### **Tools**



You need a sharp knife to cut the parts. I recommend using a knife where you replace dull blades and where you can cover the blad if not in use.

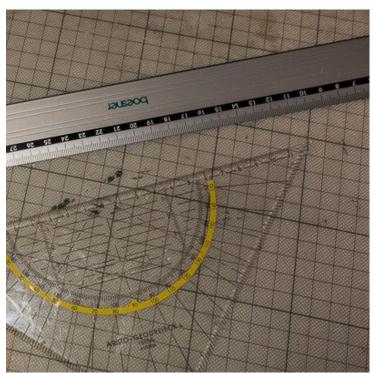
Always use the knife with caution. Cut slowly and with mindfulness. If you are a minor, get help and supervision from your parents or a grown up. Using the knife (or any other cutting tool) in the wrong way can result in serious injuries!

You will also need a cutting mat so you will not damage the table you are working on.





To glue I use any glue that works with paper. For small parts I use glue that has a small nozzle for better placement of the glue.



To get a straight line cut I use rulers. A metal ruler will not get damaged as the plastic one might. But with the transparent plastic you can see through and better align.

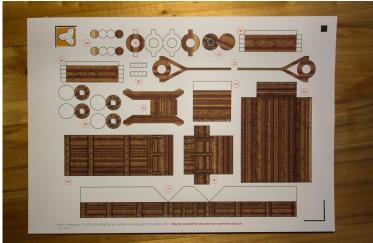
A ruler with non-slipping rubber on the back can help.



For edging – the process of covering up any unwanted white areas - I use felt pen or permanent marker in the color of choice. Black would be a good color to start. If you want to blend with the texture used on a part you can use different colors. Brown with wood texture. Green with greass etc.



# **Printing**



I recommend printing on "heavier" paper resulting in sturdy models.

Standard office paper is around 80g/cm2 or 24lbs.

I use 160gsm or 90lbs paper. If you model/part supports inside and outside the combination will be stronger than a single 320gsm or over 260lbs sheet due to the glue layer.

If the model/part is just one sided (just outside walls for example) I sometimes use 250-300gsm or 260lbs paper.



If a lot of ink is used on a print the paper can become "wet" and warp a little.

To straigthen it out again, I recommend putting the page between two sheets of paper or cardboard and put a couple of books for weight on top.

Let it dry for a while. This way all the warps are ironed out and the final page is straight and dry.

## **Scoring**

Scoring is the process required to make the paper fold where it should.

You can either use the cutting knife and very lightly press over the scoring line. You don't want to cut through but just slit the paper a little. Or you use a blunt thin object (for example a ballpoint pen without ink) and "draw" along the cut line.

I tend to keep my blunt blades and use them for scoring.

## **Cutting**

For cutting make sure you are using a cutting mat to prevent any damge to the table you are cutting on.

When you cut a straight line use a ruler to assist in getting the cut line straight.

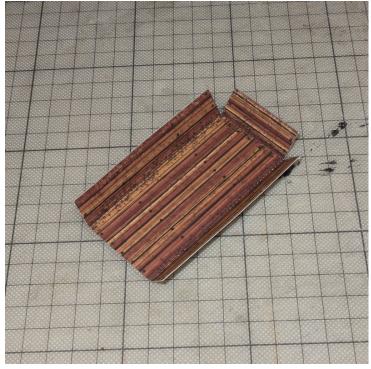
For curved lines either use scissors or special shaped rulers (such as french rulers) to help cut the line.

If you are using an automated cutter, please refer to the instructions that came with it.

Make sure you press the ruler firmly and cut with attention and mindfulness to prevent injuries.

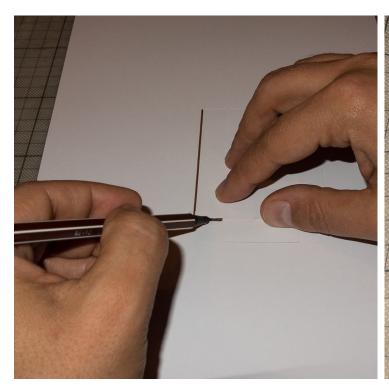
If you are unsure about the cutting process, get help from experienced friends – again to prevent injuries.

### **Edging**



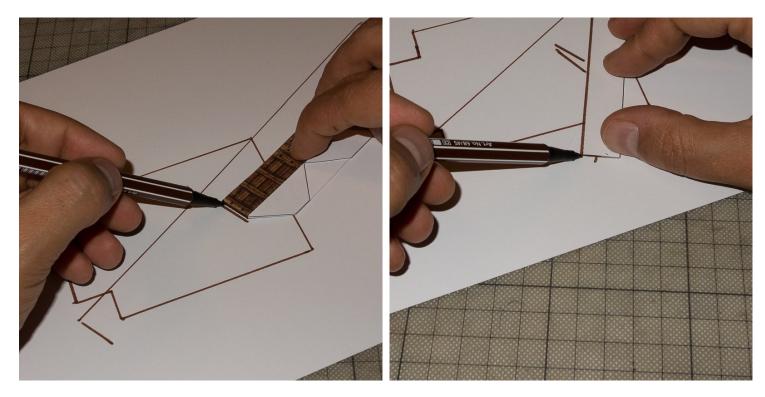
When you cut a part you will have the thin cut line still being white. When you build a model like that, you will end up with lots of thin white lines on your colored model.

To counter this I recommend the process of edging, where you manualy color unwanted white areas of the model with a felt pen or marker.

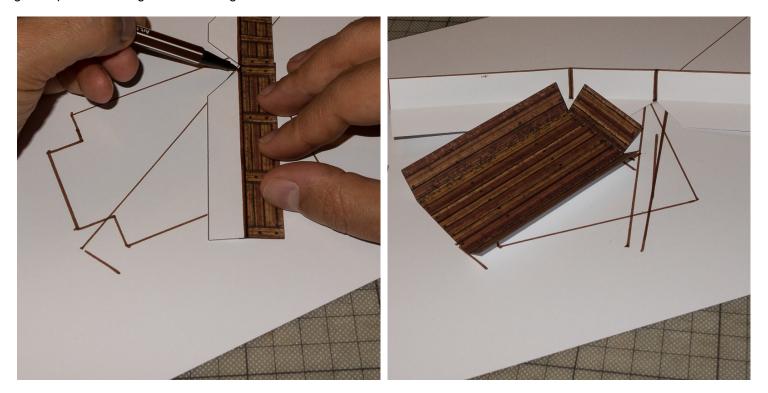




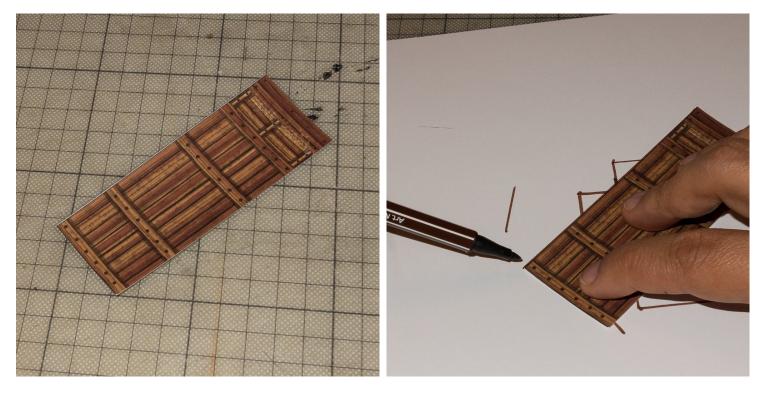
Turn over the part to avoid drawing on the texture and draw along the edges coloring both the edge and a little along on the white surface. Now you don't see any white lines shining on the edge of the part.



Also edge folded corners when you have scored by sleightly cutting and therefore making a thin white become visible. For glue flaps it is also a good idea to edge the fold on the white side.



You might also want to color a little on the white of flaps to make sure there is no chance of white appearing along a glue connection. Also color any sections that might appear white when two sided parts are put together.



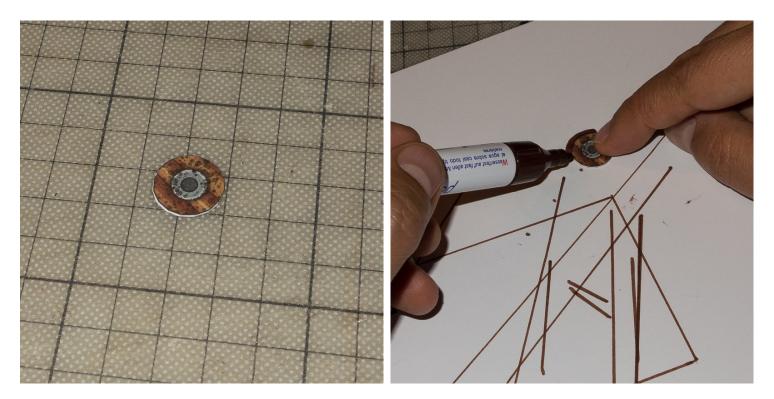
Another thing to look out for is when you cut a little outside of the cut line leaving a little white again. To color this I place the part with the textured side up. When I now draw carefully along the edge the white will be colored.



Colored top edge vs uncolored bottom white edge.

Finally check any place that could show white after assembly and color to avoid white breaking up the textured look of the model.





If you edge after glueing you might need to use a marker that can cover the glue when dried. Normal felt pens might not be able. I use permanent marker pens for that purpose.



Fully edged wheel



Full travel wagon top view. Compare unedged (left) and edged (right) version.



Full travel wagon underside view. Compare unedged (left) and edged (right) version.

### Glueing

When using glue make sure you do not put too much glue on the surface. If this happens I wipe it off the part with my finger and then smear the excess glue from my finger on a piece of paper.

If you have too much glue it will warp the paper resulting in uneven and unattractive surfaces of the model.





If possible and esp for double sided parts use the "book press" to make sure the parts glue and dry flat.

Be generous with the dry time. I let my double sided parts rest for at least 30 minutes or better over night. You feel the difference. The dried glue layer makes the part stronger than double the paper strength.

Finally – esp if you are a beginner – be patient. If you are not happy with your results, you become better with experience. Start with easier models and proceed to more advanced onces.

If you like, join a paper model community on the net to get advice from experienced modellers.