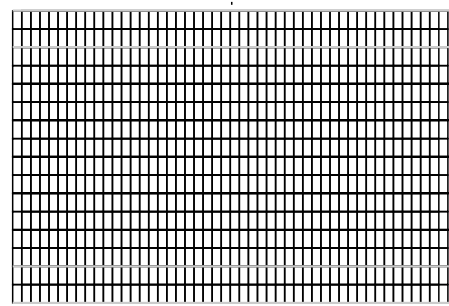


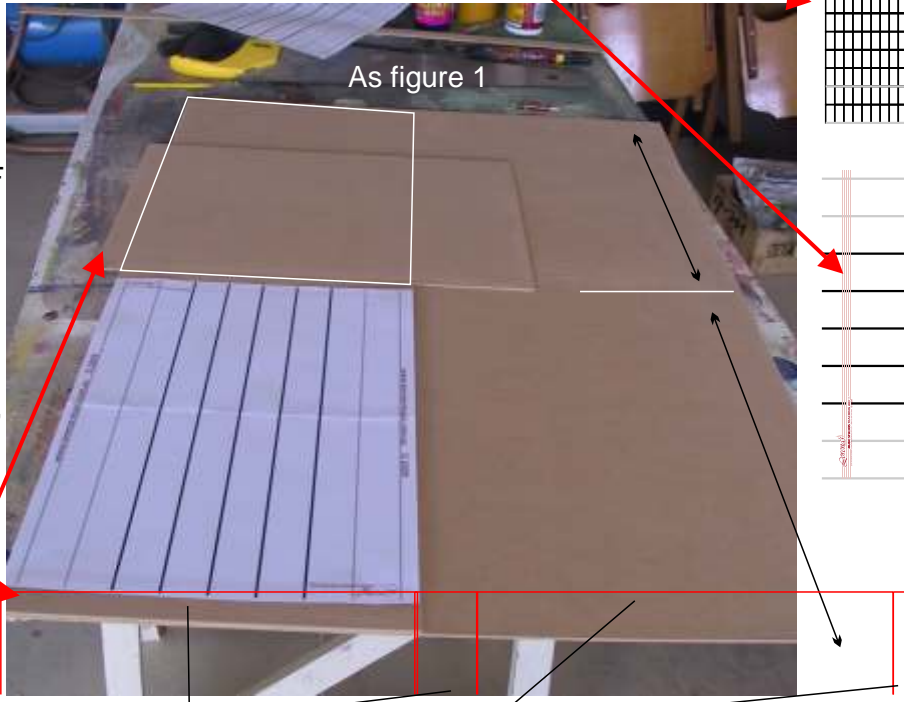
First download the plans of the advanced marble game. They are laid out to be printed on an A4 printer. Print out and join to make an A3 template.



Use the A3 staff sheet to obtain your width Which is 297mm wide. Make about 50mm longer. I just cut my width of a sheet of MDF and then cut in half, so it was cost effective.

As figure 1

To obtain the finished size of the teaching aid, Lay out your 2 pieces of MDF (which we will call staff pieces) end to side.



Width has to be 10mm + width 297mm + 50mm + width 297mm + 10mm  
The 50 mm in the centre can be changeable to obtain cost efficiency from your MDF board.

Next is to work out where you want your holes to be drilled for the marbles to go through. You can work out your own or use the marks I did. The main thing is not to have the holes too close and in lines up the staff. You do not want all the marbles to drop at once.

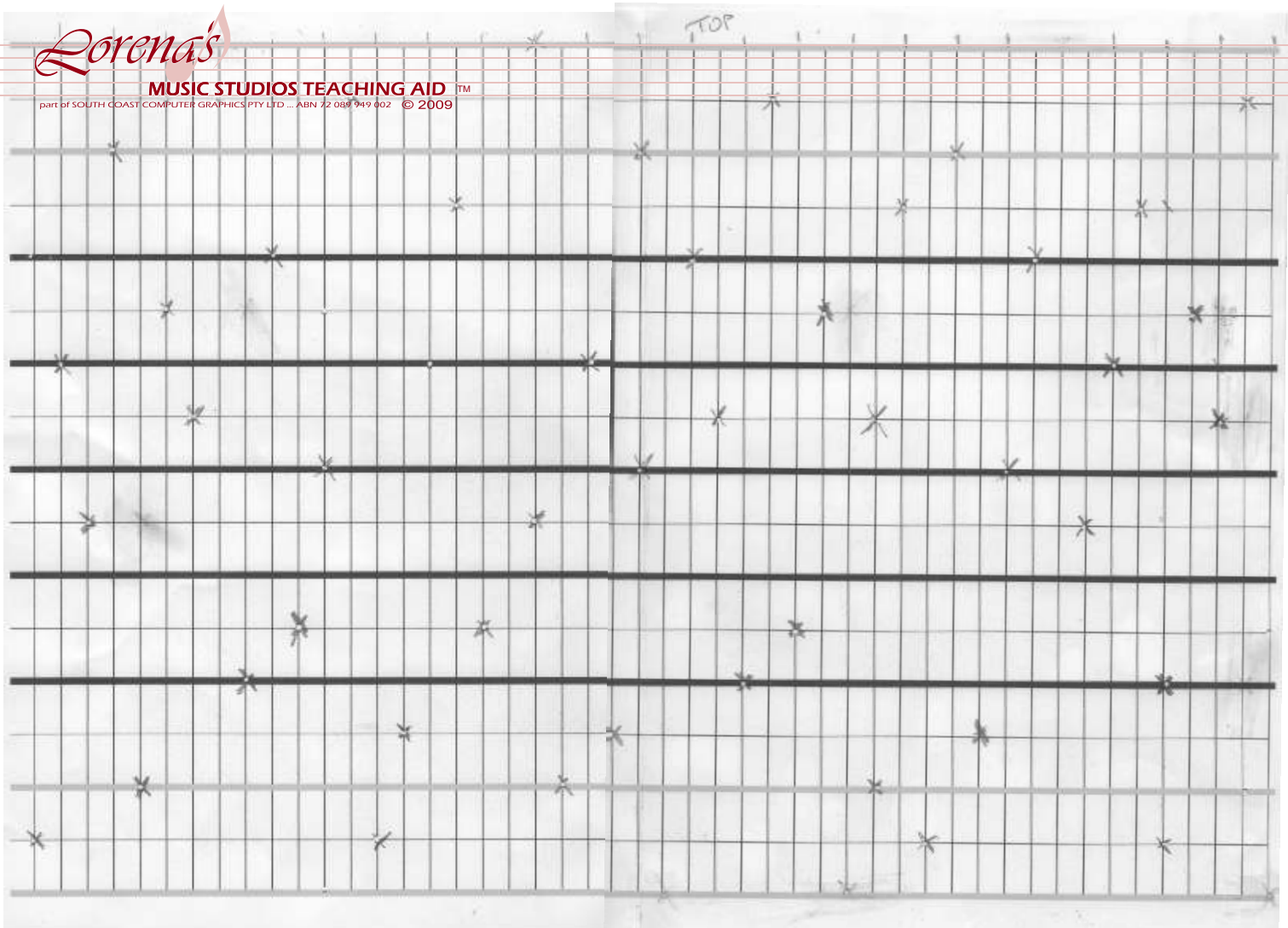
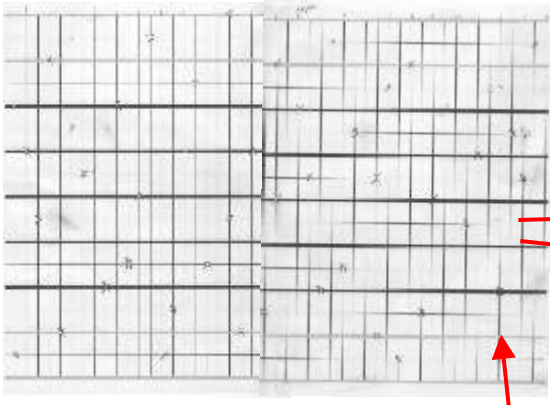


Figure 2 shows the back board and the 2 slides. There was extra length in my MFD board, it is not a bad idea to leave this if your sheet works out similar.



Place the sheet you have marked for your holes, onto the staff slide. Make sure it is in the centre and tape in place so it can not move. Pierce a hole through each mark and into the MDF. Be precise as this is your centre hole to be drilled out.

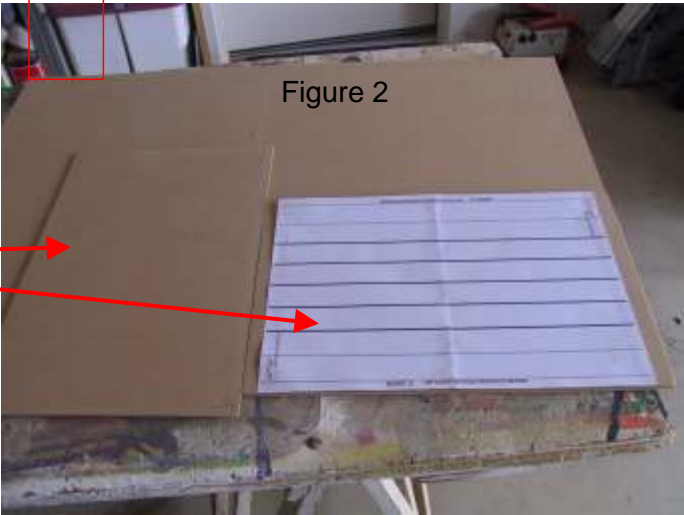


Figure 2

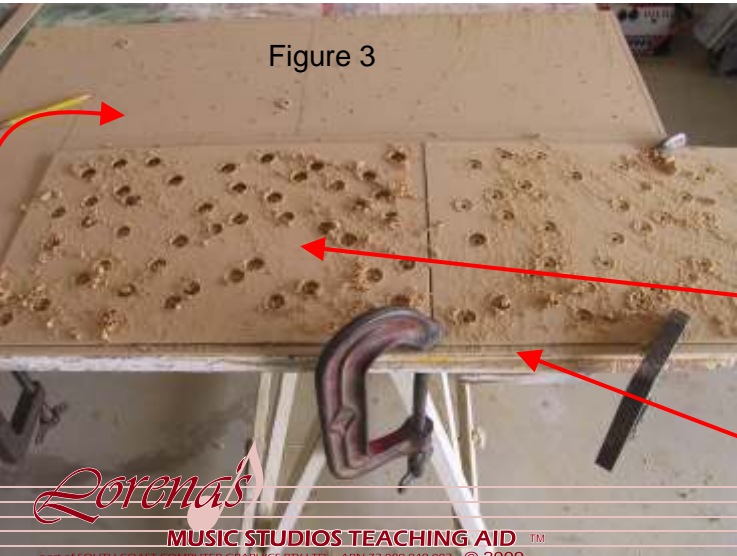
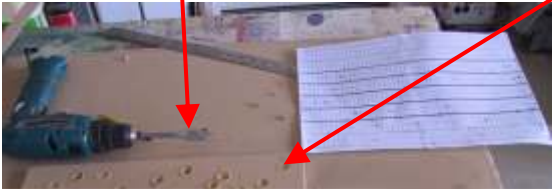


Figure 3

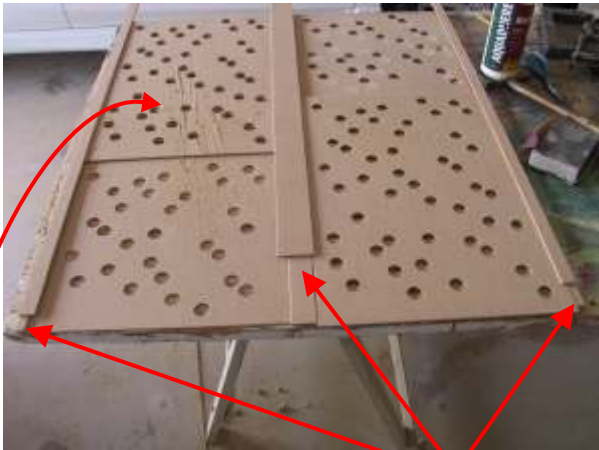
Clamp the 2 staff slides together and using a drill slightly larger than a marble, drill out the holes.



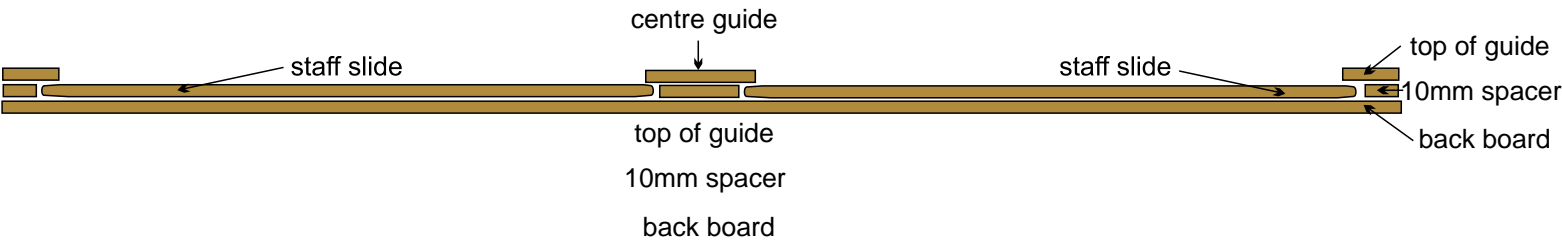
Mark the face piece as your template. Lay the 2 staff slides side by side on the back board as Figure 3.

Ensure you have them 10mm (as allowed) in from the edge.

If you have used a similar drill bit as I did, it will mark the centres without drilling out the holes completely. Continue until the 2 slides and back board are drilled out.



Next is to make and install the guides. Use your staff slides as a template between the guides

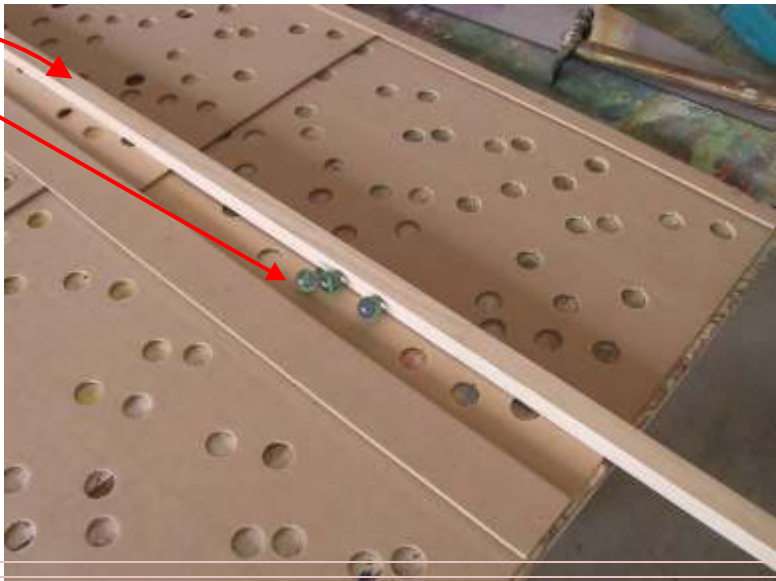


As you glue your guides into place, sprinkle a fine amount of sawdust over the glue. this will give a small gap that will help the staff slide move easily. Also sand the edge of the staff slide to make smooth movement.



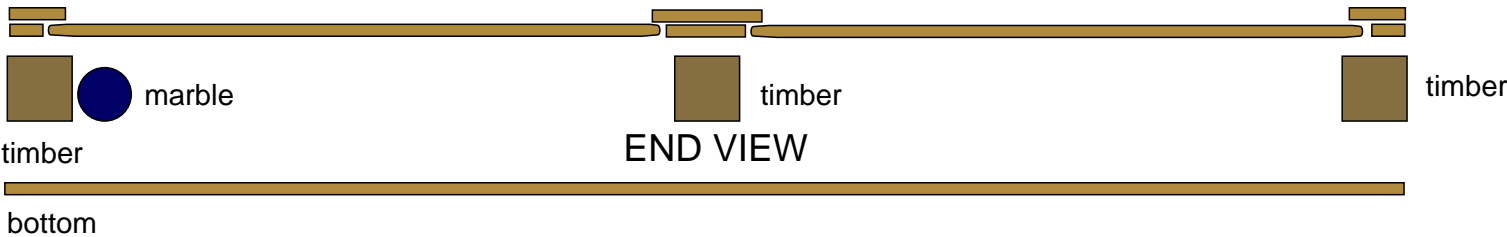
The next thing to do is to make something to catch the marbles.

Get some wood a little wider than the marbles



*Lorena's*

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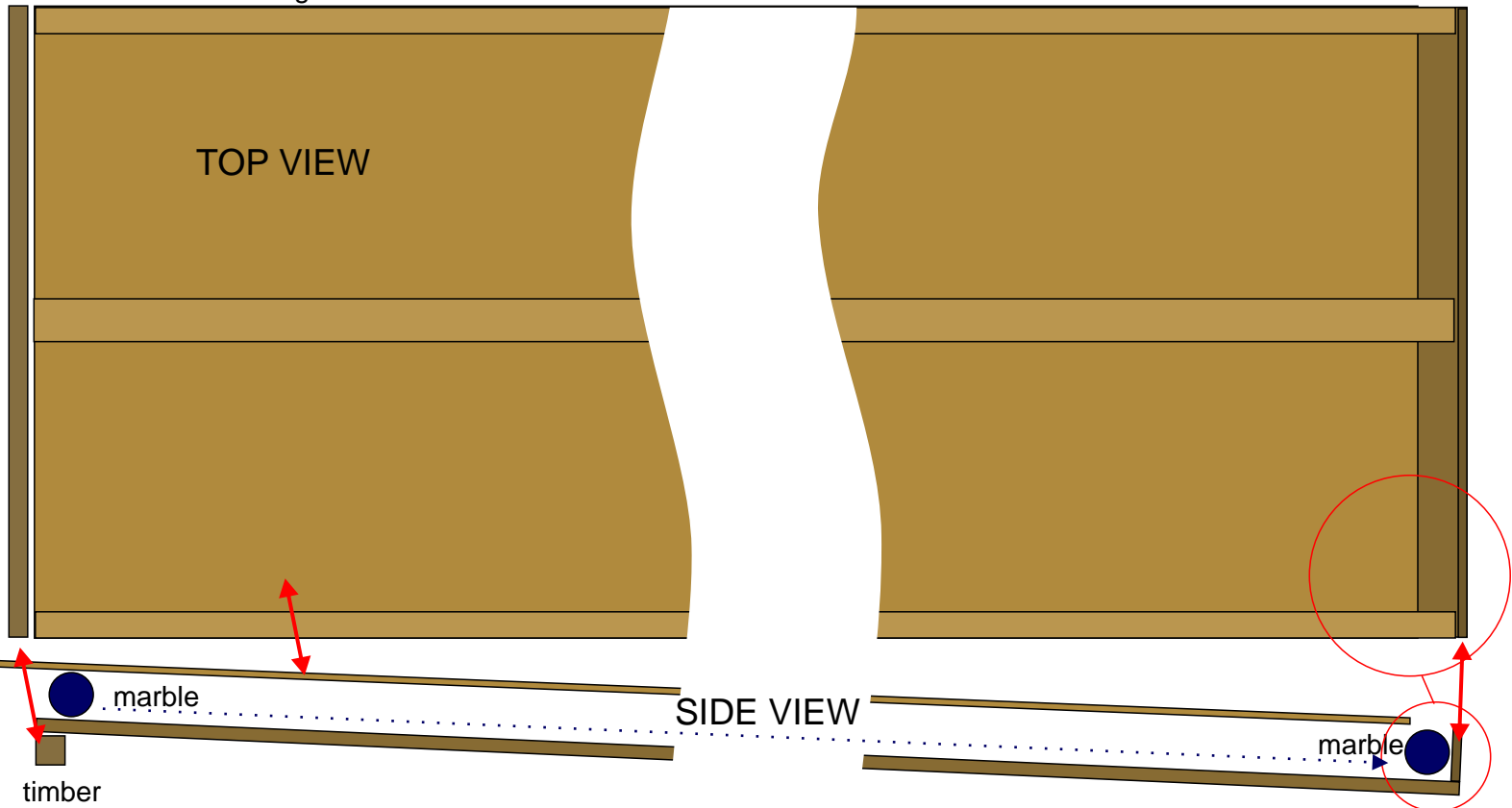


One piece of timber also is placed at one end to create a tilt so the marbles can roll into a "catch area" at the opposite end.

So when installing the bottom have 40mm extra that end.

TOP VIEW

SIDE VIEW







This picture shows the finished "base" and the channel to catch the marbles



I thought it would not matter what colour it was painted, as you can see a bright colour is distracting



Basic black, highlights the white staff slide



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However you decide to finish off your training aid Make sure your tracks are free of paint and glue. Run a file on its side up and down to clear the tracks.

One slide is for treble the other for bass. They should be interchangeable as the treble and bass clef are put on with hook and loop tape. That way you double up the combinations that the training aid has.

Laminate the treble and bass clef and put the hook and loop tape on.

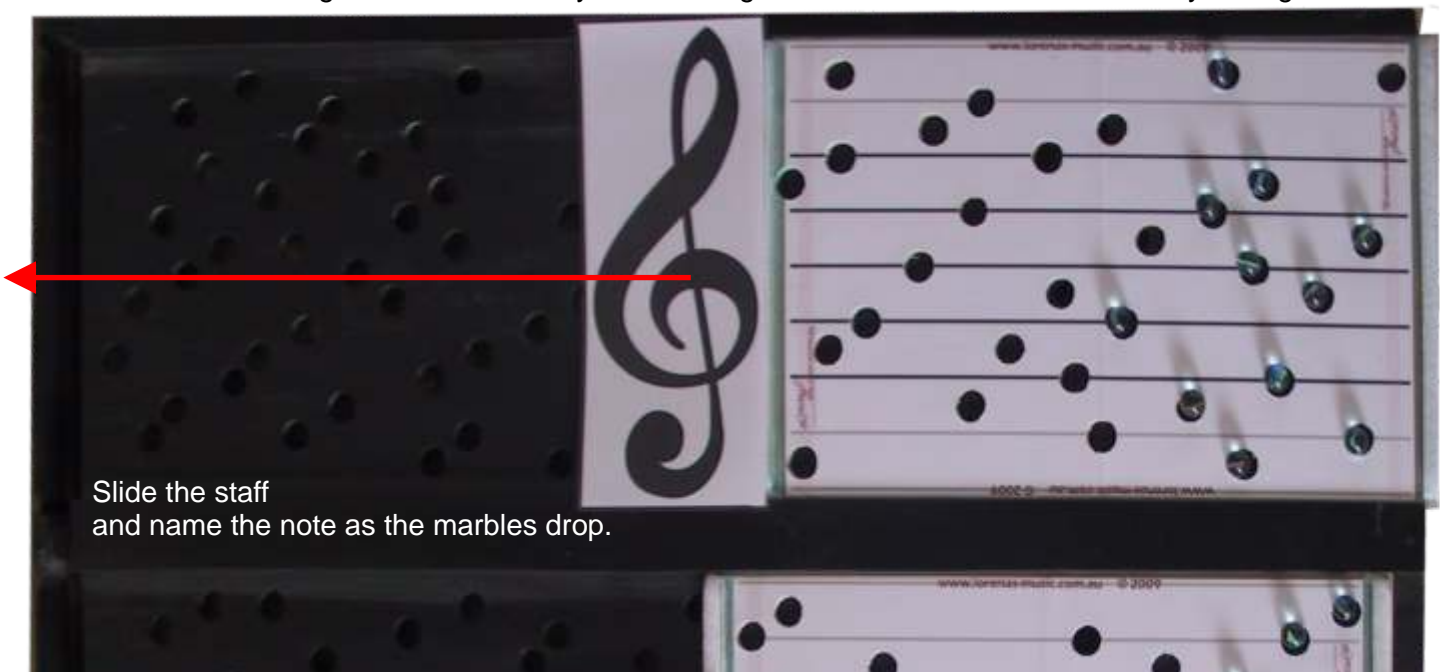


To finish the staff slides, laminate the staff and trim to size. With spray glue attach the laminate to the slide, Make sure the lines of the staff are over the right holes. Hold up to the light to check. Pick out 2 or 3 holes on each line and space. With a sharp knife cut out the holes you decided to use.



It is ready to use.

Place marbles in one hole of each line and space. Slide the staff slide either up or down as the marbles drop, the student must name the note. A person confident in music and can read music should be there to check. Unlike the basic marble game there is no key board and guides for the student to check they are right.



Slide the staff and name the note as the marbles drop.