to cut those. We still have some curved shapes, some that are smaller than we looked at, but you can use the same technique as for the big curve, and that is, make sure you don't turn your arm in the range of motion that's not natural to it. Keep moving your paper, and you can come off in a straight line to create those really nice curves. And then there are a few elements on this sheet that are internal, that are more detailed shapes. I'd like to show you how to cut these pieces that have straight lines and curved ends. And we'll also be looking at how to cut small circles. Okay, let's start with these ones. So you've got quite a tight curve. And you also can't use the same technique where you're running off the end, because obviously you want to keep your Big Bend piece intact. And I always find that the best way to deal with curves when they're internal and they're quite small, is that you want to break up your paper. You want to make it easy to get bits out, so that you're not trying to cut an entire piece of paper away. So I start by cutting a straight line down the middle of the shape and then across the shape, so you end up with a cross in the middle. And this means that you can quite easily cut away just a quarter, and once that's gone, you've got more space to cut your second piece. And again, you can kind of use tiny straight lines, and making sure you get rid of any excess you go. You can even experiment a bit with this. If you cut a line down the middle. Is it easier if you cut it into three, and then that leaves you with two small rectangles in the middle. So once you've got rid of your rectangles, you just have the end pieces to do, and then you can pull round and there's less to cut, and that's a really good way of creating curved internal shapes. So in a similar way, the circles in the Big Bang plot faces are easier if you cut them off into segments. So this way, certainly across is the easiest way of doing it. And what I'm doing with my arm as I cut is I'm starting at the farthest away I can get it so that I can pull round in one motion. If I start here, I've got nowhere to go, so I'm starting with my elbow out so the hands are not an internal shape, but they're very small and quite fiddly shape. And you can use some of the same techniques I would always start with the largest part. So I'm just creating two curved lines, and then I move going straight on same around this side I and then you end up so I wanted to get these ones specifically because we haven't tackled them before. But everything else on this page, you can use either those techniques or the techniques that we've learned in previous lessons. So there's quite a lot of cutting on here, so if you're cutting it out by hand, it might take you quite a while, so you probably want to put something entertaining on music or podcasts. But for the purposes of time here, I've pre cut all these pieces, so I'm going to put this to one side and bring those in. So now I've cut everything out. And it's really important to take your time with this and be very precise, because if you're not creating precise shapes, and it'd be very. Hard to get a smoothly working pop up mechanism. So the base page, we've got Big Ben with the detail, and this is the insert that will go behind it. So we'll be layering those two. We've got shapes that are creating some detail on our base layer, and they're sort of representing London. Have the bridge and sides of the bridge, again, to create some layers. We've got the roof of the Houses of Parliament, and that's using the box with the flat lid. Big Ben is using the box with the pyramid lid. And then we've got some details which are going to add interest to our shapes and also layer it for the lighting, so that we're creating really interesting silhouettes when we put the light through. And so that's the details, like the clock face of Big Ben and the surround. Okay, let's get to work. And my first job is to make these two pieces into one piece. This is what's going to create that nice glow effect. These are already decreased to fold everything before I start some of these, you need to be really careful. You've got some cuts quite close to the edges, so you want to be really careful when you're folding and make sure you have half of it on the floor, on the table, and then once you get a little bit, it should sort of follow quite easily. You the folds also help us see where this needs to fit, so you can see that fits really nicely onto there. And we want to turn it essentially from two pieces of paper into one piece of paper. So we'll definitely need the roller for this. And we'll be adding the glue to the piece that has the holes in it, so that we're not accidentally putting glue anywhere we don't want it, and taking this piece, lining it up carefully, making sure that the creases match, and then using the roller to create some even pressure. And if you look on the other side and you see that some glue has come through, what you can do is use your finger make sure you've got clean hands. Use your finger to roll it up, and you should just be able to brush it away. So you repeat that you you I check the other side make sure there's no glue that's come through they don't want and now that piece is ready to add the details, like the clock face. Details, like the clock face and the hot cans. We'll do that next. These are the pillars that run up the side of houses of parliament. And he's also adding an extra layer so they're blocking more light, so that you'll get a difference between the windows, the walls and the pillars. So you can put four clock faces on these, but you could actually save some time if you don't want to put one on the back, so this panel can stay blank. So we're going to put clock faces on this one, this one and this one. When you've got something this delicate, it's a case of putting kind of tiny dots of glue. It doesn't need much at all clock faces are on, and then clock hands, and again, these are so tiny, just one or two dots of glue will be enough. Let's say it's two o'clock we'll add these, which are the surrounds, creating that effect of not a straight up-down tower, but adding a little bit of shape to it. So we'll put one on the front and one on the back.

Important Screenshots:



Episode 3: Assembling Page 1: Big Ben 2

Description: In this second stage, I will glue the different elements together and onto the page to create a 3D model. Once everything is set, I will test out the lighting.

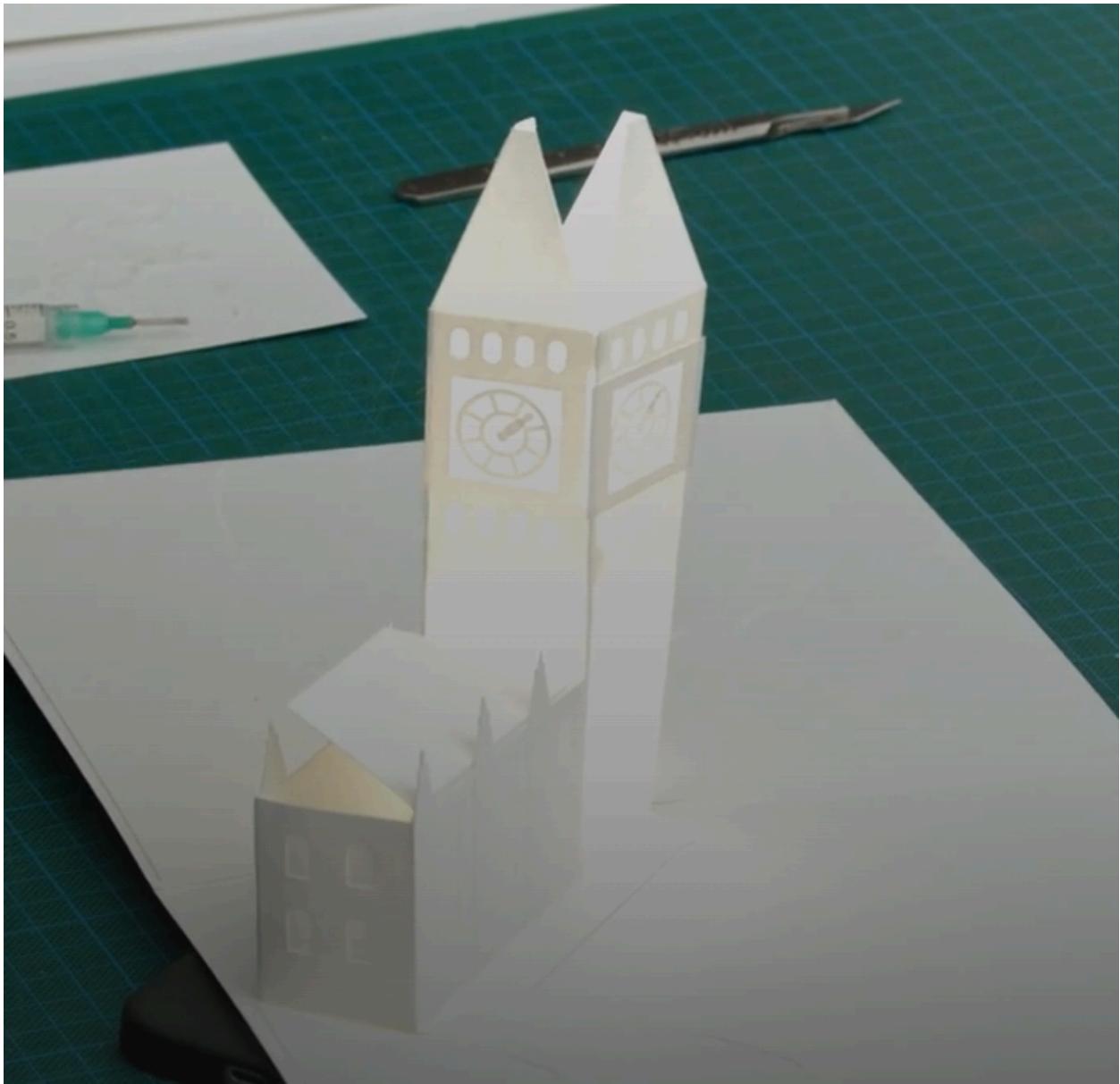
Transcript:

And now I'm going to put this onto the base page, and we've done this in this order. We've put all of our details on because it's much easier to work flat. And then we'll stick this to the base page. And then we've got our additional elements, which are actually going to go over to cover the glue tabs. So we'll be doing those last. I've just realized that I've missed one crease at the end of my piece, and actually that's really easy to add back in. And the way I'm

going to work out exactly where it needs to go is to fold everything flat. So when it folds flat, big one is going to be like this, and I want it to go inside, so I need to make the crease line down here. So I'm gonna use my spell ball for this one, because I want it to fold away from me. Drag it really lightly, and then I've created a sharp fold that I can use. So we're going to do this one in two parts, because we've essentially got a square and a rectangle that are joined together. We created our tab here so that it's not going to interfere with the light coming through. So we'll glue big foam first. You can do this by pushing it flat. Make sure that all the tabs are inside facing the right way to put extra pressure on this one. And then again, I think we've got some blue going where it shouldn't actually. You can see that some of that has it stuck. So it's quite a thin tab. So that's fine. We just go back in add a bit more blue and try again. For You is super strong. So once it's stuck, it's really stuck. So you might just need to leave it a little bit longer make sure it's opening correctly. So just let it open a little bit there, so that it's still keeping attached. There we go. Then we've got our roof as well. So we need to attach those. And these are pretty easy to do once it's already glued at the bottom, all you need to do you can fold those ones out to keep them out of your way. If you want glue that together. Next, we've got a nice neat line, and you can see when it folds flat, we've got these two separate triangles. Okay, so the Big Ben element is done just to add Houses of Parliament. And again, we can do this by flattening out houses of parliament, flat Big Ben on top. I and there we go. Big Ben has the appointment registered on the base page, and because we're layering these pieces over, we'll put Big Ben on first. So you can see that these two triangles are not joined, and that's just like the box with the pyramid lid that's to allow it to open and close. So you can see this kind of pincer movement when you're opening it to create that pyramid. And because we'll be folding these glue tabs out so that we're not blocking the lights, we'll put this piece on first, and then we'll add our decorative pieces to cover them up. This is exactly the same as the boxes we're putting it on at a 45 degree angle, and we've even got a nice rectangle to show us exactly where we need to stick it down. So this is pre creased, but I'm just going to make sure that it's nice and crispy folded. Use my bone folder to get that open it back up. And as I said, the tabs on this one are going outside, because we don't want to interfere with this box inside, where the light is going to come through. I would start by gluing the long edge of this one, because it gives you more space to check that it's correct and that you've got the right angle. So you're making sure that it goes all the way along this line, it's not sticking out the edge. And then exactly the same as before, glue on that tab, and then bring the page over to meet it. So five minutes to dry, just to make sure that everything's really well stuck down, so we should be able to open it now. And yeah, that's exactly what I wanted. And the next step is to add the roof of houses of parliament. And this is the flat roof technique, flat lid that we learned in the previous lesson, and so we'll be adding this one while it's in situ. You can use what we've already got here as markers for where everything needs to go. So we know that this needs to be straight across. You can even close it a little bit just to be able to get some purchase sort of to squeeze that tab in to make sure it's really well glued. What's that stretch? We'll add the other side again. It's very easy to see where it goes because we've got the line here. So you can even just push it down to that line and maybe use this. Gap underneath to push in close and roll again. Lid is working exactly as we want. The Big Bend in the House of Parliament finished. We want to add some decoration to the page and add a little bit more design interest. And that's where these come in. I'm also using these to cover the glue tabs so they're doing double duty on this page, we'll just glue these one by one. I always start by going around the edge on big pieces, then around the edge of the smaller shapes, and finally adding a little bit more in the middle, which make sure you've got an even border around the edge and that you're covering the glue tab. You don't want it sticking out into this gap. And very carefully, I the beginning of the terms there, I'm only a little low on glue, so I'm going to refill my glue syringe. Yoo hoo. Can get everywhere if you're not careful to make sure you don't overfill your syringe either or it can be messy, and then just make sure that the air bubble is out, otherwise when you get to the top, you'll get a splatter of glue. Clean the end and you're ready to go again and again. Make sure you've got an even border. You could have created this as one long piece, but actually I decided that it would be better. You don't want to end up with too much paper over the crease. So I've created it as two pieces. And actually I think it was quite nice if it's quite nice for the design, but also means that you're not having tons of paper bunching up in the middle. Final piece, there's, actually, there's a little triangle back here that I decided it wasn't worth making a piece for because nobody's going to see it. So it's not going to affect our design when it saves a little bit of time. So that's the tenant and some buildings on our base page. Now we just want to add Westminster Bridge. I And then finally, let's just add a tiny bit of traffic to our bridge, a couple of busses going across. So if you're finding that tiny pieces are hard to pick up, sometimes, if you've got a little bit of blue on your hands, that makes it easier. But you can also use your scalpel. Can also use your scalpel just to get it off the table, give one final roll that's done. There are lots of ways that you can extend this model. So if you're creating your own design, you've got every single plane of the model here you can add extra card to and you'll just need to experiment to see what works, what doesn't, what sticks out your page, what stops your model working in the same way that we've extended this line here, you could

extend this line here. You could add something at the top that looks like it's floating. You could add something at the back. There's hundreds of ways you can adapt and adjust this model for your own design. We've looked at ways that you can extend the model, and let's see if all of the things that we've done to design it for light have worked. So have worked. So I usually use a phone torch. It's a single bright LED. It's great for doing things like this. You can put it underneath your model, and that's the effect I was hoping for. You can see that most of the light is going up through Big Ben, and what's happening is we're getting a partition. This piece of card between the two is stopping the light going through to the Houses of Parliament. So if you wanted to create more light between the two, what you could do is cut here either a semicircle or a triangle. If you take any material away there at all, it will allow more light to flow through two spaces. So in this lesson, we've cut out our model, we've assembled all the pieces, and then we've tested it to make sure that the lighting elements working. In the next lesson, we're going to get back to designing, but this time for our second page, Leicester Square.

Important Screenshots:



Episode 4: Designing Page 2: Leicester Square 1

Description: The second page of the book will represent Leicester Square, which lies right in the heart of London's lively and exciting West End. It's a location that is synonymous with performance and entertainment – all of which I want to capture.

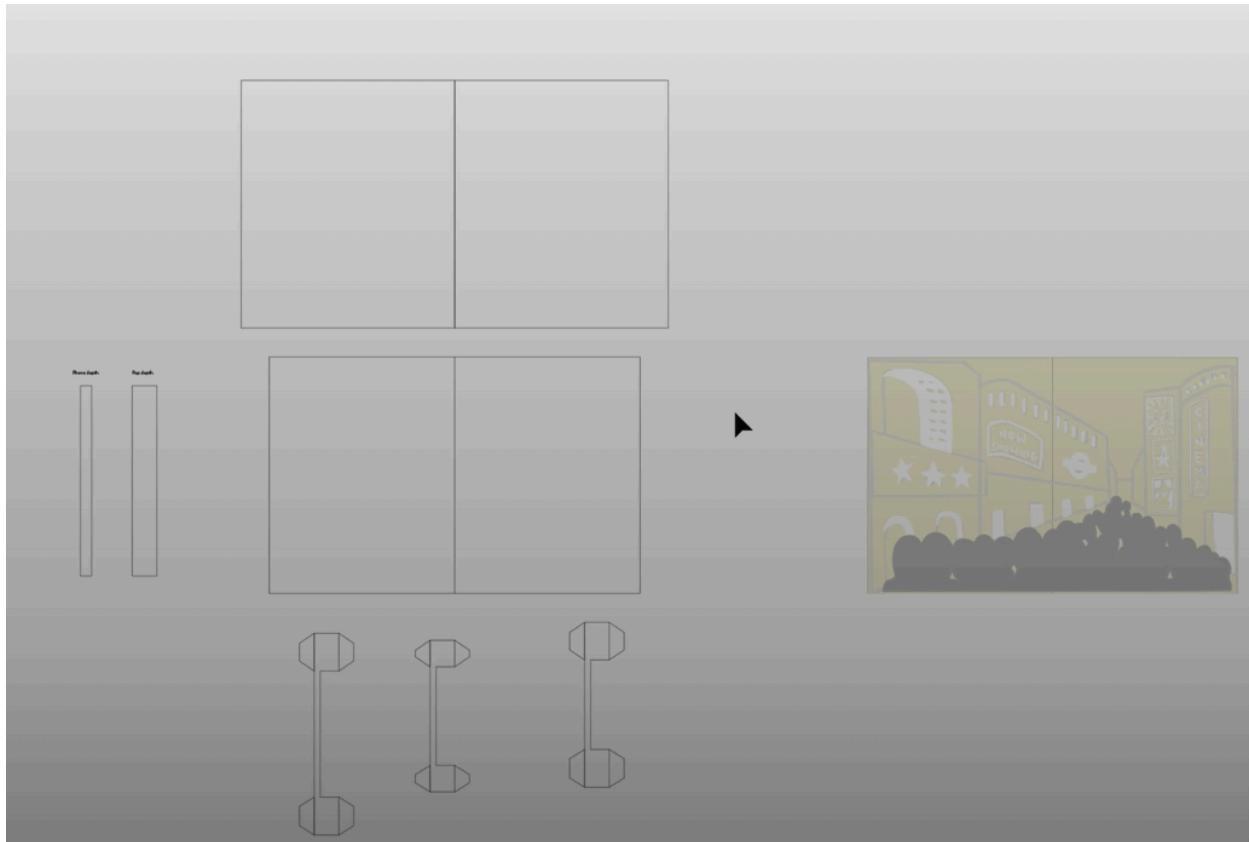
To design this page, I will be using the Floating Platform mechanism.

Transcript:

In this lesson, we'll be designing the second page of your book, Leicester Square, using the floating platform mechanism that we looked at in a previous lesson. I'll be designing Leicester Square, which lies right in the heart of London's West End. It's an area that's synonymous with performance and glamor, all of which we want to capture in the design. Let's in the design. Let's go back into Illustrator and get started. Going to start by ignoring my sketch, and we're going to design the pop up element first, and then we'll come back to the sketch and we'll put all of the detail on top. So we need to start by looking at the size of our base page. We know how big this is. We want to create maximum effect from our floating platform pop up, and that means that we want to cover the most amount of page without it coming outside of the page when it's closed. So there are a few things we need to think about, if we made it the same size as the page, because it's going to be raised up. If you imagine you're looking at it from the side, it's going to look like a box. When the page closes, the box is going to go like this. So you can see that it would come outside. Side of the page. The first thing we need to do is to decide how high we want the pop up to come off the base page. And we need to consider things like how we want to light it. I know that I want to put a phone underneath light so it needs to be deep enough that it can accommodate a phone. I also don't want the pop up to be too close to the light, because I want the light to be diffused, and if it's too close to the light, we'll just get a very kind of hard circle. But I also don't want to make it too high off the page, because then I can't use much of the page. So you can see, I decided to make it this tall. I need to have it quite far back so that it doesn't come out when page is closed. So I started by measuring how deep my phone is. That's approximately 10 millimeters. Obviously you won't have a different phone, but they're all roughly the same depth. And so the pop up depth can see, I want my phone to be able to get underneath, but I want this little bit of space to allow the lights to diffuse. So I've decided that I want my pop up depth to be 22 millimeters, so when it's floating on top, it will look like this. And so we need to consider how much to bring it in so it doesn't go outside the page. So the very minimum we'd want to leave is 22 millimeters. But you've always got to leave a bit of extra so that any slightly bulky gluing, or any bits of cards are not quite straight are not going to stick out. So I'm going to say, add three millimeters of tolerance, just for anything. That's not quite perfect. So I want it to be 25 millimeters in so I know to leave that much space on either side, on the top and bottom. I don't need to worry so much. It's not going to be moving up and down. It's moving side to side. But again, it's always good to leave a bit of tolerance, because you don't want it sitting right against the edge of the page. You edge of the page. So I'm going to leave five millimeters at the top of the bottom. So I'm going to take off 10 millimeters, and now I have the space where I'm going to put letter square. Now I know what size I want my page to be. I'm going to add in the struts that will power it. And obviously, if you were keeping this rectangular shape, you could have the struts all the way along to the full height, but we know that we're going to take some of the card away. So I'm going to use the sketch as a guide for how high I can put the struts on the page. And obviously you can come back and refine these later when you've drawn your actual piece. So I'm going to bring my sketch to the correct size. I can see, I don't want to go all the way up here. I'm way up here, the left and the right. I can go pretty much all the way up. So I know that my pop up depth is 22 millimeters. So the struts will be 22 millimeters. I bring it onto here. I'm going to bring it down so that it's not overlapping the top of my sketch, and then take it off again so that can work with it. And all I need to do now is add some glue tabs. Okay, so I could just leave it like this. This would work perfectly fine. Something that we could do to improve this would be to create splits in the tabs, so that when you stick it to the page, one tab goes one way and one tab goes the way, and that just creates a more even pull, so that your pop up is not pulling so much over to one side. But what I am actually going to do, because I know that I want to put my phone under I want to have light moving through the pop up. I don't want this wall, which is effectively what it is that will stop the light getting through. So what I could do is put one tab here and one tab here, and that would be fine. To make life easier for myself when I'm gluing, what I am going to do is create a shape that allows me to stick once, but to have the two separate tabs. And the way I'm doing this is to Create a gap on one side and you and then I'm going to replicate these tabs on the other side. And you'll see I've left a piece here, and it'll become clear when we go into the assembly, what's that for? What that's for? That's basically to create a spacer so that you can get your pieces exactly aligned. And then we'll just snip that out at the end so it doesn't matter how deep that is, just make sure it's deep enough so that you've got a bit of stability there. So we've got one piece going down the middle. We need another piece here and another piece here, and those will create the movement. This center piece will stay straight, and the left and right struts will bend, which will create the fold and the page closes. So I can actually use exactly the same piece. All I'm going to do is change the width. I want to have it a little bit more spaced on some anchor points so I can manipulate that the way I want. And I'm making them a little bit wider because they're further apart. And I want to make sure that I've got good. Bought from a piece when it's this wide, you can have markers on your design if you want to show whether it's going to glue. The main reason that it's helpful to have markers is that you know that you've got all your pieces in parallel, because that is how this pop up works. These three pieces have to be in parallel, or you'll find that your pop up won't work correctly. And I can do

the same. You again, you can add markers if you want. I have added markers to your template so that you can see where I tend to stick them, but I'd usually go for maybe two thirds out towards the edge of the page. You don't want it too close to the edge, you don't want it too close to the middle. And that is that layer made. I'm going to repeat that process for the crowd. The only difference is crowd. I'm just going to have a 10 millimeters depth, because I don't need to get a phone underneath it. I want it to create a silhouette. So I want the light to be hitting it quite close. I don't want it to be too far away, so I'm going to repeat that process using the same struts, except I'm going to make them 10 millimeters wide. We're in this layer, you can see, actually, it's so small compared to the other that we don't need this double tab. We just need a single one. So I'm going to get rid of these, and that's all I need from these ones, very simple. And then just take them along, make sure that they're approximately the right tight. You can see as I go, I'm looking things I don't want to move. You can put stuff on different layers if you want this is a just a quick way of stopping things moving when you don't want them to move this side maybe just a little bit smaller. So once I've got that, let me move the base page out of the way. I'm and these are all of the components that you need to make your pop up work. So with these, you can do whatever you like. You've got your base page. You've got your first layer with three straps underneath, and it just needs a fold line, so let me just add that make sure they're centered. Base page, first layer with struts underneath, second layer with struts underneath. As you get higher, as you add more layers, you'll lose power. So you need to make sure that you're experimenting and you're just seeing how high how many layers can you do. You can do as many layers as you want, but you'll see that it comes with practical challenges. So the more layers you add, the less power you have. As it's coming from your base page, and each layer loses a little bit of power. So you might find if you're adding a lot of layers, by the time you get to the top, it's not closing and opening, but it's not opening as well. Experiment. Play around with it.

Important Screenshots:



Episode 5: Designing Page 2: Leicester Square 2

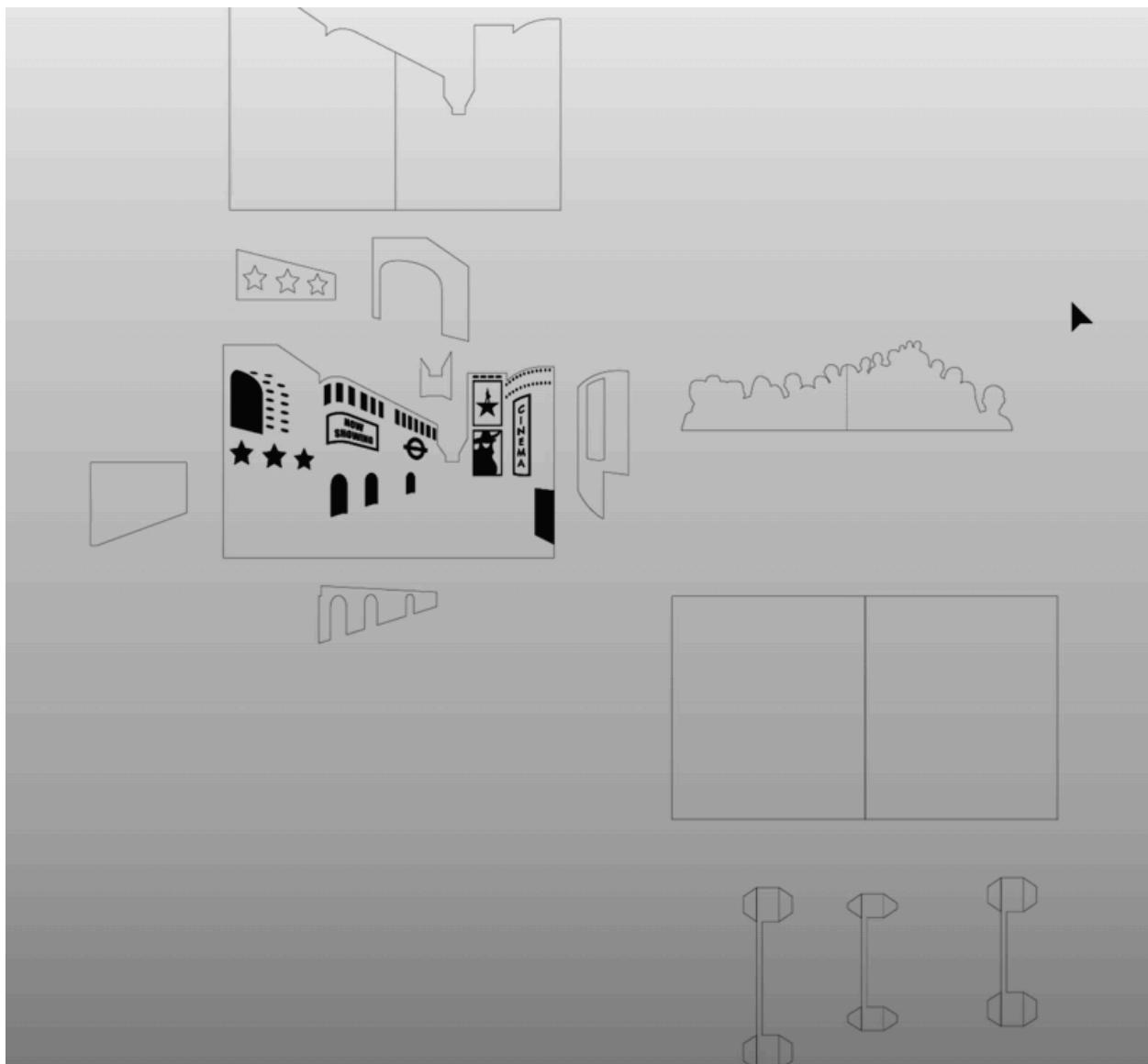
Description: I have designed all the layers of Leicester Square. I will now separate the elements that will make it pop up.

Transcript:

Now that we've created the layers of Leicester Square, we'll begin to separate the elements that make it pop up. The only thing I need to worry about right now is this, the bottom layer and my sketch. So I can put my sketch back under that, move them to same layer, and I lock that layer, just so that I don't need to worry about accidentally selecting things I don't want. Let's move these out of the way so that they're not distraction. You can see this sketch is going to have quite a lot of detail compared to Big Ben. And so what I'm going to do is show you the different tools you need to create different elements of it, and then I'll show you one I created earlier, just to save some time. So let's look at some of the shapes in this, things like the stars you can create using star tool in Illustrator. Use your cursor to create more or less points on the stars. You also want to create a bit of perspective on this, and the way I'm going to do that is by using the perspective distort tool. And you can see this does the job for me. You can do this manually as well, but if you've got a tool that will help you, why not use that? You. We've got things like these lozenge shapes. And the way that I create these is making a rectangle using the Rectangle tool, selecting the corners, and then using the corner round tool. And you can see up here the numbers are changing. So you can put in exact numbers, if you want to. I'm just doing it by eye. And then you want to place these lights all the way along this curve so that it looks like they follow the line. So what I might do is just distort that slightly using the free transform tool, and then I'm going to create this curve using the pen tool. I'm just going to refine this curve here. Again. You could use a stylus to do this if you wanted to draw it out. I'm draw it out, I'm just very roughly following my sketch. And then I can also use these curves. This one I'm not super happy with, so I'm gonna use the Smooth tool to just get slightly nicer curve on that that's much better. And then I'm selecting using the direct selection tool. And then I can use this curve to see exactly where I want to place my lights all the way around the shape. Again, you can make a slightly smaller going up as if they're moving away from you. Something else that you might want to create is text. The first thing is to create the line that you want your text to sit on. And I've got a curve and then a straight piece, and then I'm selecting the type tool, and I'm hovering it over the path, and it automatically creates type in a path I want it to sit in the middle of this piece. Find a suitable font I can copy. So I've got my text, and you can see that it's not sitting straight as you'd want it to. And the best way to do that is to expand so now it's got an outline. And you also need to do this if you're cutting on a plotter, any kind of cutting machine, because cutting machine, because the machine needs to be able to read the outlines of a shape. And then I can use my free transform tool again and manipulate it as I want. That's it. Then you've got a text, something like the tube sign, I would create using a circle slightly squash, because we're seeing it from a little bit of an angle. And then if you hold down Option on the Mac keyboard, you can make a smaller circle inside you can also do that by doing object path, offset path, and putting in a minus number, for example, minus five millimeters. Then I'll create a rectangle. And again, use the free transform tool. You could do all of this super precisely using the perspective tool in Illustrator. That's something that's a whole other lesson. So it's interesting to look at, but you can see that I'm doing this all by eye. I don't want it to be perfect. I'm quite happy by doing it as it looks right to me. Make sure you save as you go. So the last thing I want to look want to look at, in terms of tools is these posters. These are one of the more detailed parts. The easiest way to create this sort of negative shape is, again, to create a frame using the pen tool. And not trying to create an exact facsimile of this. I just want to create the impression. And it's amazing how little you need so that people can recognize what you're trying to do. Actually, I don't need my frame here. I'm using the Shape Builder tool. And the shapes that I want are these shapes I want, the negative shapes so that when I take this away, I've still got the impression of the poster that I want. You can do the same for these ones. So there's probably all different tools that you'll need to draw something like this. Again, you don't have to do it on the computer. You could do on the computer. You could do this all by hand. You could draw it in procreate, if you want, and then you could, if you draw everything in black, you can use the image trace tool to get your lives that way. There are lots of different ways to get to this point. This is just the process that I use. So to save time, I finished drawing up my letter square, and you can see some of it. I've overlapped shapes, so I haven't drawn around this. I've doubled doubled up. And that is so that I can create a separate piece later that's just going to stick just going to stick over the top. You have to remember, this is all going to be a paper next. I want to work out where I'm going to cut. There's a lot of detail here, and we need to separate the layers out so that we create a back layer, middle layer and a front layer, and those will determine how much light is going to come through in each piece. So let's start by creating the base that's all altered on. We don't want this rectangle shape. We want it to follow the line of the buildings. So I'm going to start by making a copy. I don't want to destroy my original, and I'm using the shape builder tool to just grab I don't need all these details. I just need the edges. So I don't need to worry too much about getting all of these little pieces. As long as I've got the outline, that's all I want. And then I'm going to ungroup everything. This. See it's still got some of the details in it, and that's because it's created a compound path. So I'm going to release that compound path, and there you have your outline. So that's the piece that we're going to stick everything else to. Just want to make sure I've added a crease, and we'll just put that to one side for a moment. Now we're going to focus on the middle layer, which is the main layer, which will have all of these details in. And the easiest way to determine what is going to be cut out is to make a Live Paint group. And this means I can use a bit like a coloring book. I can add color in these shapes really easily and quickly. Now I'm going to make black everything that I want as a light source. We're you so everything I color black I want to glow as if it's lit from within, which means I want to cut it out. So now a quick way for me to do to get the sheet that I want cut out is to expand so it's no longer a Live Paint group. Use the Shape Builder tool on everything that is not colored black, so you can see it still got some details in there. Now, if I ungroup everything, get rid of any lines I don't want. I now have a piece where I know everything that's colored black in here needs to be cut out. And because you're placing it onto a base layer, you can have things like this, which will be floating effectively, and elements like this, these internal shapes are fine because you'll be sticking it onto another piece of paper. And now we just want to create a bit more depth. We're going to add pieces that go on the front and give the impression of buildings, and also block out some more light so that there's a bit more contrast between the lit areas and the unlit areas. And that is why I've left shapes like this. So now I can take these individual pieces, I ungroup everything again. I can say, I want to add a piece on top. Just add that edge back in. And so when it's placed back on over the top, that will give the impression of a sign. I'm going to

do that with all of the lines I've created here. So again, I'd create another version. It's just always useful to keep an original version, in case you need to go back and do anything else. And again, you can use the Shape Builder. And you can see, when I place that back on, that will create an impression of an arch. So I'm just going to go through and do that with all the shapes in this drawing. I can see here that the Shape Builder is not working on this left hand side, which means there's a gap somewhere here, so we need to find that gap. Sometimes, trying to find the gap can be really tricky, and in those cases, the easiest thing I find to do is remake it as a life bait group, color the pieces that you want, expand the life Paint group and group, Select those pieces, and then I can merge them. As you can see, for things like the text, I'm not creating an extra layer for the text, and that is mostly because I don't want to cut two layers of text. I know that this will take me quite a long time to cut, and if I'm cutting two versions of the summer, it's going to really up my cutting time. So I can create a Lyd effect just using this outline. I And now I'll get rid of the bits I don't need so I don't get confused. And these are all the pieces I'll need for my Leicester Square layer. The last thing I need to do is create the crowd, and I've used my sketch and the Pen Tool. To simply create a neat vector version of those, I want to just quickly check that the struts that I've created will fit on my final piece, so you can see that's absolutely fine. Those will all fit. I can get rid of these placeholders now as well, and I'll always just organize my file so that I don't have anything left that I don't want. These are all the pieces that will go in my template to create less to square. Having designed our Leicester Square template, lets translate it into a physical model. Join me in the next lesson where we will be assembling it into our second page.

Important Screenshots:



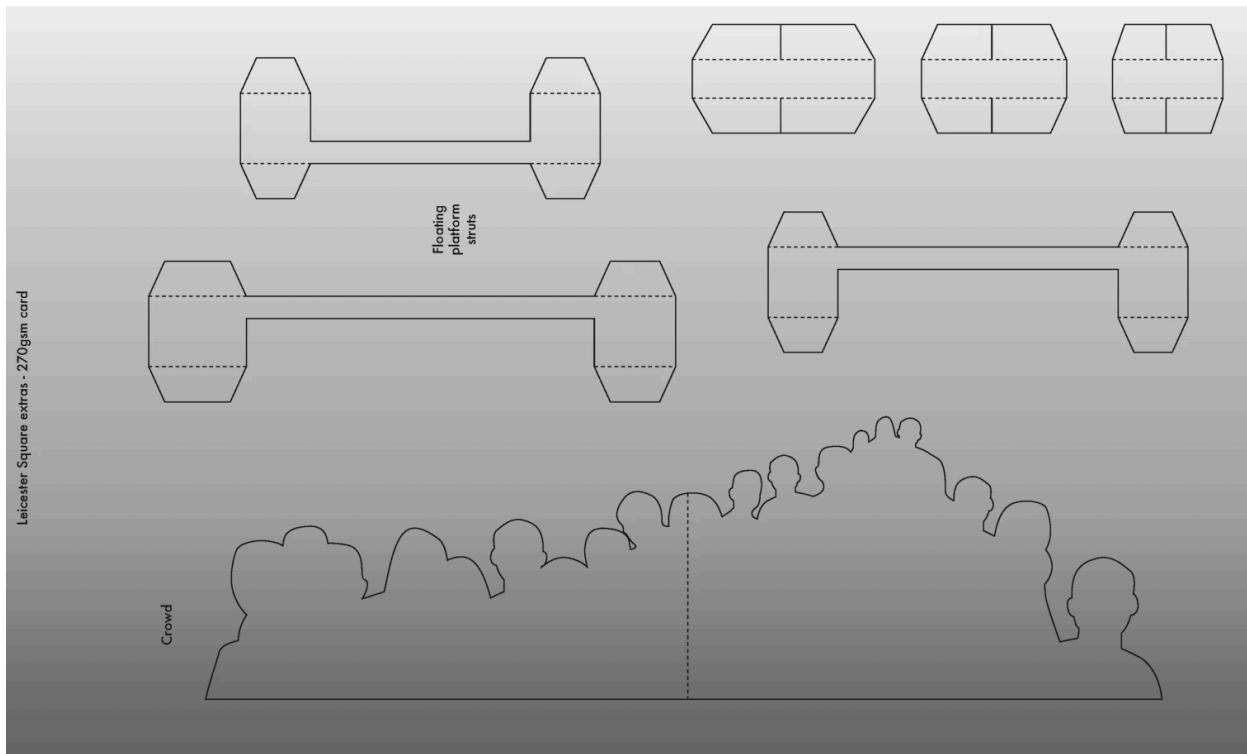
Episode 6: Assembling Page 2: Leicester Square 1

Description: Having successfully designed the Leicester Square model template, I will translate this now into a physical model. Just as I did before, I will start by cutting out the elements then I will glue together the layers.

Transcript:

In this lesson, we'll be putting together the second page of your book, using the floating platform mechanism. Let's go through the Leicester Square templates. So we're starting off, as always, with the base page. This one doesn't have anything cut out of it. You've got some glue positioning, because this one's a little bit harder to position than Big Ben. And this one's 270 GSM. As are all the base pages in this one, we have a second sheet that's also cut out of 270, GSM. And this is all of the sort of working parts. So we've got the struts that will support our platform, platform and the crowd, which is an entirely separate piece, and we want that to be quite strong. This page is printed 135, GSM, and these pieces are just to create some extra levels, kind of an additional topography to our page, to create more texture and use that light and shadows more. And then, like Big Ben, we've got an insert which is going behind letter square, and this is going to create the diffuse glow that we're looking for that's printed on 175 gsm paper. And finally, we have the most detailed page. This is printed on 135 GSM. One thing that we looked at is how to cut out fine lettering detail, especially internal shapes, because those are always harder. So I'm going to go through that on this page and show you some tricks to cut those pieces. There are two lots of letters on the sheet, but I'm going to just focus on this cinema one, just as an example, and you can use the same techniques on both. So similarly to the circles, what we're trying to do is cut out the lettering, but we want to keep this part intact, which makes it harder, because we can't use the technique where you run off. So you just want to make sure. Again, I'm starting with my elbow quite far out, and I'm pulling around as far as I can before it gets awkward. When I get to this point, I'm turning the page the other way, because I'm left handed, and it's much easier for me to come around from this direction. You might find if you're right handed, you need to do it the other way around, and then a final joining piece, and then I'm trying to keep as much intact as I possibly can. So I'm not going to cut these end pieces yet. So the reason we're not cutting these end pieces is because you want to keep the paper as stable as possible. While you're cutting, I want to have to hold it as little as possible. So I'm getting the paper to do it for me. So if I leave these end pieces intact, they keep the C stable. And then for the final part, I just cut end end and lift it out. It is a little bit easier. Just got two straight lines. Do exactly the same thing, leave the ends intact. And with something like this, it's very complicated. I would always start cutting from the smallest pieces in the middle and work your way out, because then you've got lots of paper to be able to hold, to keep it stable on the end. We're going to treat it not as a zig zag, but as three separate rectangles. So I'm doing line, on the other side, line, line. Then I'm turning the paper and I can cut. And the same with the E, we're thinking about it as three rectangles across and one rectangle down. And just like the larger pieces, you cut everything in the same direction first, before you move your paper around, and then the M exactly the same thing, treating it as a series of lines, not as a zig zag. If you do end up slipping and going over, I wouldn't worry too much, because we're sticking this down onto a piece of paper. So actually, you can just have it as two pieces instead of one, and nobody should notice. Okay, the A is a tiny bit more tricky, because we want to keep this internal piece here. So the first thing I'm going to do is cut out the little triangle in the middle of the A. You can use your blade to pick that, but it's so small. Then we'll cut the outside of the A and try and cut this one as neatly as possible, because then you can use your letter A as a template for where that triangle should go. So we're going to keep both of those pieces. So I have my A if I put my triangle back in the middle, and we'll just keep those to one side until we need to glue now. I'll show you how to do lettering everything else on this page. You can use the techniques that I've already shown you with cutting things like the tube station styling you want to treat exactly like the A where you're keeping the internal spaces, but also keep this tube logo, because then you can use it as a stencil when you come to glue to save time again, I've pre cut all these elements, so I'm going to bring those in. The first step of Leicester Square is just to create the layers. So there's quite a lot to glue on this one. We'll start with piece that goes behind, piece that goes in front, and we'll do exactly the same as big. And we'll crease both of them so that we know that they're going to fit together properly. And in the same way, we'll start with one side, and then we'll move over to the other. And I would say, start with the side that has the most detail on it. Always start with the trickiest thing. I then just check that it's holding okay. You might find again that you have a little bit of overshoot here, but that's fine. You can always trim things off at the end. Just watch where that's buckling slightly. Go in and really make sure it's well, stuck. You okay, that's the first step done. So next, I'm going to start with the bigger pieces, and we'll layer those first before we get onto the really fiddly stuff. So we've got these big shapes, which are again designed to give us more layers with the light. So the more layers, the less light that shows through. You so I've added all of my big shapes, things like these stars, these buildings, and it's just creating an illusion of depth. I've just got one more to add, and that's to create the idea of the street kind of going away into the distance with a perspective. Next, we need to add some of the smaller shapes, and we'll do those carefully, one by one. Let's start with the cinema sign. And with these, you want to make sure that you're getting glue into all the bits of the letters that might lift just a tiny bit of glue, and then place it very carefully, making sure you tap down those in between bits. And this is where the A comes in. So we kept the outside and inside of the A.

Important Screenshots:



Episode 7: Assembling Page 2: Leicester Square 2

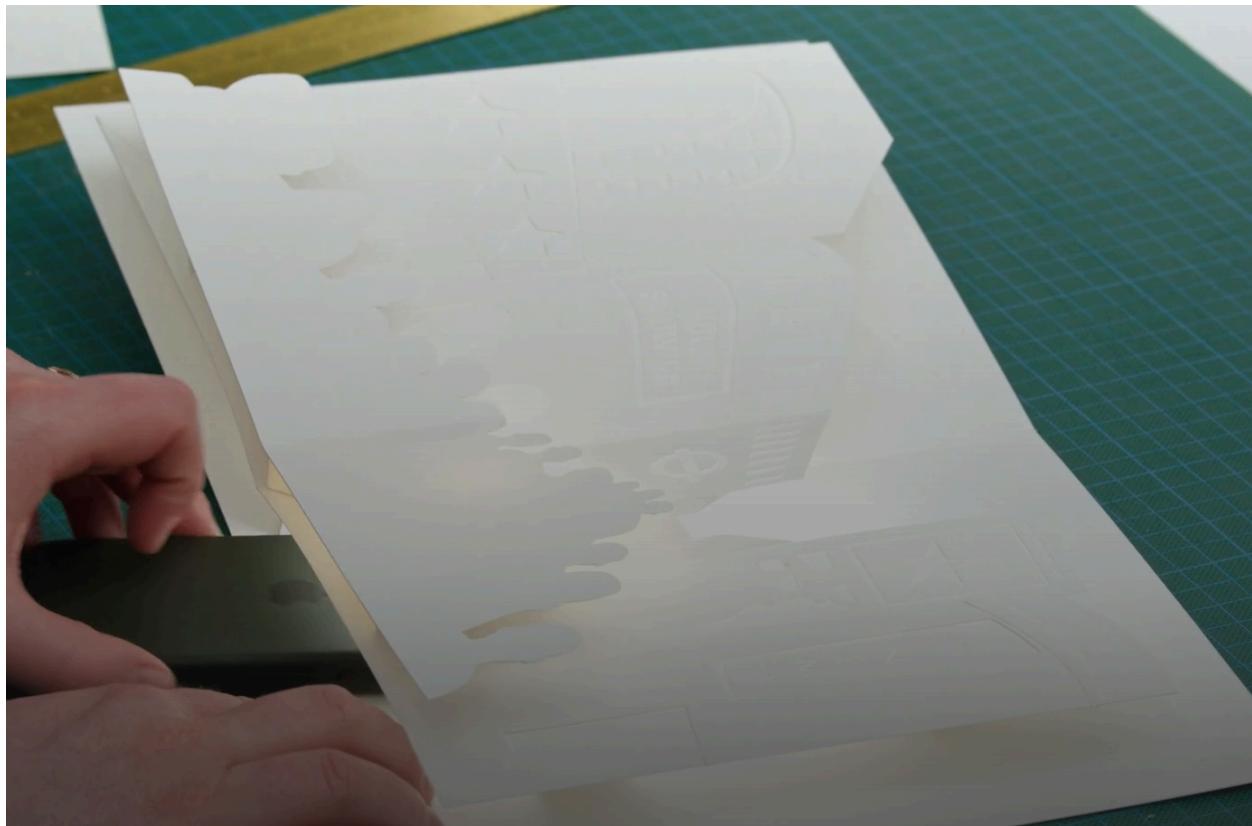
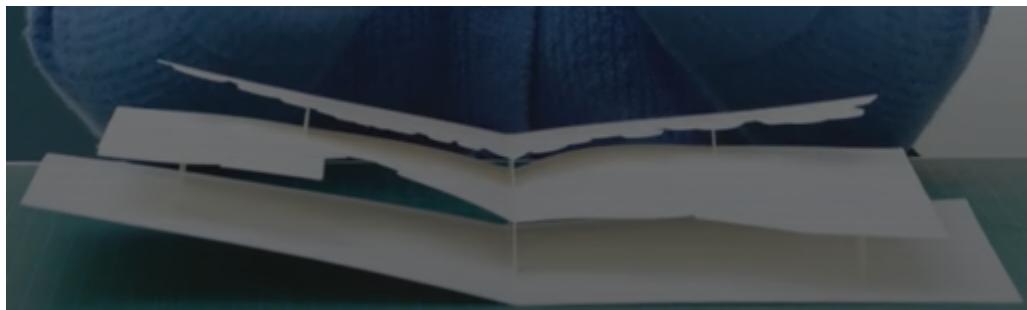
Description: Here I will continue adding the smaller shapes of the model. Then I will glue the crowd element and attach the base page.

Transcript:

And this one is so small that actually I would put the glue on to the center of the A and then take your A-piece and stick that to the middle. It is worth putting a little bit like that, because it can make it look a little bit unfinished if you miss them out. Things like this, I've got my theater poster, and to make sure that goes in the right place again, I'm going to use the outside as a template. Put a little bit of glue where I want the piece to go, use the knife to pick it up, and then use the knife to sneak it down as well, and remove that before the glue dries. Lots in place, we can stick this down so the tube sign is the same principle as the A we've got a ready-made template. You can put that back in, put the glue in the gaps, and then attach them using the knife, and then when you lift this out, just be careful it doesn't lift them with it. It should be exactly the right place. Now, the now showing sign. We've got two pieces with inside shapes, two O's. And these ones are so small that I would just do them by eye. Just put a bit of glue in the middle of each O, pick it up, and you'll really notice these when you've got the light shining from behind. And that's it. That's that piece ready to go. And we can start layering up our crowd on top, and then we can stick it to the base page. Let's start with the crowd. Always easy to add pieces before we stick to the base page, if possible. This one, again, has been pre-creased. Make sure it's creasing okay, and it's going to sit here along the bottom of our piece. And like the foundation, I've cut the tabs into half so that we'll have one piece going one way and one piece going the other way, because our main concern is that it's not sticking out of this piece. We'll attach to this first, and then here, this is effectively the base page in this situation. Make sure it's right over that center crease and that when it closes. And now these pieces, these have been split, but you can split them or use them as one piece. It might be easier just have them as one tab. And actually, here is some is where a cutting mat comes in really handy in the grid, because it doesn't actually matter how far along this is. You want it to be sort of maybe two thirds long, so that it's nice and strong. But the main thing is that it is parallel to your center crease. If it's at an angle, it's not going to fold properly. So you can use the grid to make sure that you've got a nice straight line, so that when you glue your piece, you know that it's going to be parallel to this center piece. And that's all three struts ready to go. So we'll do again, the same as we did for the foundation piece. We'll do the center first, and then the other two will find their place naturally. It's easiest to keep this folded nice and flat, and then you're lining it up. And you want to make sure that

this is lining up with this crease and that this is also lining up with the bottom here. Pull it over, just making sure everything will fold. It is working. Same again as we did on the first one. Put these flat, close your page, leave it for a little while. The more heavy lifting a piece has to do, the longer you want to leave it to dry. Just make sure that it's not sticking to anything you don't want it to. And while that's drying, you can flip over this side. That's a few minutes, and that's dry. That's really nice and strong now, so we just repeat the same process to attach this to the base page. The only difference here is that we want to leave some more space to allow light to move across the image and to make life a little bit easier. What I've done, rather than having to attach six separate tabs, I've left this connecting piece through the middle, so we'll glue them using the connecting piece, and then we'll snip it out so it just helps us space a little bit more easily. Use this connecting piece of card to just make sure we've got them really nicely aligned. Sometimes, if tabs are quite short like this, it can be quite hard to tell if you've got them in a straight line. And this helps us know that we have. Take my scissors, because I don't want to disturb them, and just zip that piece out. And these pieces, we're going to do the same thing: use our ruler and the grid on the cutting mat to make sure that it's parallel. You can even use the ruler's width and just use that as your parallel line. It doesn't really make much difference. We're doing the same again on this side, let's use the ruler along the edge. That's a really easy way of doing it. You don't even need to use the grid. You know that this is going to be parallel to this. You have done that while the glue was still a little bit wet. I'm just going to check everything's still in place. That one got moved slightly by the scissors. I can just put my ruler back in and reposition them. Those are all connected to that piece, and now it's time to put them onto the base page. Same process again, this time to make sure that there's an even border top and bottom, and that both of these are in a straight line over the center crease. You have tons of paper. Same on the other side. Check nothing's sticking where it shouldn't be. That looks okay, and then we'll just leave that for a few minutes to dry. That's been left for a few minutes, open it now that's all stuck. What you might need to do is just sort of give it a bit of a wiggle to make sure it sits in the center. So the final step is to test it for light. Again, this time we're putting light underneath and actually vellum is perfect for this again, because it's really thin. If you move it around, you get different effects. This is a more intricate version of the floating platform that we learned in the foundation. But actually, there's really not much difference to it. We've added an extra layer. And as I was saying, you can keep adding layers. You could have three, four, or five layers. What you need to watch for is that the power is greatest on the bottom layer, and then it loses power. So you might find that the higher you go, the more layers you add, the less they open flat. You could get a stronger effect by making this bottom layer closer to your paper, and then that's got more power. So you can go a bit higher, but you can change the levels. You don't need to stick to these close levels. Have a play around, do some experiments, and see what effects you get. You're over halfway through creating your final project now, and in this page, we looked at how to use light to create a space. That Leicester Square is really a kind of a capital of glitz and glam, and you're adding lights in the same way that you would see them as you went there. So for your reader, for your audience, you're creating that same feeling in your page. In the next lesson, we're going back into design mode, but this time creating our final page.

Important Screenshots:



Episode 8: Designing Page 3: Hyde Park 1

Description: On the third page of the book, I will work on capturing Hyde Park, the largest park in central London and one of the city's most important green spaces. In this case, I will design a V-fold and 90-degree mechanism.

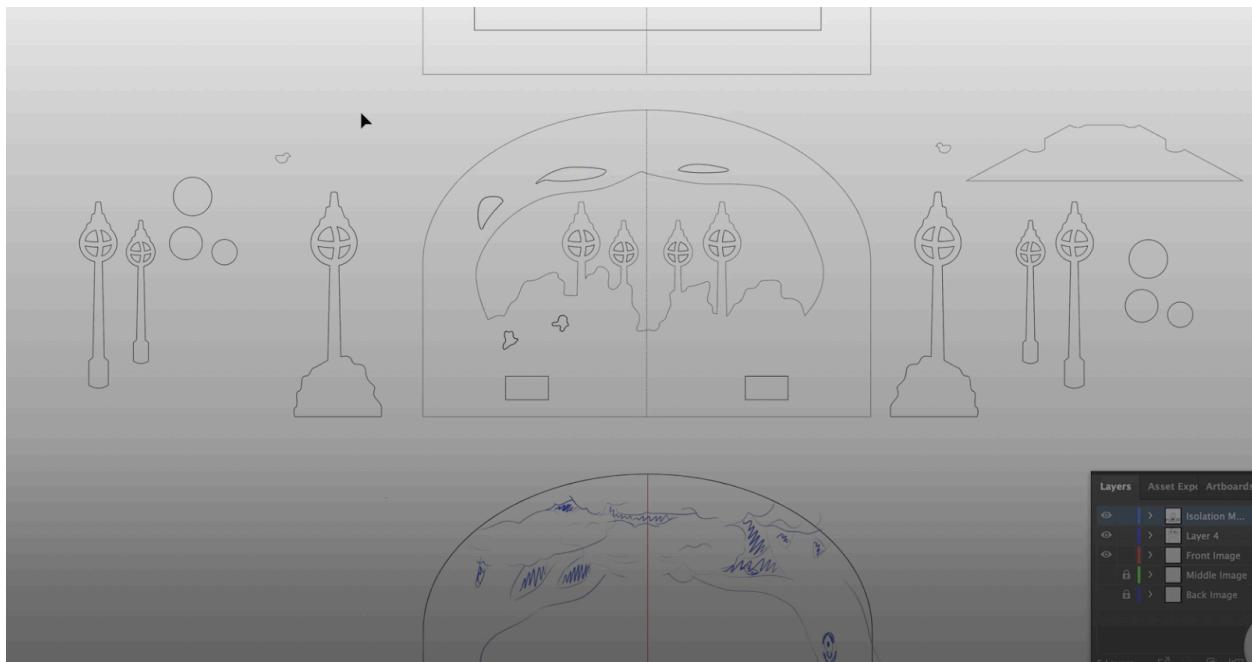
Transcript:

In this lesson, we'll be putting together the third page of your book, Hyde Park, using the V-fold mechanism and 90-degree angles that you learned in a previous lesson. We'll work on capturing Hyde Park, one of the largest parks in the city and one of London's most important green spaces. Let's go into Illustrator for the final time. This is a layered pop-up. It's a V-fold. We'll also be adding a 90-degree angle, and it will be in three layers, four if you add the 90-degree. So I've taken my sketch from Procreate, and I've used different colors so that I can see clearly what's on different layers. This is a really good way of working. If you're working in designing a pop-up, you can use different colors to see what goes where. The first thing I want to do is separate this sketch so that I've got my separate layers. I'm going to work in the same direction as I did with Leicester Square: back, middle, front, so from the back towards

myself. So let's start with the back. You can see that it's not got a huge amount on. What I want to create is a cityscape. An overall effect I want is the sun coming through the trees on a sunny lunchtime walk. But I need to create the idea of London behind the park. And rather than cutting out just simple building shapes which might let too much light through, I'm going to use the window to buildings. I'm going to create a new layer to work onto, unlock these. So some of the things to consider: I don't want my windows too close to my crease line, and I only want to make as many as I want to cut out. They can take some time. So have a think about that. And also, how much light do I want to let through? I'm using this Command D, which is move again, which I find is really useful for things like this. You can move an object once, and the next time you copy and paste, you can move again and repeat that movement. And then you get even rows like this, just using the Rectangle tool, creating different sized windows. And you see that you can get the impression of a building without actually having strong building outlines. I think what I want to do, I'm going to be making this piece out of card, because it needs to be structurally sound. What I want to do is create a cut-through of this piece so that I can use a thin paper behind it to diffuse the light and create the glow that I want. And I want it to have a sort of a sun effect. Now you can see it's a different curve to this piece. Normally, I would try and match the curve as you're not going to see it, because you've got other pieces in the way. To make sure that that's in the center, and then I'll add at the bottom. Just give myself some more room. You can always copy, paste. Maybe you can turn it, remove some windows, and you've got a different type of building. Maybe that one's squarer. Maybe this one's taller and filler. So how many windows you add, the more light you're going to have coming through. And this section is going to have a piece of paper behind it. That also means that it's easy to cut out your windows, because you'll be cutting them on thin paper rather than thick card. So that works both ways. Maybe I want to add some clouds in the sky. You can use a Pen tool for this. You could draw out the clouds, bring them in and draw around them. You could draw them and scan them and use the Image Trace tool to create them like that. To save time, here's some that I've already done. I'm going to put some onto this piece and some onto the frame, because I want the frame to be part of the image too. Maybe I'll flip that so it doesn't look the same, and then you can turn off the sketch. You want to make sure what you do have is a vector version of your template like this, and the shape I've chosen is not necessarily what you need to use. The V-fold works with any shape you'd care to put on it. But I want to create this sort of archway effect, particularly like the dioramas you sometimes see where you put your eye down, you look through, and it's this really lovely kind of tunnel effect. And that's what I'm going for. I turn off the back sketch, and then I make sure that I'm putting a crease. What I need to create this back piece. When you separate these two out, you don't want the back piece to be exactly the same size as this, because where are you going to do it? So we are going to offset the path, I'm going to say, six millimeters. And then when I take these, you'll see we're left with the frame and with the piece that we want to stick behind, and we've given ourselves a bit of leeway to glue. Let's move on to the middle section. This one's a little bit more complex, and what I want to do here is create the effect that the lamps are glowing. The main effect that I want to create in this pop-up, I'm going to start by drawing my hedge. Actually, I'm going to reduce the opacity of this slightly so that I can see more clearly where I'm drawing. Again, using the Pen tool for this, but you can draw it however you like. You don't even have to use the computer. You could just do a drawing and cut it out directly. The main advantage that I find using Illustrator is that it allows me to create the very precise measurements much quicker than if I was using a ruler to draw them out. So you can see, I'm not stopping at the lamps. I'm creating that as an entirely separate piece, and that's because I want to use the lamps as an overlay. So this is essentially the backing piece of my layer. I want to make sure that it's the same size and shape as the previous one. I want them all to match, so I'm going to bring that down. And that way, I can use this line to create the back piece, and I'm using Shape Builder again for that, removing all the excess. And I want some flowers in my hedge. These really don't need to be neat. You're sort of creating the impression of flowers rather than drawing an actual flower. Once you've got it as you want, let's move on to the lamps. Now we have six lamps, but we only need to design one lamp, because we're going to design it and then we're going to copy it five times. And I'm thinking about this because it could get a little bit delicate. There are some thin parts. I want to make sure that it's not going to fall apart when I cut it, because the lamp is almost symmetrical. I'm actually, especially for this base part, I'm designing half, and I'm flipping it around, and that way I know it's symmetrical. And then I'm creating a circle, and you can see I'm letting them overlap, and that's fine. I would rather have them overlap, because then I can use the Shape Builder tool at the end to combine them all. Whereas if you do this, you won't be able to use it, so it's better to be slightly over than slightly under with all of your lines. And just like the others I've looked at, sort of the key elements that make these lamps so recognizable. I'm not always following my sketch exactly. Sometimes I'll draw something and then I'll get it to the vector stage, and I'll realize that it's too complicated or it doesn't work for many different reasons. The top piece is a little bit too complicated, and then I'm creating a curve and copying it, and I can also copy and rotate again. Make sure these are overlapping. I'm not going to create that piece a bit too much, but that's when I'm finished. All I need to do now is bring it out just so that I can see what I'm doing. I can see now that I've got a little gap there. So I'll just join those two pieces, and the Shape Builder tool again, remove the excess, and that's your lamp. Now I have my lamp shape drawn. I'm going to get rid of this one, move this back in here and copy and paste. And again, we want to show the perspective of the lamps getting smaller as they go down the path. And because this is symmetrical, I can then copy those three lamps, flip them around, and they're already except for I know that I want these lamps to glow. If I don't put anything behind them and I leave these gaps empty, I'll get quite a bright, harsh light. And what I want is a soft, glowing light. So to create that, I'm going to make circles that I place behind the lamps here that diffuses the light and move those out of the way to be printed later. I also know I want a path. I want to add a layer so that I've got the sense of things going off to the background. But first of all, I'm thinking about where I want to add my 90-degree mechanism. I want to make these front lamps sit ahead of this layer. It's giving me an extra dimension. It was making it look even more 3D and it's also casting shadows, which will look great. So before I do anything else, I'm going to move these lamps. I'll deal with those in a minute. Move those lamps out of the way and think about where I want my path. So I want it to go. I can even move the lamp slightly once I've started doing this again. Copy, paste, flip, and then, you know, you've got a symmetrical image. I'm going to use the Shape Builder to get this shape. But what I will do is copy, paste, and I want to destroy

anything that I've made, and then I can just get rid of the rest. And when I take it back, get rid of my guide lines. That piece sits perfectly, and that will block more of the light so that the hedges are slightly lighter than the path, which is what I want. It'll also be cutting these lamps out and putting them on separate pieces to block more light. So now that's done. Let's think about the 90-degree mechanism that will make these sit ahead. And what I'm thinking about is, is the base of this too thin to allow it to stand up? And probably the answer is yes, it's not going to be strong enough. It'll be easily knocked over. It'll be difficult to glue. So I'm going to cheat it by creating a wider base. First of all, I know I need a flat bottom of the lamp. It will not sit properly if it's got a curve. And I'm going to create a little extra hedge piece. So not only does it help the lamp sit more comfortably, it will actually create an extra layer to this edge. So that's a win-win. And I want to make this all one piece. Again, I'm taking the Shape Builder. And the 90-degree angle, I know from the side it needs to look like a rectangle. I need to work out how high I want my piece to sit and where I'm going to glue it. And actually, I'm going to save myself some time when I'm assembling, and I'm going to build the joining piece into this layer. And that means that it will already be exactly where I need it to be, and all I need to do is add this lamp to it, and then add the lamp to the base. So I'm thinking about how high it needs to be. If I have it this high, I don't have a huge amount of room to put anything. You don't want it too low, because it will struggle to pull your piece up. Somewhere like here will work quite well. And I know I want it about that wide. So let's move this piece back in. We can use it to see how it will look when it's all stuck together. So I think I want my lamp to stand about there. Next thing is to think about how long this piece needs to be, and actually, we're going to put a pin in that while we design our front layer. And we'll come back to it, because that is linked to the placement of all the layers. So we'll think about that a little bit later, but in the meanwhile, we know that that's the distance from the edge we want it to be. You do on this layer is add some trees. I want to have as many trees as possible. So I'm going to add back in the top curve to help me out. And I need to think about how much card I need to leave around the edge so that my piece will stand up successfully. So I'm going to create a sort of a trunk and a branch shape. And then we're going to cut pieces out. And a bit like the flowers, it doesn't have to be perfect, it just has to create the impression of a tree. You know your lamp is going to be about here, so you don't want to have it too far in to be blocking the light getting to your lamp. And I think it would be nice to have something like a little bird here. You can add these kind of details. It really doesn't have to be anything complicated, but they can really bring something like this to life. That's probably a little bit big. Let's bring the size of that down, and then when they're cut out, you can just decide where to put them in assembly. You don't need to decide now. Okay, so we want these pieces. I want to block the light coming through the body of the lamp as much as possible. So I'm going to take those off, but leave one on so that I can have it as a strengthener. So when I stick these lamps onto the pieces, one, I already know where to stick them, because I've got a shape just to get to, and two, it will help them stand up because they've got quite thin stems. So I'm also going to remove the birds. Don't need the birds, and I don't need my path. These are all going to be cut out as separate shapes to be stuck on. So I'm only leaving the bits that are incorporated into this piece. These are incorporated into the pieces, but we're just going to lock them so that we don't move anything or do anything to them until we've decided how far away the lamp is going to be. So again, using the Shape Builder, and I'm removing the excess. If you're left with something like this that you didn't intend, that's absolutely fine. You can just delete it like a point. And what I've done as well, is taken away the crease line, so I need to put that back in. So let me check that I've got all the pieces I need to create this layer. I've got two lamps that will be stuck onto the 90-degree angle mechanism. I've got four lamps that will be stuck onto this layer directly. I've got a pathway. I need to create another set of circles to set behind the right-hand group of lamps. Don't need that piece. I've got some little birds, and I've got some flowers.

Important Screenshots:



Episode 9: Designing Page 3: Hyde Park 2

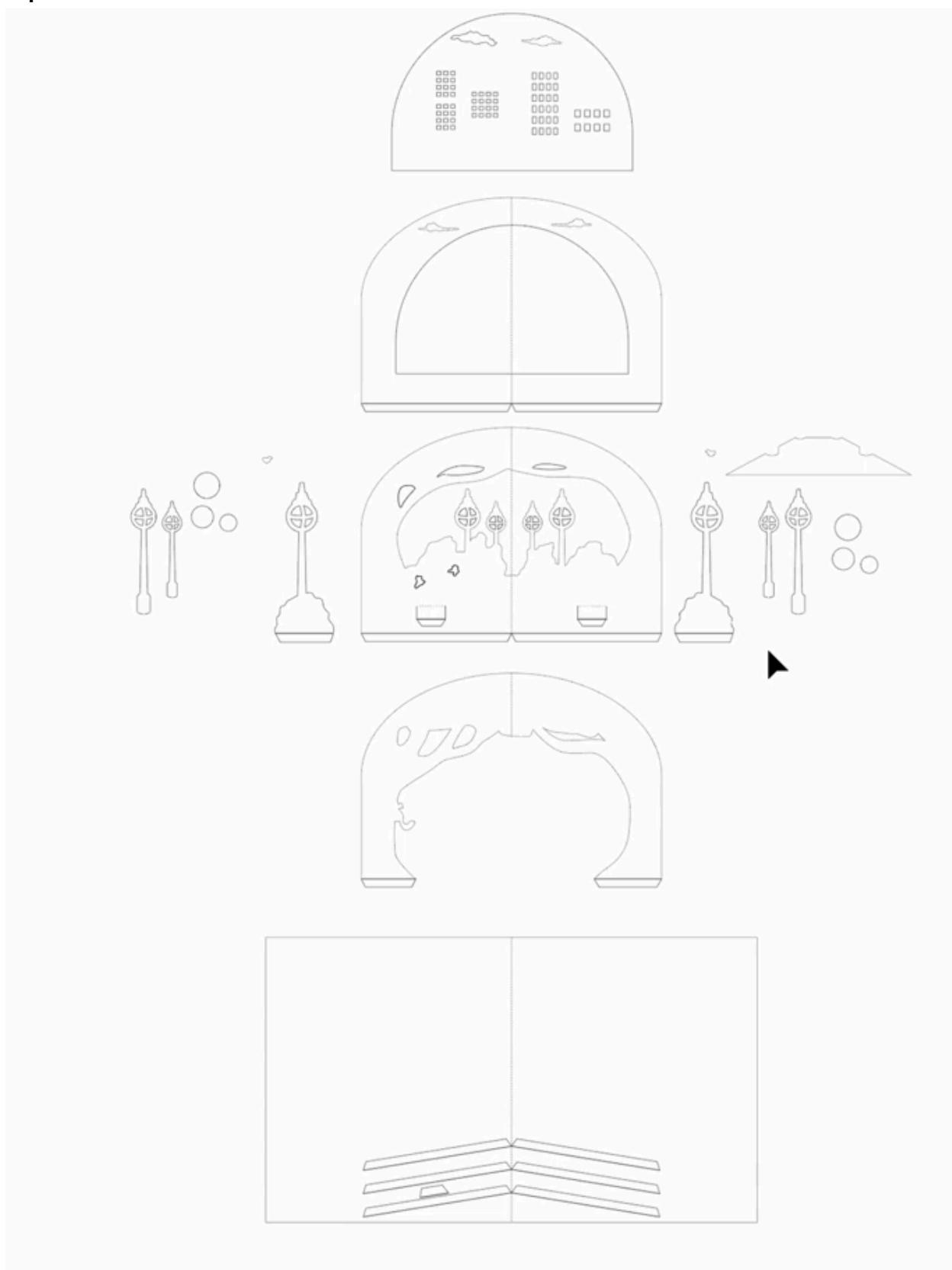
Description: After finishing creating the vector file of my design, I will separate it out into the different pop-up elements.

Transcript:

So the final layer we need to look at is the trees at the front. And this one is slightly different in that it's all cut away, so it's only got two columns to hold it up. And this one you can be quite easy with creatively. Let's reduce the opacity so I can see where I'm drawing. And I'm just creating a really nice tree shape. I start with the branches, and I'm not worried about finishing these off, because I'm going to create leaves that I will use to do that. I just need to add in, like the other pieces, I want them to have the same outline. You can have something like a little squirrel just running up the tree again. It doesn't have to be complicated, and remember what size you're making it and whether it's something that you can cut comfortably. You can see, I'm zoomed in 200%. Make sure you can you check how far zoomed in you are. You don't want to be 1000% zoomed in and end up with something that's far too small to cut and then to get a natural shape. I think it's the best way to design something so that I'm not really thinking about the edges. Even though you won't see these separately, they create more of a natural shape when put together and overlaid. Yeah, and you can flip. You can manipulate it. You want to make sure that you're leaving some room for light to get through. And then you're again, using this piece and the Shape Builder tool, and you're getting rid of all of those lines. You can see, that's the clean shape that we want, and we'll just delete any excess. And there you have it. You've got a nice archway that you can look through to see other layers. We've created a vector file of our design. Now let's separate it out into the different pop-up elements. So that's all the designing done of the detail of our pop-up. Now we want to make sure that it pops. So let's take a look at our base page template. So, like everything else, our top priority is to make sure that it works and it doesn't fall outside of the page. I've been designing just to the size of my sketch was. So I know it's probably not going to be right, as you can see, absolutely enormous. So what I'm going to do is just bring it down to a more manageable size, and like Leicester Square, if you're resizing, you need to make sure that you resize everything. The way I'm going to work out what will fit onto my page is to lay it down as it would be when the page is closed. And to do that, I'm going to take half one of my pieces, because when it's closed, it will be folded in half. And I know it needs to be on an angle to be able to stand up. And I'm going to take it to about that angle. I think this will create a good balance between something that stands up straight and is strong to something that it sits fairly straight to your eye so when you look through it, you don't get too much distortion of the image that we're looking at. And I need three layers so I can see that I can't go further back than here. And I want to give myself a bit of a margin. So if I place another one here and another one here, they all sit within the page. The front one comes quite close to the front of the page, but again, there's a little bit of a margin. And I'm going to be placing my 90-degree angle between my first and second layer, so that's fine. That will sit within there. So the lines that I'm gluing along, if I delete these, are these. So now I know where I need to stick my glue tabs. And again, this is a symmetrical pop-up, so you can copy, paste and flip. And now any changes you want to make to where your pop-ups go. You want to redo that exercise. You want to make sure that you know you can see where it's going to go when the page is closed. So I said we'd come back to this piece, and we'll do that now. I know that I want it to be this wide. I also know that I want it to be this far in from the edge of my layer. So I can use that. I can bring it here, and now I'm looking at it from a bird's-eye view. I know that it sits this far in from the edge of this layer, so I've placed that exactly where it's going to be. And now I can see how deep I can make this piece. If I make it this long, then the lamp post is going to sit in front of the front layer. And that's not what I want. I want it to sit between this layer, this layer, and this layer, and I don't want to sit too close. I want to make sure it doesn't get caught on anything. We've got a lot of cuts here, and the more detail you have, the more likely that something is getting snagged on another piece. So I want it to sit fairly comfortably in the middle. So I would say that this distance from the second layer is about right. So I can take this piece back, and I can say, "Okay, I have my placeholder, but actually it needs to be a little bit shorter than that." And I'm removing the two top parts, and that will be folded so that, if you imagine this from the side, this will fold up and down. We'll be adding some glue tabs, but we'll do that as we add glue tabs to everything else. Going back to the base page, where do you stick this? Well, you've actually already drawn it, and like the other pieces, you get rid of these and you know that the front of your lamp shade, you know that the front of your lamp needs to stick exactly here, and that will line up with the piece on the second layer, and it will be the right distance away. So now you've created a template for your base page for exactly where everything needs to stick. The last thing we need to do is add glue tabs so that we can stick everything together. So let's start with the front glue tabs. You can usually be a bit more easy with these. There's not so many rules. One of the rules for this one, though, is that you don't want the glue tabs overlapping onto other layers. Especially here, you can see that the front layer, if you have a glue tab that's too long, it's going to overlap here, and then you're sticking pieces on pieces, and it all gets very confusing and messy, and it doesn't usually work. So you can create your glue tabs by using your base template that you've made. I'm just making a rectangle. I know my piece to be that long, and I know if my glue tab is that wide, it's not going to interfere with this piece. I'm going to bring the edges slightly again, so that it's not hitting the other side, as it looks neater that you don't see anything. Actually, I can use this glue tab for all three of my pieces. If you want to, you can even put the shape of the glue tab onto the base to see where you need to glue. In the meanwhile, all I need to do is bring this in. Actually, something to note is that these two pieces cross the center crease, so you will be able to see exactly where you need to place them. Even without the template that we've made on the base, you'll be able to see exactly where you need to glue them so

that the center crease of these pieces crosses the center crease of your base page, which is what we need for the mechanism to work. This piece is a little bit more tricky because we've cut away the center so you can't actually see exactly where it needs to go. So that is where something like this comes in very helpful. So that you can see this is the point at which you need to glue the outer edge, and then you know that it will cross the center crease at the base page, at the correct point. I'm going to add two tabs to the bottom of these pieces. You can add the dotted lines if you want. If you're cutting onto a plotter or a cutting machine, you will need to separate out the layers. That's sort of a whole other thing. And if you're using those machines, then you'll need to have a look at what you need to do for those. But if you're cutting for yourself, the dotted lines can be helpful to see where you need to cut and where you need to fold. But they're not necessarily essential. All I would say is, if you're creating your own templates, and you're not putting dotted lines where to cut and you're not putting dotted lines where to fold, think really carefully when you're cutting. Make sure you don't accidentally just chop something off that you didn't mean to. All three of our layers have glue tabs now, and there are four more glue tabs we need to add for our 90-degree mechanism, and these are exactly the same on both sides. Again, I want to make sure that the glue tab here is not going to interfere with this layer. So I'm going back to my base page. I'm creating a rectangle, and I can have a slightly deeper glue tab on this one if I want. And I can use this glue tab. I'm going to make some copies, because I'm going to use it on the other piece as well. So this glue tab will attach the lamp to the base page. And then we need to add another glue tab here, which will allow the 90-degree mechanism piece to attach to the lamp. And the considerations here are, we don't want this distance to be too short. You don't want to chop away too close to the edge here, because it's going to weaken this entire structure. So I'm just going to make that glue tab a tiny bit smaller, and then all I'm going to do is take both of those glue tabs and put them on the other side. Everything I've been doing today is symmetrical. So if you do it on one side, do it on the other. And then to make life easier for myself, if I layer it like this. This is a great way to see I've got my base, my first layer, my second layer, with all the extras, my back layer, and then the insert piece that I'm going to put on the back, just to create that diffuse glow. And this is a piece where it can be really helpful to have some markers on the base page to see where you're gluing. Things you need to consider are, you want to put these in parallel? There are ways you can certainly experiment. And you can have V-folds at different angles, but I wanted to start with doing everything at the same angle so that you know that it's not going to conflict and bang into any other pieces. So today, keep them all at the same angle, and that is our Leicester Square piece ready to print. With our designer park finished, we're ready to print out this template and assemble it into the final page in our book. Join me in the next lesson where we'll be assembling our final landmark pop-up.

Important Screenshots:



Episode 10: Assembling Page 3: Hyde Park

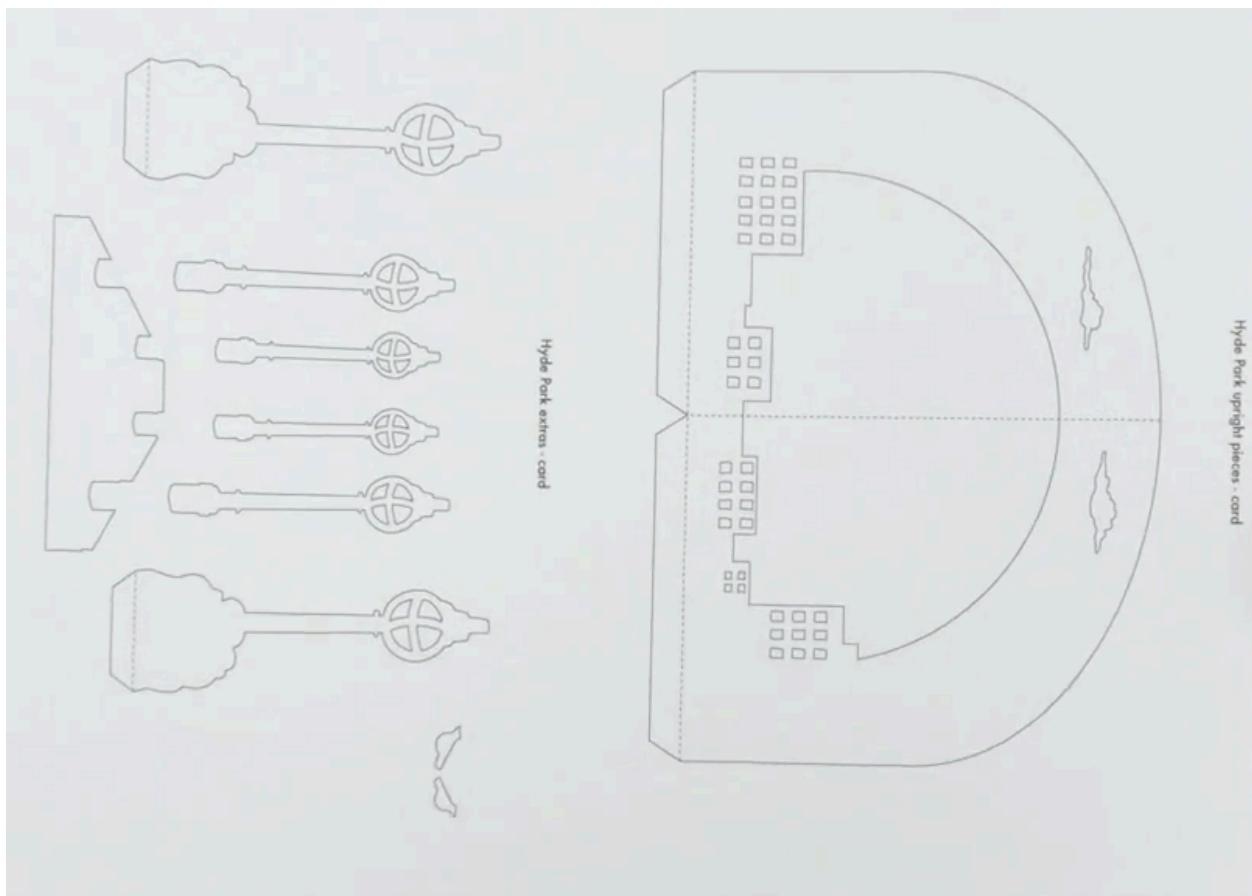
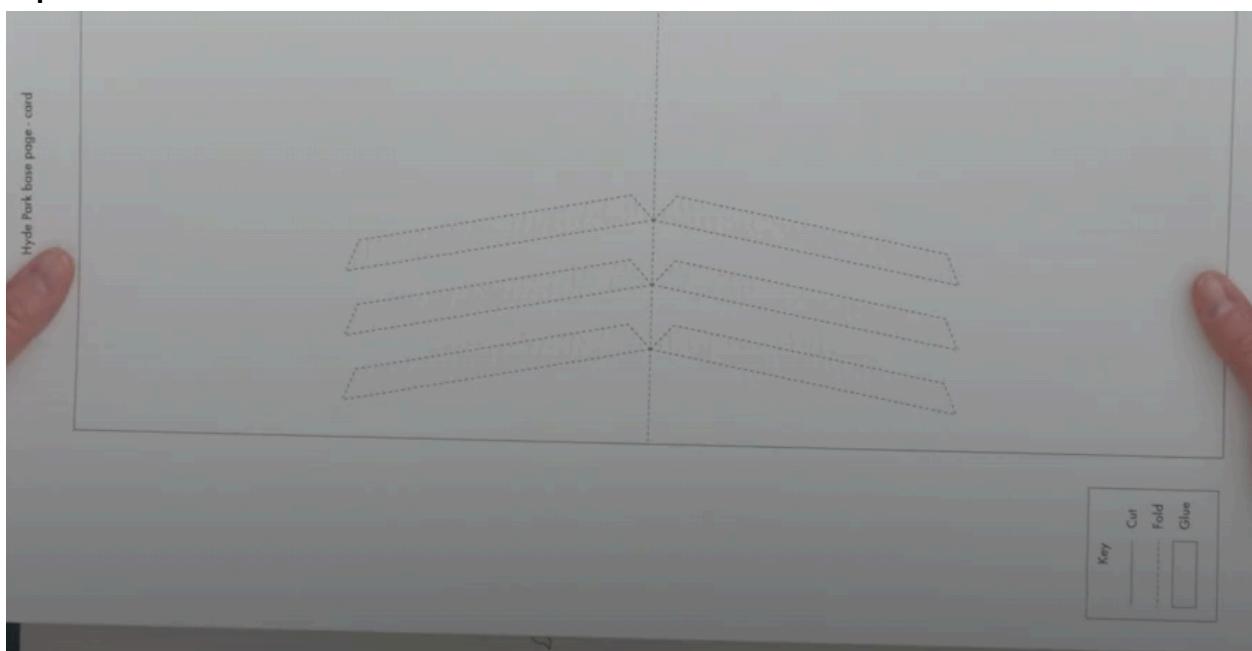
Description: Let's assemble the final landmark! I will be putting together the third page of the book so you can see how to work with the V-Fold and the 90-degree mechanism.

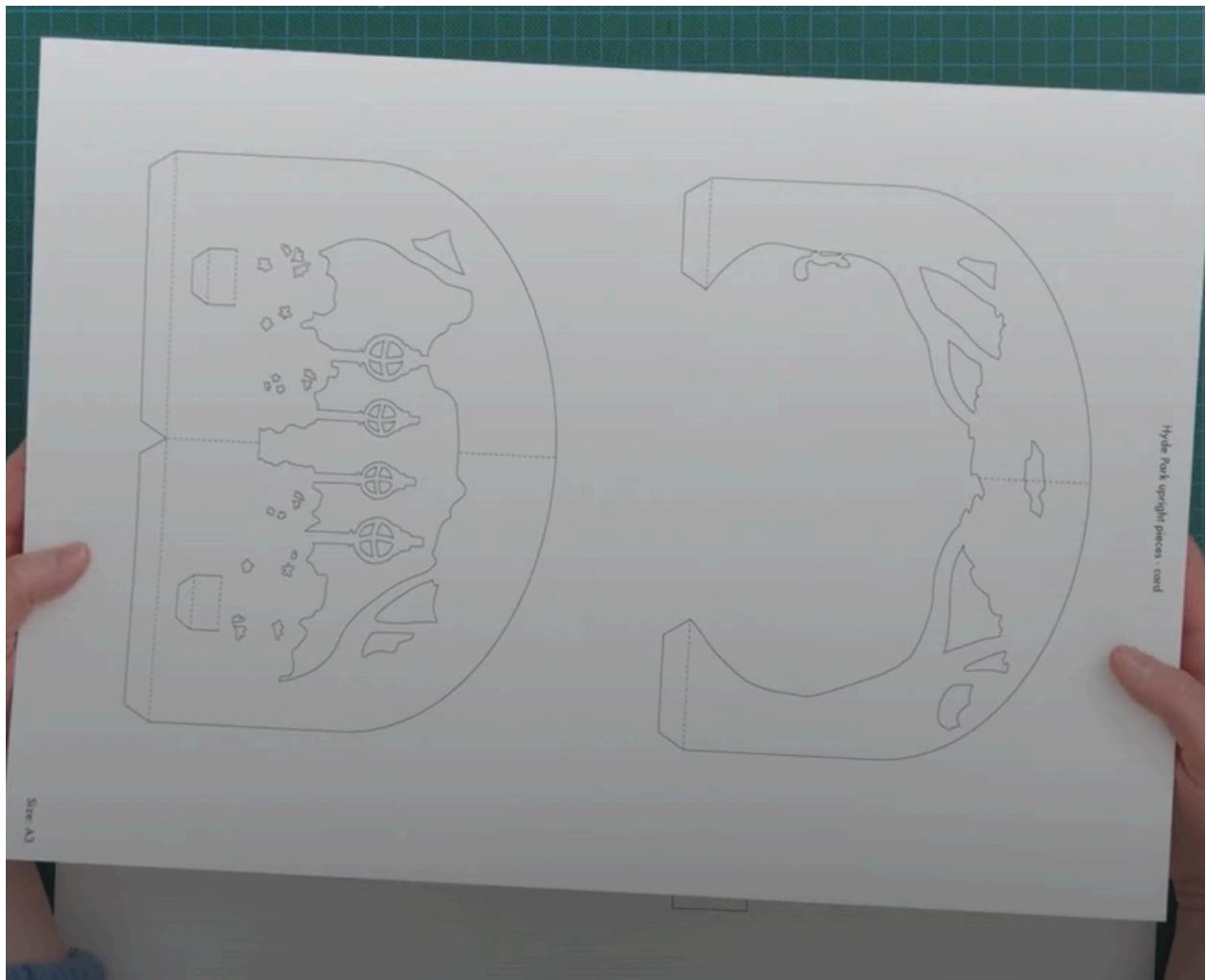
Transcript:

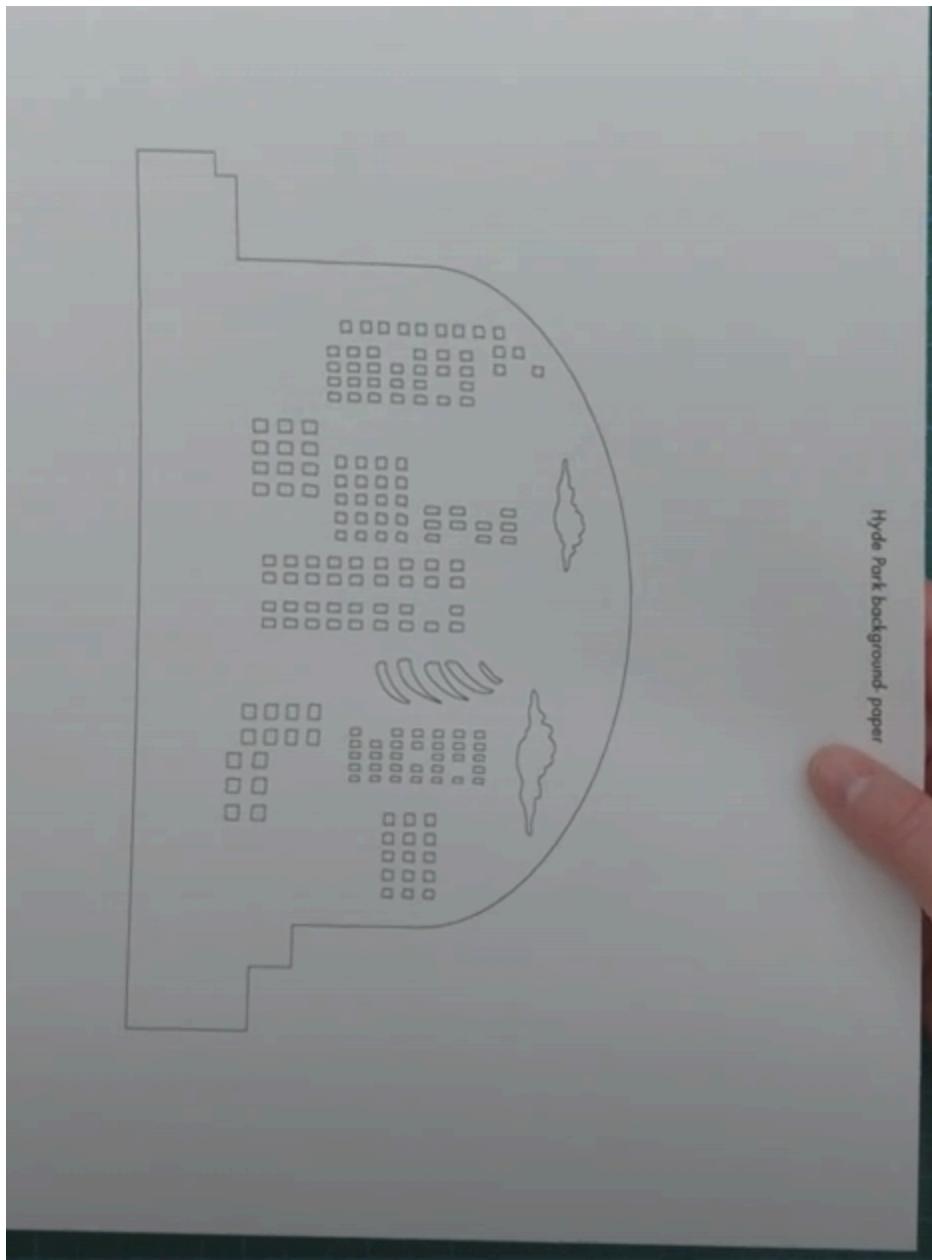
In this lesson, we'll be putting together page three of your book, Hyde Park, using the V-fold and 90-degree techniques. Let's look at the templates for this page. We have our base page, as usual, printed on 270 GSM card. We've got another page also printed on 270 GSM, and that's because the pieces in this page are quite large, so they need a lot of strength. The larger the piece, the more strength you need for it to stand up right. We also want to particularly block light on these lamps. We want the body of the lamps to be dark so that the glow of the lamps comes through and makes them look like they're really a light. And the same with the path, we don't want light coming through the path. We've got some little bird details, and we've got the back piece of the diorama as you look through the pop-up, and we'll be putting a piece of thinner paper behind this one so that we get kind of a glow like sunlight coming through the trees. We've also got some quite detailed windows on this one, and I'll talk more about that in a moment, as that's a slightly different cutting technique. And another page also 270 GSM, again, because we need a lot of strength, especially in this kind of piece where we've cut away quite a lot of the card, and so you've only got these two struts at the sides to hold it up. So you need the strength to come from the card and not from the pop-up, as it were. We've also got the 90-degree fold here, which we'll be using to attach our lamps. And we've got some details cut through of flowers, and those will also allow some really nice shadows to come through and kind of fall on the table when you shine a light through. And the trees, and we've got a little squirrel climbing up the tree. So the only piece in this page that is printed on thin paper, this is 135 GSM, will be the backing piece, so that will go behind everything, and this will be what's diffusing our light. So we have these little windows, and those will also create some great shadows. And we have, I've just sort of creating the impression of buildings using the windows, and also things like the Gherkin and we've got some clouds, so you've got kind of sunlight coming through clouds. There's nothing totally different for cutting all of these little windows, but obviously you've got a lot of them, and it will take a little while because there's quite a lot of detail. But the ways you can make life easier for yourself is to use the same techniques as we use when we were cutting the larger pieces. And that's essentially to go all one direction, turn the page and go the other direction, so that you don't waste time turning your paper back and forth. You also will need to slightly cut over the corners to make sure that you don't end up with lots of pieces that are just stuck in, which will be really irritating when you think you've cut everything and you have to go back again. So you're cutting just over the edge of the lines. You could use your ruler for these, if you wanted. It's quite nice sometimes to get more of that sort of hand-drawn effect. And if you wanted to use a ruler, you could sort of speed yourself up. You need to make sure that you can see the lines, but you can then just go along the row quite quickly. So when you've done all of one direction, turn it back the other way, and then the same thing in the other direction. If you shake them out. This one, like you see, I haven't quite cut to the corner, so just want to avoid that if you can, just to save some time, and that's it. And you can cut as many or as few windows as you have the time and the patience for. Like before, to save time, I've pre-cut all the elements. Once you have cut, it can be really useful sometimes to lay them out in the order that you need to stick them, just so that you know in your mind where everything's going. It can be quite easy sometimes to get confused and stick wrong bits to wrong bits. So again, I've got, I've made very, very light marks on this page so that I can see where I need to put things, but actually, the main thing that you need to remember when you're gluing these V-folds is that they're parallel to each other, so they're not hitting each other when they're opening and closing. And then you can experiment with the distance. Obviously you need to make sure that you're not going to be falling out of the page, but otherwise you can move them closer or further away. See what effect you get. Let's pre-fold everything to make life easier for ourselves. This one's the front layer. So I've laid them out in the order that we're going to be using them. This is the middle layer, and in this piece, we've got the built-in 90-degree folds too, which will save us having to stick them on separately. It also means that we know that they're perfectly positioned. And in the back, so this is the piece that's going behind here that will create the diffusion that we want. And when you've got lots of cuts near the crease like this, you want to be really careful when you're folding, because you can see the paper wants to fold along the edge of here, because it's the weakest point, so I'm just trying to persuade it that it wants to fold on my crease just like that, just carefully and gently. And then we've got all the lampposts. And so that's it. That's everything folded. So now we can start gluing together. And as the other pages, we'll put the pieces together before we put them onto the base page, because that's always easier. And let's start by joining these two pieces. And a bit like Big Ben, we want to add these two pieces together so that they behave as one piece of card when we've finished. And this one's a little bit trickier, because we can't just put glue anywhere. Otherwise we're going to end up with it all over the back as well. But you can see that the glue goes all the way to the edge here, and then as long as you stick fairly close to the edge of this semicircle, you should be okay. So you can do it by eye. We're going to make sure that you get in between the windows. The other piece we did one half at a time. I think this one's fine to put on as one piece, because it's fairly simple. We've only got one crease in it, and we can see, we can use the edges of the card to line it up so we know exactly where it's going. But you still want to turn it over and check. You see the crease. My crease at the bottom there is just a tiny bit off, so I'm just shifting that over, turning it back, and making sure it's glued. And that piece now acts as if it was one piece of card. Now we need to add the detail to this piece. We don't need these larger lampposts for the moment. What we need are

the path, the smaller lampposts, and the birds. So let's start with the lampposts and these going on here to add that extra layer, to block the light. Actually, you can see when I've been cutting this the paper's separated slightly, and that can happen sometimes, it can split. What you can do is just put a tiny bit of glue underneath, and then it will glue both of the layers together when you push it down. These star circles are in the thinnest paper, and they're just to give a bit of diffusion to the light to make it look like the lamps are glowing. I just put those on the back and actually a good tip for knowing where to put your glue is to always apply your glue to the most complicated side; the other side will sort of look after itself. Okay, we'll add the birds. These can go really anywhere that you like. This piece has been cut so that it fits around the bottom of the lampposts and make sure it's not interfering with either of these flaps here. I need to add a crease line to that as well. Make sure it all folds neatly and then the same. Make sure it all closes together. That's that piece done. So all three of those pieces are ready. We're going to put these onto the base page, and then we'll put the lamppost on last. So let's start from the back. I'm just looking for the very tiny marks. If you don't want to print, you want to make sure that you can't see anything. You can even use your scalpel and make tiny marks in the corners of where you want to place your glue tabs, like it'll be enough for you to see but nobody else will notice it. So as always, we do one side first, make sure you've got your angle right. As I was saying, the angle doesn't particularly matter. But once you've picked an angle, you need to stick with it, so the other ones need to match. If you decide you want to experiment, you might be able to work out you can use different angles to create different effects if you've got the panels far enough apart. But to begin with, I'd stick with using panels in parallel. Just keep things simple. Actually, I'm not going to glue that yet. I'm going to put on the next one first, and then we can do all three together. I think that'll be an easy way of doing it. You need to make sure that this one goes inside the back one, and again, make sure that everything's this is over the crease. This point is over the crease. This is parallel. And the same with this piece. We've got to slot it inside. This one's a little bit harder because it's away from the crease, so you need to make sure that this line is over the crease. But it's quite hard to do. So this is where it can be really useful to have pre-measured and to know exactly where it's going. So I have a little mark here so I know where to put the corners of my piece. And again, make sure that the angle is correct, which is harder when you're not working with such a long line. Then we've got all three lined up, and we can do them all together. I glued each of these tabs. Make sure they fold over as you push it down. You're praising God. You're doing it that way, because it can make it easier in some ways, but it also means you can't check as you go. So if you've made a mistake and then you've repeated that mistake three times, it might mean that you're a little bit stuck with it, but generally, as long as everything's over the crease and in parallel, you should be okay. And that's it. That one's ready to add the lamps. Again. I've marked where I'm going to put them on this one. We're going to just add a little bit of paper behind to create the glow that we want. I need to make sure that my lamps are in parallel to the piece behind, and also that they're the same distance away from that piece than the length of this joining piece here, so that when it stands up, it creates that nice 90-degree box. To make sure that the lamp also sits behind the front piece, so it might be a little bit easier to leave this front piece off and do the lamps first, but it's not too much of an issue. You'll notice, if it's not in parallel, you might find that your piece is bowing. It might be bowing outwards, or it might be pulling, or if you haven't got it straight, it might skew. So you might find your piece is pulling to one side. Any situation where it's not just easily standing upright probably means that it's not attached in exactly the right place, either to the base page or to the 90-degree piece, or there might be a measurement slightly out somewhere. And once these are attached to the base, it means that we've done all the hard work, because these were already attached to the pop-up. So we just need to put them flat and they'll sit in exactly the right place. I would do these one at a time, just so that you can adjust without having to worry about the other one drying out. In closing, there was resisting. And what happened is that one of these lamps had come forward. So if you're trying to close it and you feel something kind of pushing against you, stop, open it back up and check so that you don't damage something by trying to force it. And there we are, one piece ready to test with light. So let's see what it looks like with some light. I'm using the phone torch again, and you can just place it behind, and you get some really nice shadows and kind of the dappled light effect that you get coming through trees in the park. And then I've got the phone on the base, and you can get different effects by moving the light closer and farther away. And just experiment, see what happens. And just like the other pages, there are lots of ways that you can adapt this to your own design. You can add more layers. You could have less layers. You could have layers that come further out. You could have layers that are at different heights to create different effects, as I was saying when we were making it. You can also change the angle of the V-fold. See what effect that gives you, if you want to try and experiment with having different angles, and see how far you can get before they start hitting each other. It's always fun. Lots and lots of ways that you can make this your own design. That's our third and final page assembled. But we're not quite finished crafting yet. In the next lesson, we'll be combining our three pages using book-binding techniques. Join me there to find out how.

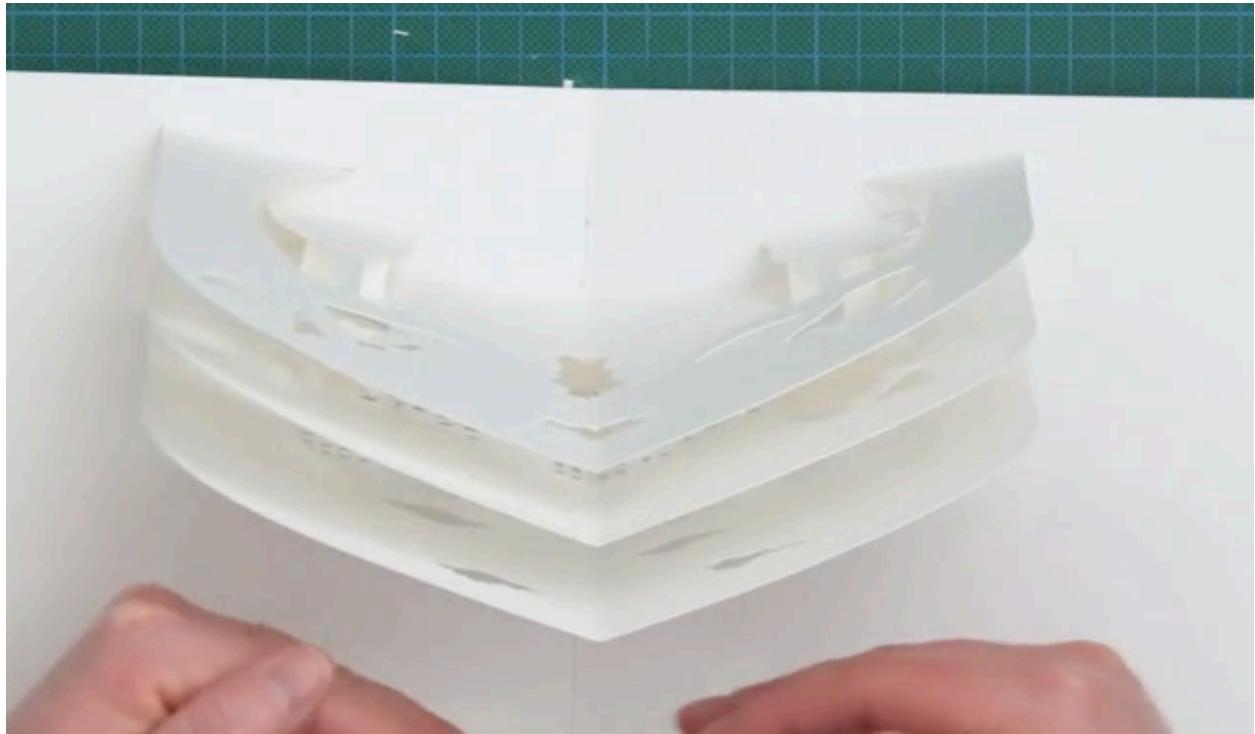
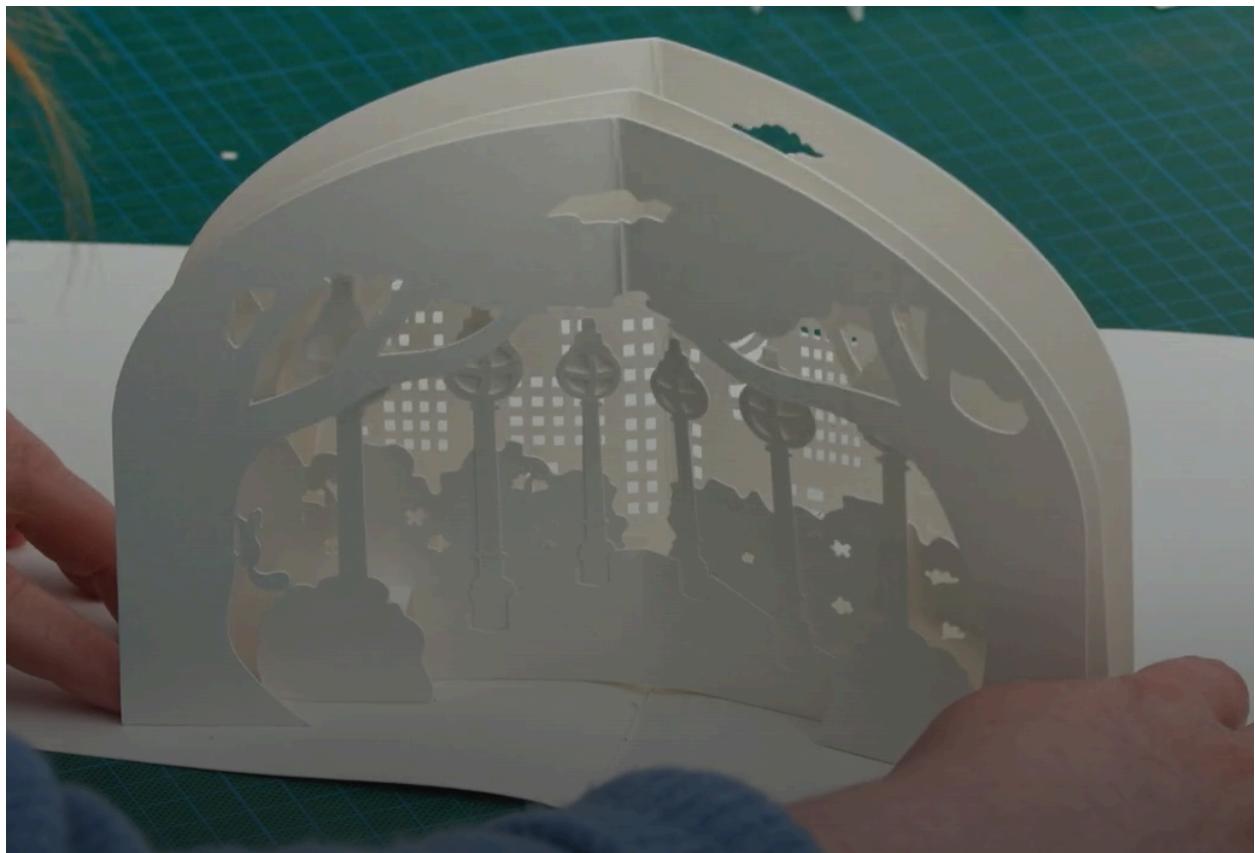
Important Screenshots:







Hyde Park background-paper



Unit 4: Finalising the Book

Description: We're close to finishing the book! You will learn here how to bind the pages together into a book and create a spine, as well as a front and back cover.

We will also add finishing touches by creating a decorative cover logo, get playful with light, and discuss ways in which you can take the piece further should you wish.

Episode 1: Putting the Book Together 1

Description: First, I will use simple bookbinding techniques to combine the pages into a book that can be kept forever. This will involve making a cover and spine to secure everything.

Transcript:

In this lesson, we'll be using simple book binding techniques to put our three pages together into a book that you can keep forever. This is going to involve making a cover and a spine so that we can secure the pages and also putting our pages together. So as previously, I've got my tools for this one. I'll need the roller, for sure, ruler, definitely, the pencil, the knife, the bone folder. And I won't be using glue this time, I'll be using tape. And the reasons for using tape instead of glue is that you can get a much flatter effect. Sometimes, if you use glue, especially glue as we're using it, where it's kind of in a string, you can end up with some bits lifting and some bits sticking. And so you can use tape if you want to. You could do something like spray mount. What you're aiming for is just an even hold. You could also use archival tape if you wanted to make sure that your book stays perfect forever and you don't end up with any yellow stains eventually. And so there's a few reasons for using tape this time. So I have my templates, I have my page join pieces, and we'll be using those to put our pages together. Actually, we've created what are essentially three pop-up cards. At the moment, you can keep them separate if you want to, but you can also use these pieces to join them. We'll be making them into a concertina, and that means that you can put light underneath, especially the Big Ben page, it gives you a little bit of flexibility. So you've designed your three pages, and then at the end, you can decide which order you'd like to put them in. You're not stuck with a particular order. So these simple pieces are just going to run along the edge of our pages so that we can still carry on opening them like this. It'll keep them together really neatly and hold them consistently. It's just a fold down the middle, and then some glue tabs. Traditional books quite often, are joined all the way to the spine, so they would open like this, whereas ours will be able to open like this. So it helps for pop-up books, because it gives them a bit more flexibility. It's like turning the pages; they need quite a lot of movement. The second page of the template for this lesson is for the cover pieces and for the spine. And I've given you one cover piece template, but actually what you'll be able to do is, once you've cut one, you can use your piece of card as a template to cut the second one. So obviously you've got the front cover, the back cover, and then the spine runs down the side. So to cover the book, you'll need a larger piece of paper and something that's not too heavy. You don't want to use card because you need to be able to bend around. You need to be able to glue it or stick it quite easily. I've chosen one. I'm sticking with my white or off-white, but this one has a slight texture, and you can do that. You can use paper that has different textures, but in the same colors to create some really nice effects. And finally, we've got our gray board. This is really cheap from most art stores. It's very strong, very rigid card, and the card that I'm using is 2.5 millimeters thick. You can use different weights. Obviously you'll get different effects. It comes quite often in one millimeter, two millimeter, two and a half. You probably don't want to go much thicker than two and a half, because it will become very, very difficult to cut. But otherwise, it doesn't really matter. If you haven't got gray board, you could use something like corrugated board. It's not ideal, but it would work. The danger is that it can dent quite easily. But you can also find this card on the back of old sketchbooks. If you finished a sketchbook, you'll often find that the back of it is made of gray board. So you might be able to find some around your house. So that's everything you need to be able to bind your book. So we're going to start by joining our pages. So we don't need these for now, let's bring our pages back in, and we'll start by cutting out the page joining pieces. And these obviously are fairly simple compared to some of the other things you've been cutting. Again, we'll be creasing down the middle of all of them. You could actually, you don't necessarily even need a template for this. If you wanted to make sure that you didn't have any lines on them, you can just create a crease, cut a little bit either side a bit and make sure that it's the same length as your page, and it will work just the same. I'm just going to cut out four, because that's all we need, and I'll save that fifth one as a spare just in case. And for these, it's quickest to just cut all of them out together, leave that to one side. Then you want to add the beveled edge to make sure that they're not sticking out. And actually on this one, what you could do is stack them up, do this very carefully so that they're not moving. It's always better if you're cutting something that's difficult to cut, to do multiple light cuts than one hard cut. You're much more likely to hurt yourself if you're putting a lot of pressure on the knife. So let's look at our pages. So at the moment, they're three separate pages, so you could put them in any order. And actually what I've decided is that when I was designing my book, I thought I would probably have Leicester Square second and Hyde Park last for an evening stroll through Hyde Park, but looking at the lights shining through them, I think that actually Leicester Square is better suited to the evening, somewhere that you'd go at night and you can see all the bright lights, and Hyde Park would be much nicer for a lunchtime stroll. Then you've got an early morning walk across Westminster Bridge to see Big Ben. So once you've decided the order of your pages, the really

important thing is to make sure that they're all the right way up. It's incredibly easy to accidentally get something flipped around and not realize that you've glued them all together, and it can be quite frustrating. So I want to make sure that when my viewers are opening them, they're all opening towards them. Let's start with the first page, keeping it the right way up now, so that I know which direction it's going, taking my page join piece. And you want to use the bone folder for this to get a really crisp fold. You almost want these to be invisible, so I fold it over so that you can't see the black lines, and then I'll stick it along this front edge to start with. So I will be using tape to bind the book. But actually, I think it would be better and easier to use glue for this part. The glue that we're using is incredibly strong, and it will also be much quicker than me trying to measure out exactly the right width of tape, because I think my tape is a little bit too wide for my join pieces. When you're joining something like this, you can open it up, and then you can push against your fingers to get a really good line on the edge so that it is exactly on the edge of your page, so that when you look at the top, you almost can't see anything. So that will go to the front cover once we've made it. Flip over and okay, and just like the other pop-ups, what we'll do is we'll do all of these join pieces first before we start gluing things together. So this one will join onto here. So you don't need a piece on this side, but do you need the piece on this side? This could have been built into the page design. You could have added an extra flap to the end, but I think it's quite nice to have that flexibility, that you can change the order, where you can even decide if you want to keep them as standalone cards. It gives you options. Last page, we just need the piece that will join to the back cover for Leicester Square. I didn't use the bone folder before I put it on, but I can actually do that when it's on before the glue has dried, and then I can make any tiny adjustments. Okay, so those are all the page joining pieces on. Now we need to join these segments together, and it's exactly the same technique. Again, make sure that everything is the right way up, the right way around, and make sure that the pages aren't sticking together. If you've got any glue that's seeped out of the front there, while it's still damp, just make sure you're opening and checking that everything's working correctly. And that's it. That's all three pages joined. And what you'll need to do now is leave those to dry. I'd put them to one side. You can put them under a pile of books, but we'll just kind of keep everything really nice and flat, so that it all sits nicely. And we'll start making the cover. I've let this dry for a bit, and if you were making your own book and you had a different number of pages, you would need to measure the spine to make sure that it's the right width for your book. And the way to do that is you want it to be sitting naturally. That's the other reason I said to put it under some books, because you want it to sort of have all settled down a bit, and it's very hard to do it if you were just doing it with a ruler like this. So I would take the gray board that you're going to use for your cover and just let it sit on top, just naturally. And then you can measure your spine and probably give it a little bit more space than it's sitting at because it's a pop-up, you want to give it some room. You don't want everything to be too squashed. So my spine is about two and a half centimeters, which is what I have on my template. And this will change depending on the thickness of card you're using, how many pages you've got, how complex your pop-up is, because that will bulk out the pages. So there are a lot of factors that can affect that. So it's always worth checking your spine width. Because even if you followed everything exactly, your spine width might be slightly different to mine. So now we've done that. We can put this to one side and we can start making the cover. So we have our template for the cover pieces and for the spine and the gray board. Start just with one piece of gray board. I'm going to leave that to the side for now, and you don't really want to be cutting with all this paper around. So if you've got a template that's quite big, like this, it can be worth just chopping it down to size or close enough so that you can tape it to your gray board without too much excess to worry about. If your gray board's machine cut, and you know that you've got perfectly straight edges, what you could do is use a corner, and you've already got two sides of your gray board cut for you. I'm not sure that mine is perfectly straight, so I'm going to just place it a little bit away from the edge and create my own edges. To stick the template to the gray board, you could use your double-sided tape. Obviously, you can just use it without taking the second side off. That's fine. I'm going to use some magic tape, which I like because it's quite matte, so it's easy to cut through. It's quite easily removed. It doesn't really damage the card underneath it. Make sure your template is sitting really flat. You don't want any bumps. And I'm joining it on every side, so it's really nice and even and it will give a good hold. You can use any tape for this. Masking tape works really well as well. This one's good because you can cover the lines and you can still see them. Okay, that's taped down. You don't really want to go thicker than this. It's two and a half millimeter gray board, and it can be quite difficult to cut. So I'm going to make sure that I start with a fresh blade for this one. Take these off really carefully. I use my ruler to push it off, and then carefully slide on the new blade. These handles get easier to put the blades on and off as they age, because you wear away the metal slightly. So, cutting gray board, as I was saying earlier, as well, if you're cutting something that's difficult to cut and it's hard to cut through, to be safe, you want to do lots of light cuts, rather than I don't want to try and stick my knife in it and just drag it, because the things that might happen are the blade, the end of the blade, might snap off, which sometimes can go in your eyes, which you obviously don't want to happen. You can get the card stuck in the blade. And it also makes it much easier for you to veer off and accidentally cut yourself. So the safest way of doing it is really lightly. I'm always putting no pressure. I'm letting the blade do the work. The other thing I'm trying to do is get a straight cut on this so that I don't end up with beveled edges on my book. So I'm trying to make sure that my knife is going in directly into the card and not at an angle, and then eventually I can feel that I've got through to the mat. However, I've stuck this template down. I've made sure that there's some space on this side as well for my ruler to sit, because if I was too close to the edge, my ruler would be falling off, and that makes it much harder to cut. So I'm overcutting the edges on this as well, so that when I've finished, it will just pop out with no problems. And I'll get rid of that because that could get in the way and be dangerous. I know where I'm cutting because of the ruler and because of the groove the knife's already made. It's popped out really nicely.

Episode 2: Putting the Book Together 2

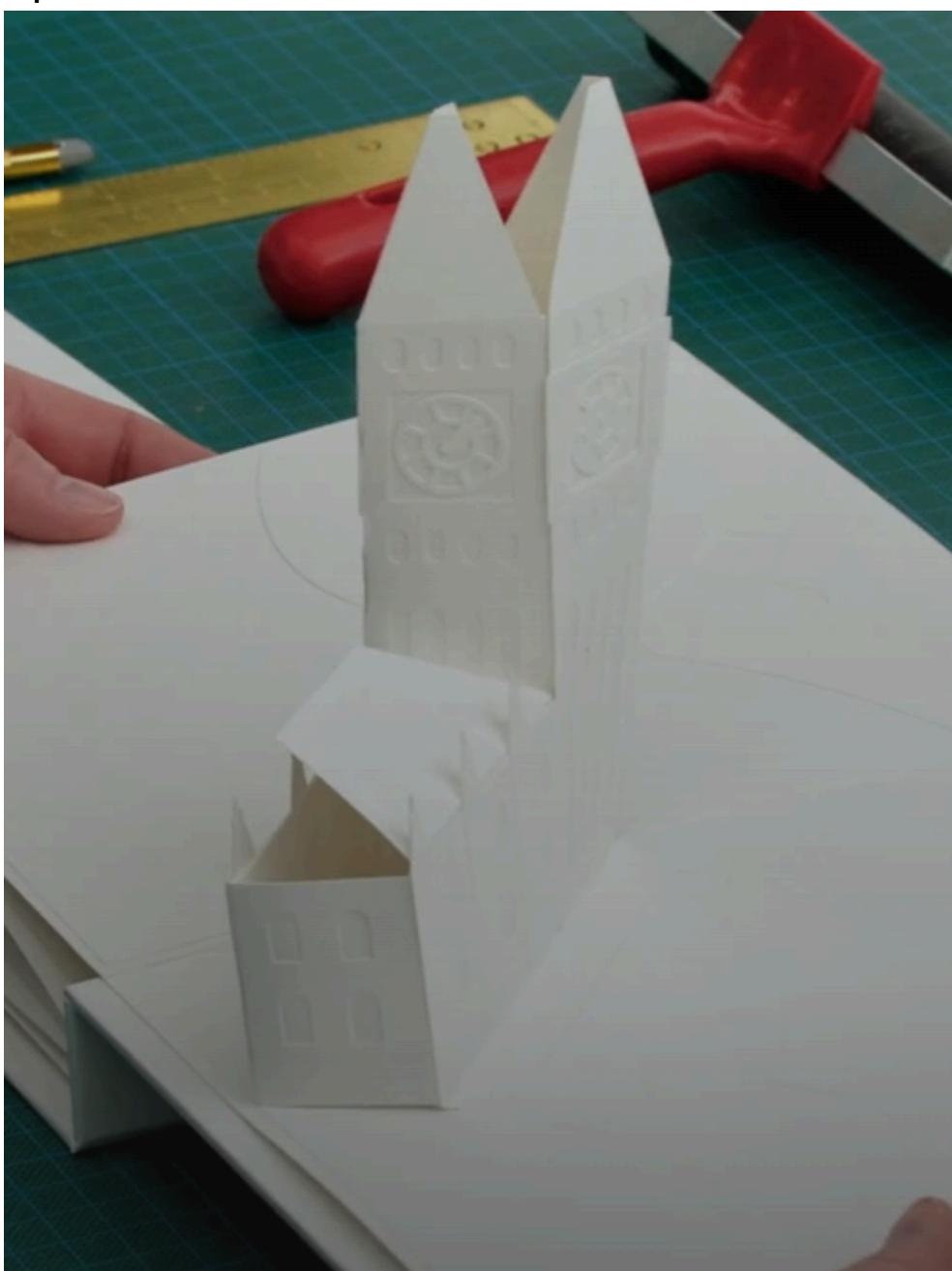
Description: After finishing the back cover, I will assemble everything and add on the three pages I have made.

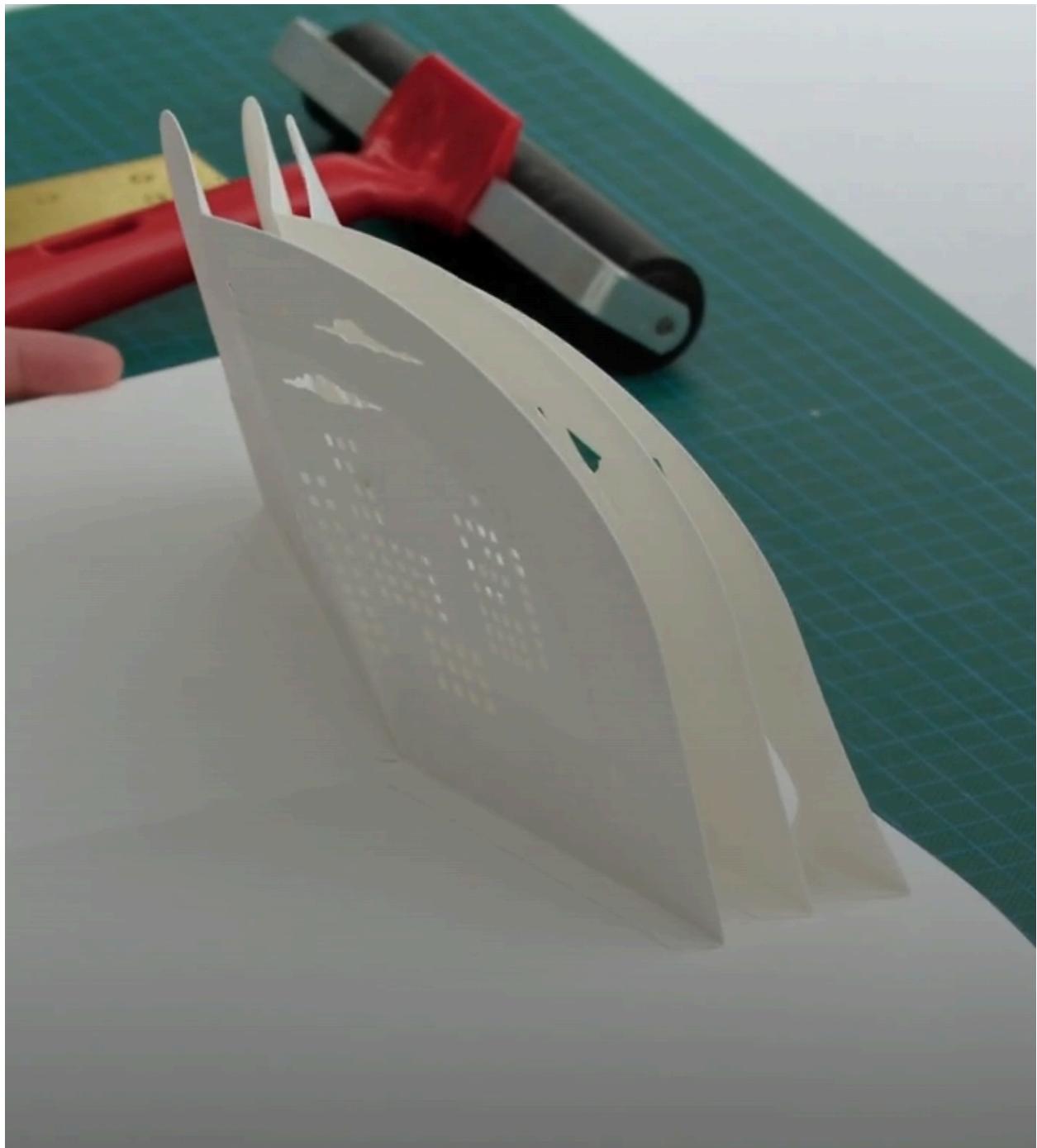
Transcript:

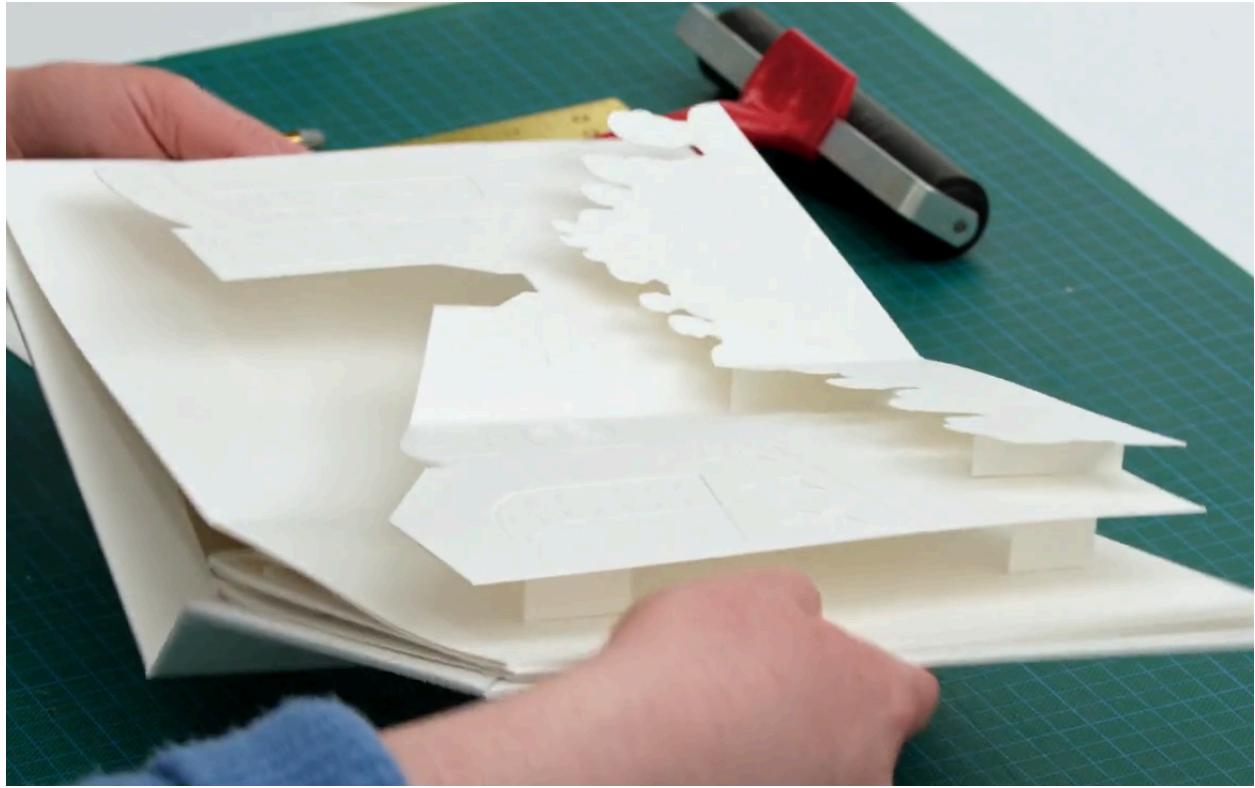
So for the second piece, I'm going to use this piece of card as my template, and this side, I can see it's pretty straight. Actually, two sides are quite straight. So I can use these to save myself some time cutting. Using a sharp pencil to make sure I get a really accurate line. And if you're using something else as a template, because you're drawing around it, you want to cut very slightly in from where you've drawn, because you know that the pencil can't be exactly in the place where the edge is, so you're just compensating for that by moving your ruler in sort of half a millimeter, not very much at all, but just enough to compensate for the width of the pencil. And that's your front cover and your back cover ready to go. We just need to cut this bind piece now. Again, I'm not sure if this card is exactly straight, so I'm going to stick it away from the edge, leaving myself a bit of room for the ruler to be supported. So there are our front and back cover and spine pieces ready to cover. Now these are made. I'm going to add tape to them, and then we can stick them to the cover piece. So I'm using double-sided tape, and I'm just going to make sure I go right up to the edge of my pieces. You don't have to use this particular tape. You can use thicker tape, as I say, if you want to make sure your book stays really nice, you might want to use something like archival tape, which doesn't damage the paper. There are lots of different ways of doing this as well. I'm just doing a fairly quick way. I place my tape pretty evenly. I'm actually going to give it a roller just to make sure that it's really well adhered to the card and none of the edges are lifting. All right, let's bring in the piece of paper that we're going to use to cover the book. And so the paper that I've chosen has two textures, so I can choose which side I want. One side has a smooth texture, quite similar to the book, and the other side has a much more grainy texture. And actually, that's the side that I want to keep up. So for the moment, it needs to go down, so we can stick our pieces to it and bring them around to cover them. So I've got a bit more paper here than I need, so I don't need to worry too much about being too close to the edge, but I just want to make sure that I'm sticking things roughly in the middle to give myself plenty of breathing room. And what I'll do is start by sticking one piece down, and then we'll use that to get a straight line off of to make sure that everything is square. So I can move two pieces to the side again, and then I need to take the backing off of the tape, and then turn this over. Make sure again, that it is in roughly the right place that you've got enough space for your other two pieces. Don't worry too much about it being exactly square to the edges of the paper. Put it down and then give it a really good roll. It's important that this is stuck evenly, otherwise you could end up with a bit of a wave pattern. Okay, so we've got that one stuck. Now we need to position the other two pieces. The first thing is to think about the distance between the cover pieces and the spine, because you need that gap to create the flexibility that you have in book covers. The general rule of thumb that I use is to make the distance double the thickness of whatever card I'm using, the board. So my board is 2.5 millimeters, so I'm going to make the distance between my cover pieces and my spine five millimeters. So I can easily measure this out by hand, and I can use the edge of this board to make sure that it's straight. What I'm also going to do is use the ruler to make sure that it's lined up correctly. So I know the distance. Actually, I think I've measured that one a bit far. Yeah, that's a centimeter. Half centimeter. So I'll mark that, that's much better. And then put it straight on the ruler, and make sure that it's lining up at the top as well. To my other mark. And remember that tape is not as forgiving as glue, so once it's stuck down, it's down. So you have to be really careful with your measurements. Okay, we've got the front cover, the spine. Let's do the back cover. Same thing. Now we need to use the spine to mark five millimeters. And again, I'm using the ruler to make sure that everything's straight. You can get a tiny bit of forgiveness by keeping it up and then pivoting it down, which will mean that it won't just stick. Make sure five millimeters, five millimeters. Make sure you really get the edges of these. Okay, now we need to wrap around the ends. And to get a measurement for how far, how much paper I want to leave around the edge, I'm going to use the width of my ruler to create really quick margins, and then I know it will be even all the way around the corners. We're going to cut a 45-degree angle across, but what we're going to do is cut out a few millimeters. I'm going to cut out approximately two and a half millimeters, the same width as my card, that will allow us to wrap the corners correctly so you won't be able to see any card poking through. Actually, I've drawn this with pencil, but since you're using the ruler as a guide anyway, you could actually, if you're feeling confident, cut straight away. Okay, then we've got a nice, even surround, because there's enough space to be able to fold and stick in. So I'm going to add tape to the paper, and I'm going to add one right into the book so that it will stick on the edges of the book, and then I'm going to add another right at the edge of the paper. It's all okay. I'm going to start with the long edges, because they're slightly harder. There's more of them, and it's always best to start with the harder part of a task and work towards the easier part, one side at a time, to make sure that I get a really nice tight stick of this corner. I'm going to pull, make sure it's straight, pull it up to me and pivot it over so that I know it's stuck right along that edge. And then continue doing that. I'm applying quite a lot of pressure. There, you are stuck really nice and tightly. You can also do is get your bone folder and just run it along. We talked about grains and paper earlier, and this is somewhere where it's not the end of the world if you don't use the grain in the right direction. But actually this will be better as short grain, because you want the grain to run along the spine, so that when you fold the book, it folds with the grain. You're not folding it against the grain, where you could end up with some cracking or buckling. So the long edge, the second long edge, the reason that this side is harder is because you have three separate pieces. They're all moving separately, so you've got to keep them in a straight line, whereas the short ends, you just have one piece to deal with. So push and fold. Make sure that ends stuck. Put a really good roll. Make a nice, neat fold on the edge, on both sides. Okay, before we wrap these ends, we need to make sure that you're not going to see these corners, and that's why we left a few millimeters out. So before we do anything with these, what we want to do is use the bone folder, or whatever tool you're using for that task, and push in there's just a tiny bit of paper at

the ends. Push it in, and the reason for that is that, as you fold over, it will cover that corner and create a really nice edge. Okay, those four are all in. And then same technique, pulling over and round. So you can see those edges are really beautifully covered. You don't need to worry about any of the gray board sticking out. Same with this end. I've got a little bit of tape paper hanging there, and I'm just going to cut it off. I don't want it sticking to the book. So that's the cover pretty much done. If you wanted to, if you were feeling like it, you could add end papers, other pieces of paper that would go here, and then we'll cover up the rest of this gray board. I think we probably don't need to worry too much with this project, because once the book is stuck in, you're not really going to see this. But you could use a different paper as well. You can quite often have decorative end papers. So decorative paper, marble paper, whatever you like, could go at the ends here, and all you need to do is cut a rectangle of paper that covers this piece in the middle. So if you're using something that needs to be a particular way up, this is the time to check that you're gluing your pages into the book the correct way up. For example, if you've already got something on your cover, just make sure everything's the right way around before you start sticking. We'll start with the back pages. But actually, first we're going to make sure that the cover is bending. Okay. I'm just using my bone folder to just stretch this little bit to give it a little bit more room to fold inwards. It just stretches the paper out a tiny bit on the inside, and that allows it to fold around. So we've got a working cover. We know that that's okay. So take your pages, line it up. I've created the cover with about five millimeters all the way around these three edges. But you don't need it on this edge, because you want it lining up nicely with the spine. You don't want it too tight against the spine, but basically along that edge. So I'm going to just apply glue to my page drawing piece here, and then I want to just get right above it to make sure that all your edges are even, the top and bottom have the same amount of space, and you can only do that if your head's directly over it. Also make sure that it's straight along the spine. Fold over the spine, and now you're making sure that the front cover is equal to the back cover, so that when you look at your book like this, the cover has a straight line. Here, you want to make sure that your pages are sitting really nicely within your covers and spine, that they're not butted too tightly up against the spine, but that there's not too much room for them to wander about, and everything is nice and straight and even and parallel. And then just leave your book for a little while. Make sure again, gently open everything, just to make sure nothing is sticking where you don't want it to. Otherwise, that's done. Let's have a look at the finished book. You might find you need to manipulate your spine a bit to be able to get it to go flat. Now we've created our fully formed book. Let's move into the next lesson, where I'm going to show you how to add some finishing touches.

Important Screenshots:







Episode 3: Finishing Touches

Description: The last step will be to add a decorative flourish to the cover by creating a logo. I will also explore how you can play with light to enhance the interactive experience and share other options you could undertake to personalise and tweak the minimal page designs to your taste.

Transcript:

In this lesson, I'll show you how to create your own layered logo to decorate your book. And we'll also look at how to create your own light filters so that you can make your book a bit more interactive. For this lesson, we need a few less tools. We've just got the roller, the scalpel and the glue. I've printed out my template and some pieces that I've pre cut for time. You'll need your finished book, and then I've got some materials that I'll be using for the filters that I'll show you in a moment. So if we start with the cover, the logo, I've designed a layered diorama of London. And the idea is that you can use this design if you want. You could make any city in the world with this design. You just choose some different landmarks, and you put them on different layers, and I put it within a circle to create a nice, cohesive design. And we start with a large circle and then sort of a sunrise sunset to go in with our story theme of walking through a day in London. We've got the cityscape, Big Ben and some of the other London landmarks. So all of the techniques that you'll need to cut these pieces, we've gone through before. We've got small windows. We've got some curves, so those should be fine. So to save time, I pre cut these pieces. Once you cut your pieces, it's always good to lay them out in the order you're going to use them. So I'm starting with the largest circle, and I'm just going to glue the next layer onto it. It doesn't matter where around the circle it goes, because we can always turn it at this stage. Just make sure it's lining up. And then the next layer will go to create that sunset effect. And if you're creating your own design, you just want to start high and go low. So you're starting with the highest buildings at the back, going down to the lowest at the front. I printed this onto 175 gsm paper to give it a little bit of weight, but to make sure it wasn't too hard to cut out. And that's it. The logo is finished, and the shadows create a really nice effect on this, and that's ready to stick onto the cover of the book. Bring in the book. I usually do this by eye. You could have it in the center, you could have it higher up. You can put it wherever you like. Before you do, make sure that you're sticking it on the front of your book, and we stuck it on the back. It's always worth checking that, and then I'm just going to lean over to make sure there's

equal space either side, and that it's straight so that this line is lining up with this line, and that's done. That's your book finished. It's really nice to create something like this to finish your book, but it is an optional extra. You don't need to have something on your cover if you don't want to. Another optional extra that's quite a fun one to add is adding light filters. We've been using the phone lights all the way through. And the phone light is a very white, almost blue light, very cold light. And so what we can do is use filters to get different effects. And to do that, I've created these little filters that are just large enough to sit over the light on your phone. And these were created really simply using sweet wrappers. They come in lots of great colors. So if you wanted to create an early morning effect, you might want a slightly colder light, and then as you're going through the day, you want to warm it up, and then maybe you've got kind of a purple or a red sunset. So you can use different filters to create the different effects. And these are super easy to make. You can even just use the wrappers as they are. That works absolutely fine. But if you want to create something that's a little bit more permanent and easy to hold, what you can do is create these kind of donut shapes any size, as long as the interior hole is not bigger than the wrapper. You can make them any size you like. And then I just do them very roughly, and look at how big my wrapper is over the donut and how much I need to cut off. Using the knife, just take the excess off. Doesn't need to be a perfect circle. That is still a little bit big. Take a bit more off. It's always worth doing too little first. You can always take off more, but you can't stick it back on. So there we go. That one works really well. And we're adding the glue to the paper because we don't want glue getting on bits of the filter that you can see, sticking the glue over, and I'm just making sure it's pulled tight and as flat as possible. You can make these as flat as they can get, if you want, by sort of pre-squashing them under some books. But even if not, they do go pretty flat once you start pulling them out. And then we're going to add the other side, make sure they're lined up, and then you've got a filter, so you can put your filter over your light and get a really nice effect. So a lot of the landmarks in London do have colored lights now. So this is actually quite a good representation. It really changes the mood of the pages when you change the colors. We're very attuned to the colors of light, sort of a cold winter's day or a warm, sunny day. Like before, I'm just moving. I can move the phone around to get different effects. You can even change the light instantly by just sliding the filter in and out. If you weren't using a phone, if you're using some other kind of LED light, and you have more than one in this one, you could place them in different areas with different colors to give different effects. And so it's not a requirement, but it's just a fun extra. If you want to make your book a little bit more interactive, I decided to keep my book really white and minimal, so everything's white, and I wanted to use the textures to create my design. But actually, what that means is you can use this as a completely blank canvas. You can draw your own designs on. You can make each piece out of different color paper, you can create lots of different effects. If you want to add drawings or paintings to different pieces, I'd always do that before you start cutting and gluing. If you're using a paint that's water-based, you just need to be really careful that you're not ending up wrinkling your paper because too much and it can be hard to work with. For a pop-up, you want everything to be nice and flat and smooth as possible, but it's really a starting point. Put your own design on it and put your own stamp on it. Now you've seen the whole process to create your own three-page pop-up book, but we're not quite at the end of the course. There's one more lesson, the final project. Please join me there, where I'll go over everything we've learned, and I'll offer you some final tips to help you in your pop-up book journey.