

# Joined Up Thinking



**Illustrator Tutorial**  
**Greenbee.blog**

# Jigsaw pieces

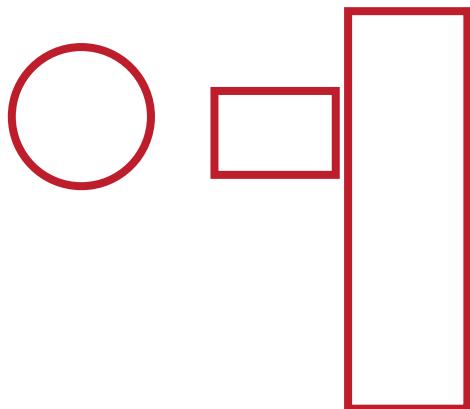
If you've ever seen jigsaw infographics and other jigsaw design elements and wondered how to make them in Illustrator, this tutorial is for you.

I'm going to show you how to make a line of jigsaw pieces that can be broken up to use as individual bits.

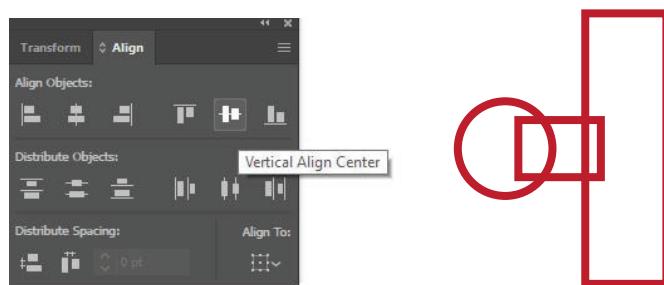
Am also treating you to a nifty jigsaw effect pencil tutorial and how to create a rainbow brush for the pencil scribble at the end.

Let's start with the jigsaw pieces.

1. Create a circle, a small rectangle and a longer rectangle:



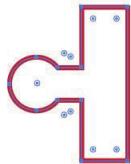
2. Arrange them as below then align them by their vertical centres:



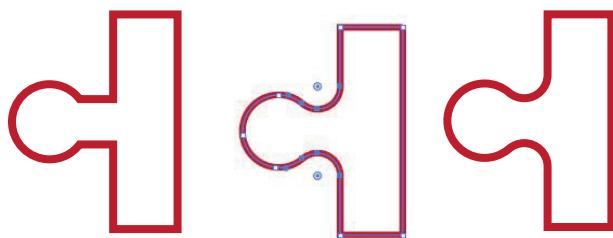
3. Select the three shapes and unite them by either selecting Unite from Pathfinder or use the Shapebuilder Tool (Shift + M) by drawing through the shapes with it.



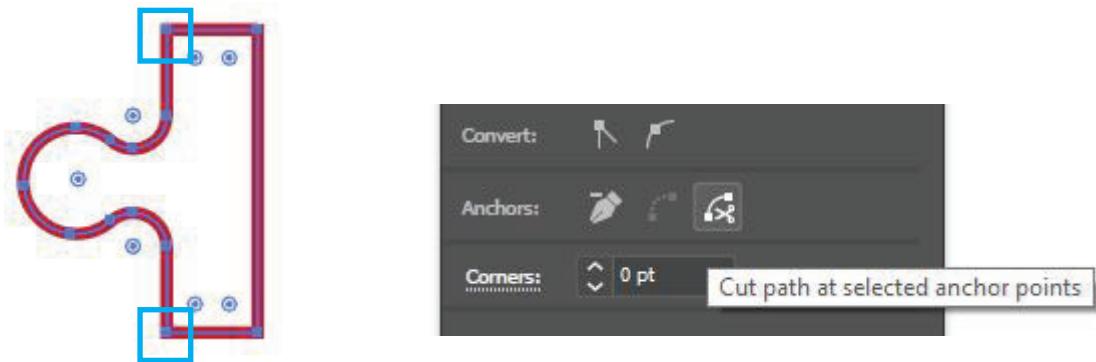
The shape is still a bit clunky and we need to smooth the neck:



4. Select the shape with the Direct Selection Tool (A) to display the rounding points. Swipe-select the four points that join the circle with the small rectangle, then click on one of them and drag it away from the shape to make a smooth transition between the 'neck' and the 'head' :



5. Select the Direct Selection Tool (A) and click on the shape to display the anchor points then click on one of the anchor points (see blue square below) then select Cut Path at Selected Anchor Points under the Properties palette:



6. Select the end of the long rectangle bit of the shape and Delete to leave the shape below:



7. Select the shape and go to Object>Transform>Reflect >Vertical>Copy. Note: we'll need the original shape a bit later on.

8. Align the shapes as below making sure they slightly overlap then Group them (Object>Group +G)

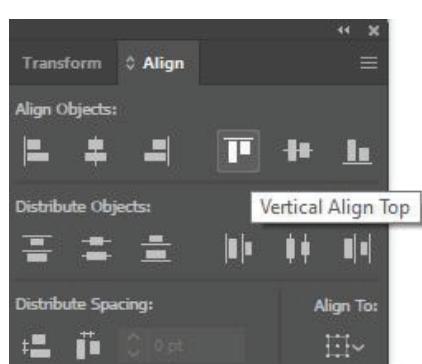
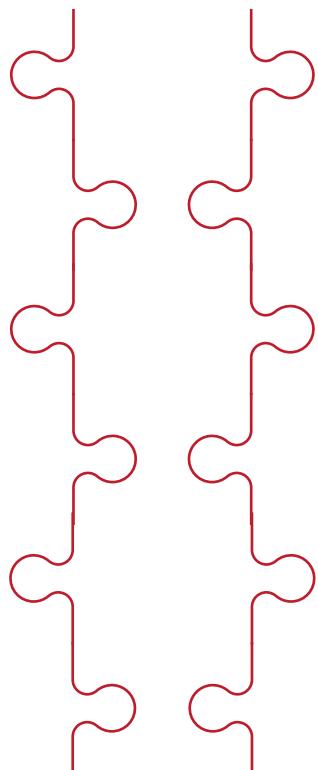


9. Select the pair of shapes, hold down the Alt key and drag a duplicate down then align it with the first pair. Repeat this action until you have a line of shapes.

10. Select the shapes and go to Object>Compound Path>Make.

11. Select the shapes and go to Object>Transform>Reflect>Vertical>Copy

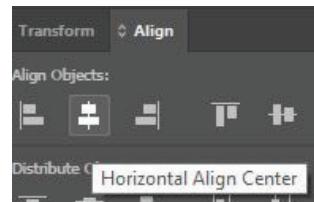
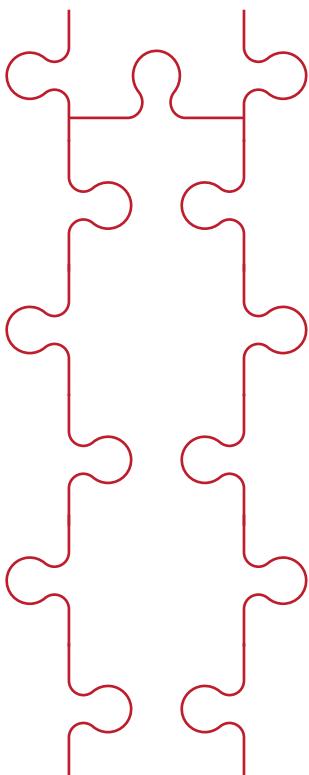
12. Select them both and align their tops using the Align>Vertical Align Top icon:



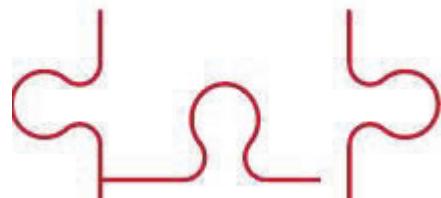
13. Select the original shape, go to Object>Transform>Rotate and enter 90° in the angle field:



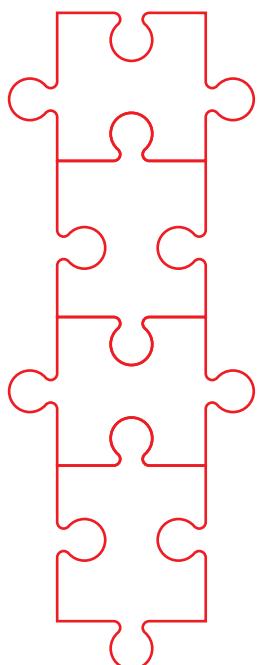
14. Select the pairs of vertical shapes then place the horizontals to create the pieces. If your horizontal is too short to make good sized pieces, group the verticals then select the horizontal shape then select Align>Horizontal>Center:



Select the horizontal middle piece with the Direct Selection Tool and click on the end point, then use the Right or Left (as appropriate) key on your keyboard to tap the end across to meet the vertical. Zoom in to make sure the ends meet with no gaps either side.

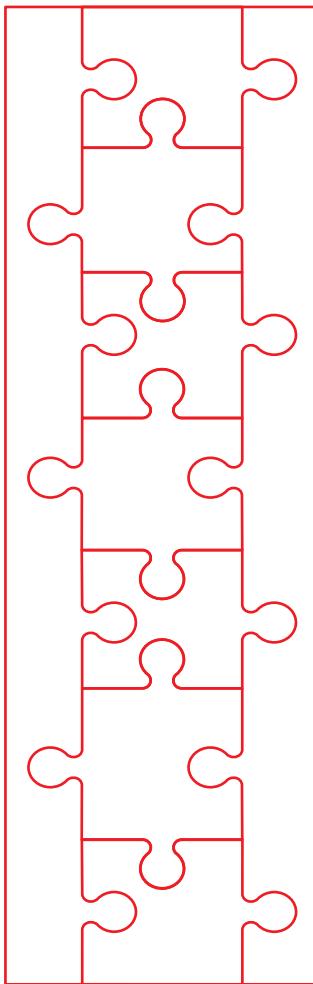


15. Select the horizontal shape, go to Object>Transform>Reflect>Horizontal>Copy: then place in the column of jigsaw shapes to create the horizontals down the column as below:

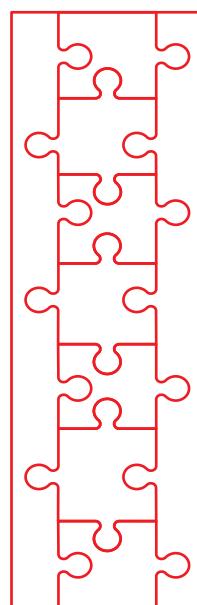
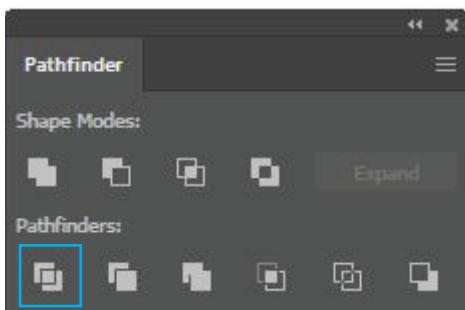


16. Select the shapes, go to Object>Compound Path>Make.

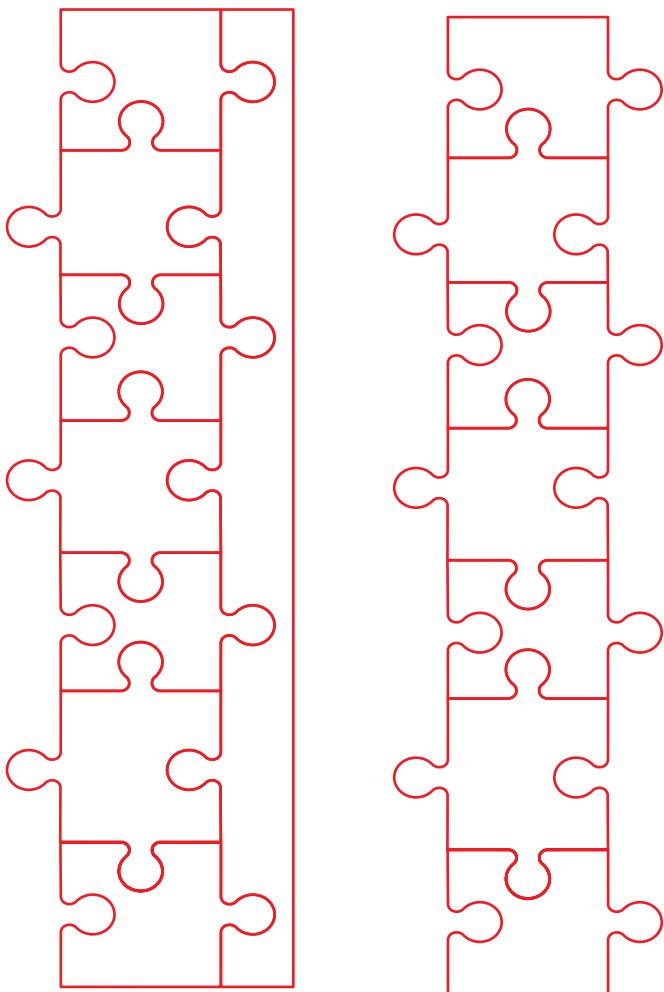
17. Draw a rectangle around the column so that the top and bottom of the rectangle meet the top and bottom ends of the column:



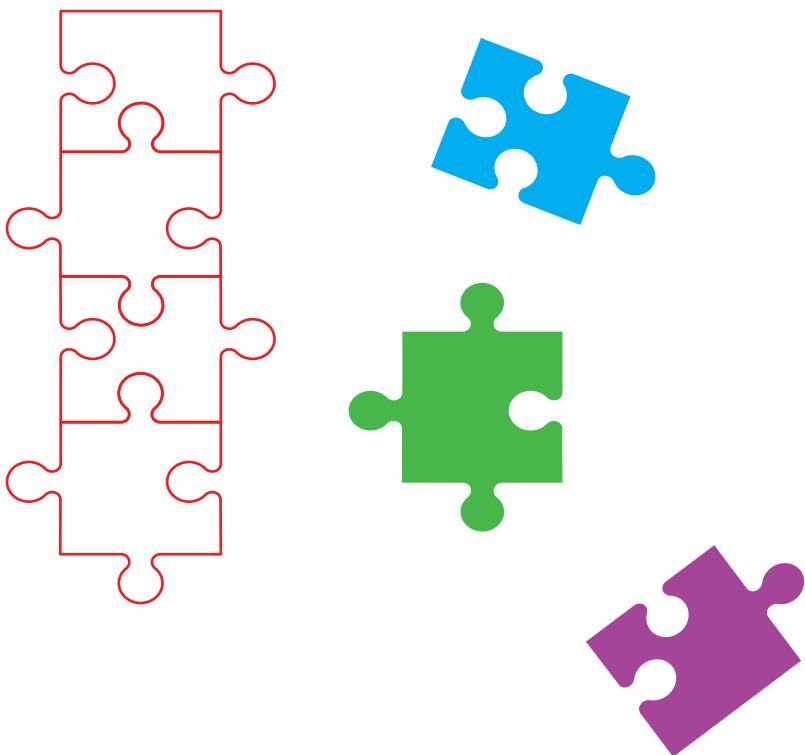
18. Select the rectangle and the column, then go to Pathfinder>Divide:



19. Then Ungroup: Object>Ungroup (Ctrl+Shift+G) then delete the two outer sides from the column:

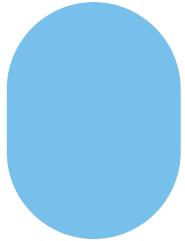


The pieces can be taken apart or left as a series.

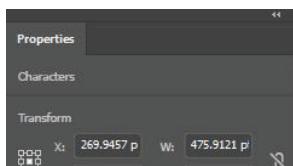


# Pencil Tutorial

1. Select the Rounded Rectangle Tool and draw out a rounded oblong - use the up or down arrow keys to smooth the end as you drag out the shape:



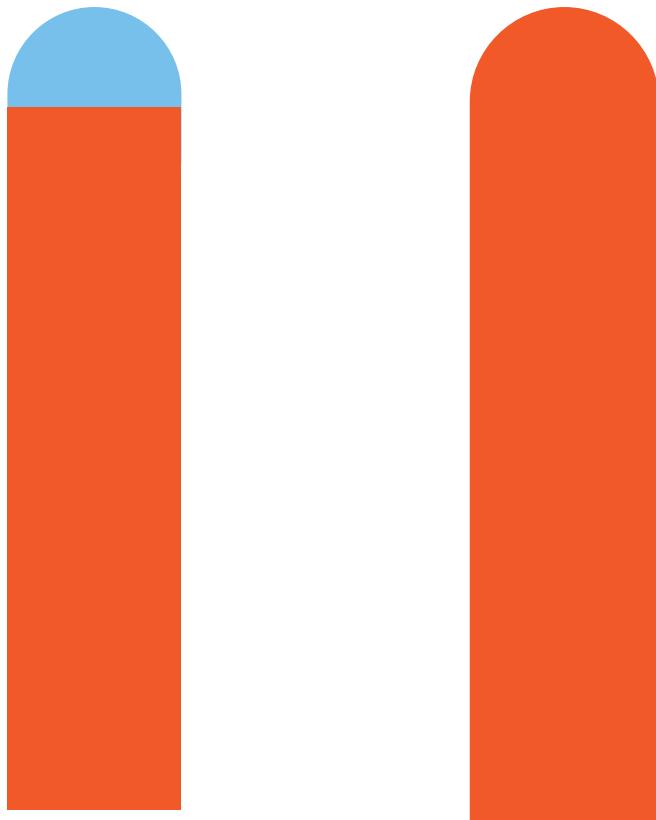
2. Make a copy of the width from the Properties > Transform > W field. Click in the field and copy the width value.



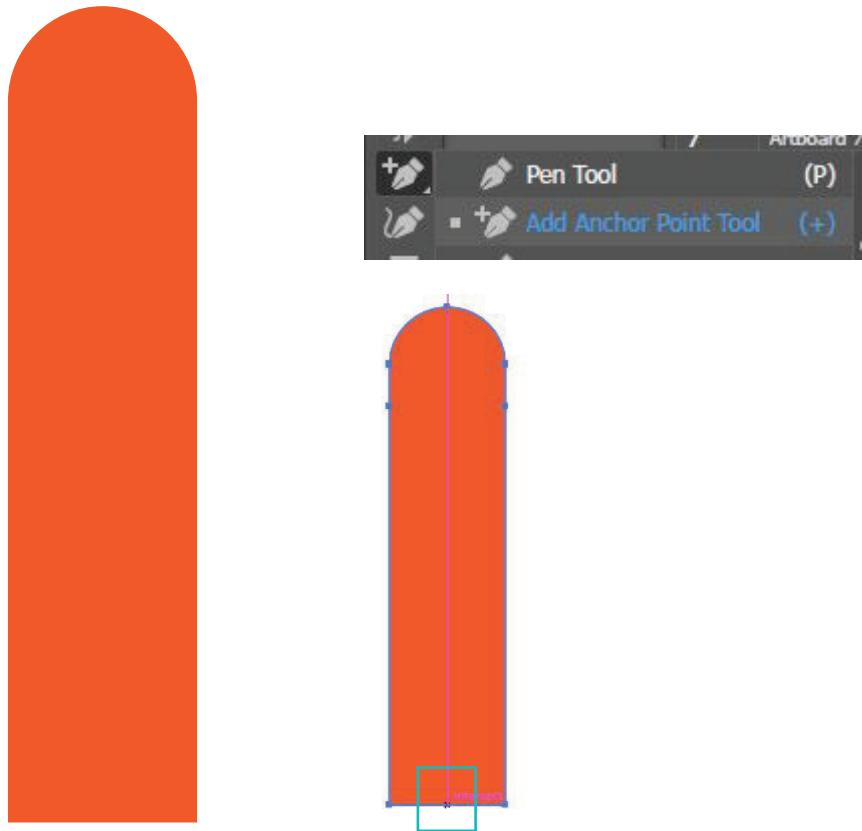
3. Create a long rectangle then paste in the width value taken from the oblong.



4. Align them then overlap them so that only the top of the oblong extends beyond the rectangle then go to Pathfinder>Unite or use the Shapebuilder Tool to create a single shape:



5. Select the united shape then go to the Add Anchor Point Tool and create a new anchor point in the middle of the bottom.



6. Select the new anchor point with the Direct Selection Tool (A) and drag it down, or use the Down Arrow key, to move it down to form a long point.

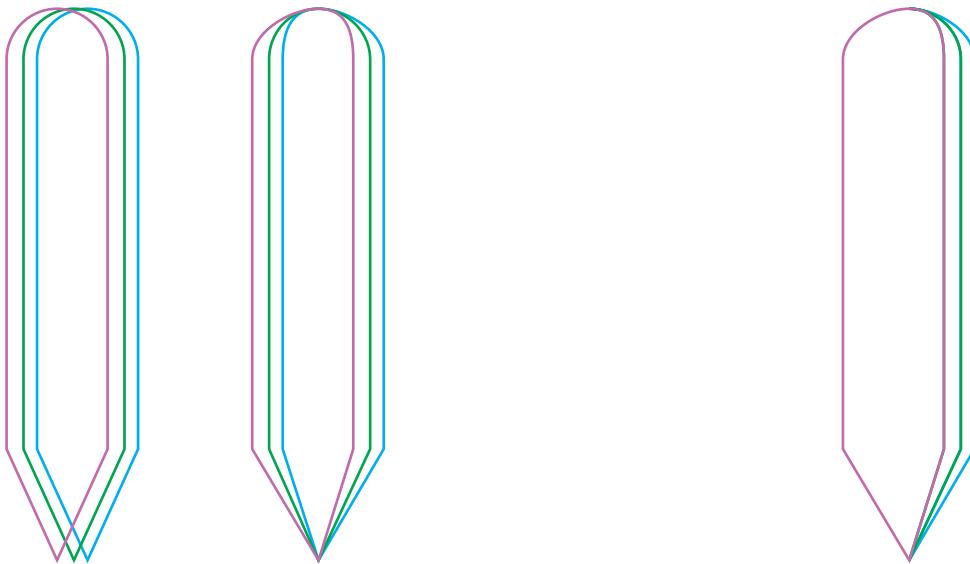


7. Hold down the Alt key, select the shape and drag it across to create a duplicate. Repeat the action so that you have three of the shapes.



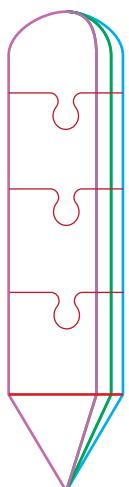
8. Take one of the shapes and overlap it with one of the others as below (I've changed the colour just to make it easier to see what I'm doing). Do this three times. We'll need the third copy in a short while.

9. Make sure they are aligned, either top or bottom, then select the top and bottom mid-points and centre them vertically. Select the paths and go to Pathfinder>Divide. Ungroup (Ctrl+-Shift+G) them and select the 3 pieces on the right, select Pathfinder> Unite.



10. Get the shape we created back in step 15 from the jigsaw pieces tutorial and place down the length of the pencil, creating repeats as necessary. Also, draw a straight line across the bottom where the pencil starts to taper.

Make sure they meet the sides; zoom in and use the Direct Selection Tool on the end anchor points to extend the width if they need to be wider.



11. Select the jigsaw shapes and set their stroke to white and increase the stroke size so they'll be clearly visible when we add colour to the pencil.

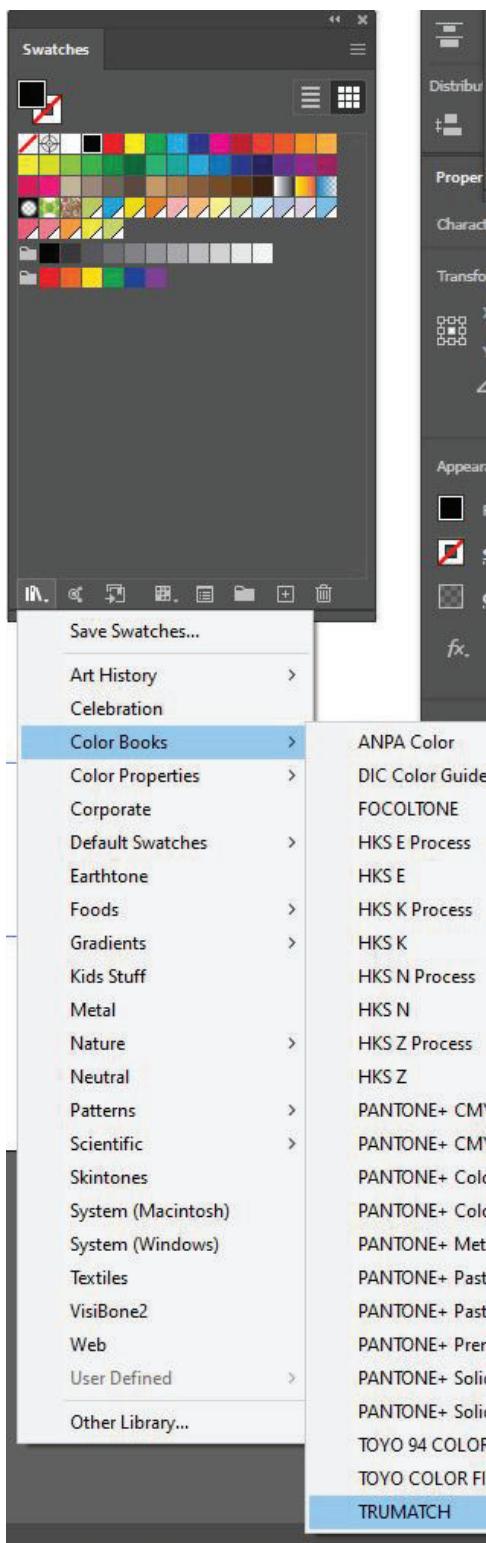
Set the straight line above the cone and the pencil shape to None. I've left mine coloured for now so you can see what's going on!



12. Swipe-Select the whole group of shapes and go to Object>Live Paint>Make



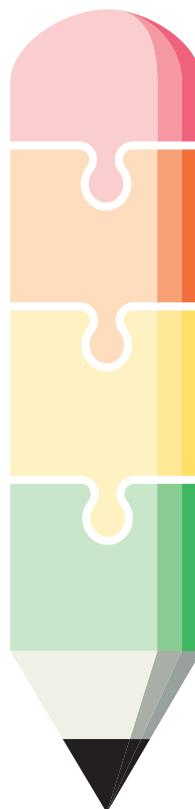
13. Get your Swatches palette and select one of the colour swatch options that gives lots of colour shades. You'll need a main colour, a slightly darker one then one darker still for the bevels on the pencil.



13. Get your Swatches palette and select one of the colour swatch options that gives lots of colour shades. You'll need a main colour, a slightly darker one then one darker still for the bevels on the pencil.

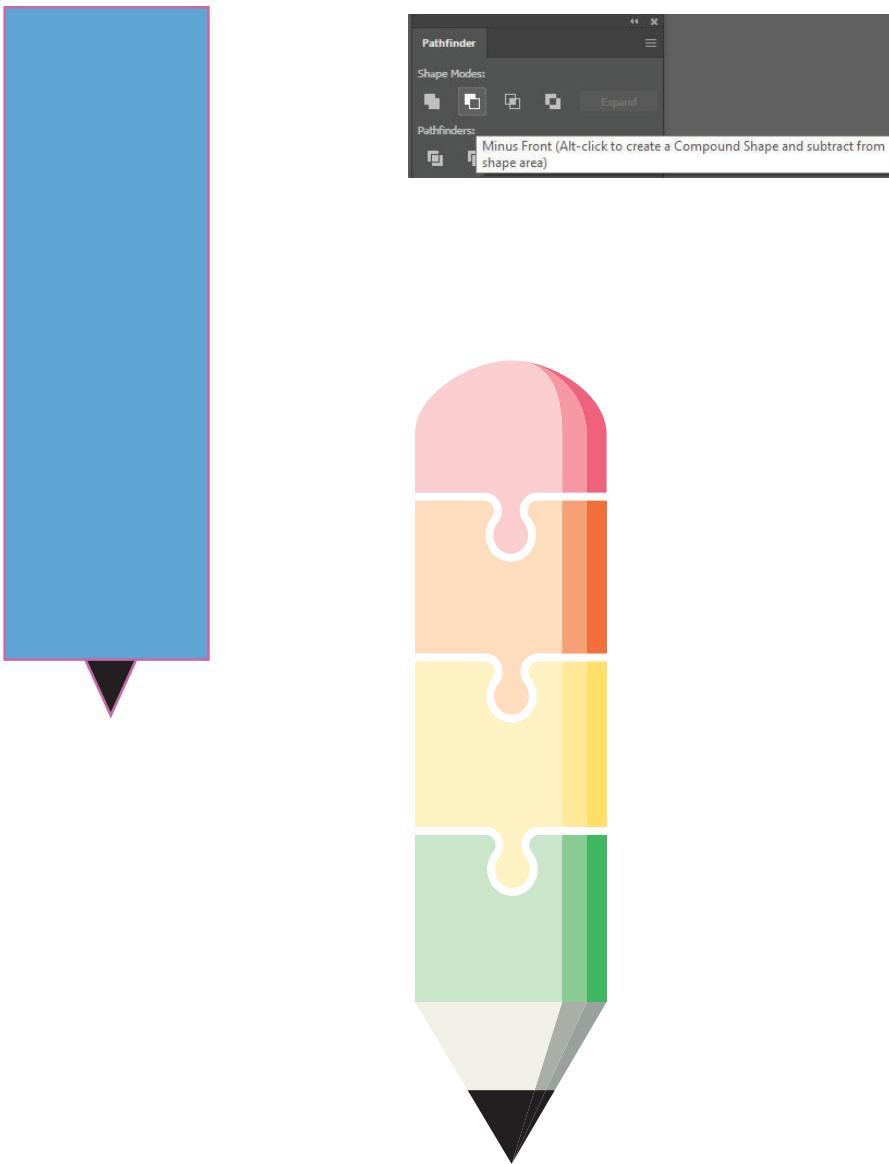
I've gone for Trumatch.

14. Select the Live Paint Bucket Tool (K) from the Tool menu. Hold down the Alt key and select a colour from your Swatch palette then click in one of the pencil segments to lay the colour down.



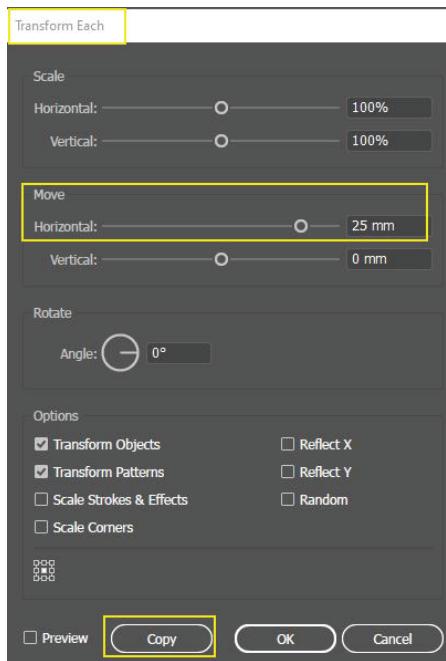
15. Finally, we need a point of pencil head. Get the spare shape set aside from step 8. Fill it with black then create a rectangle to cover the pencil leaving just the tip exposed.

Select both shapes then go to Pathfinder>Minus Front. This leaves you with a little black triangle to place on the end.



# Make a rainbow brush

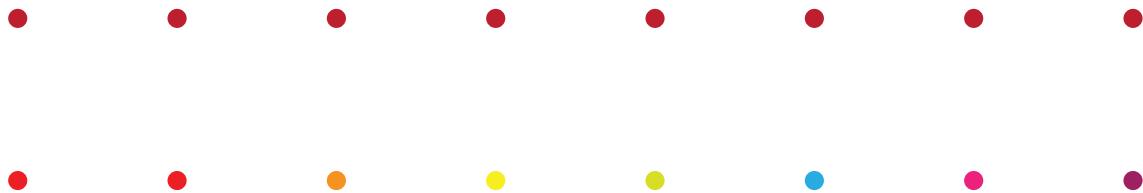
1. Create a solid colour-filled circle but with no stroke.



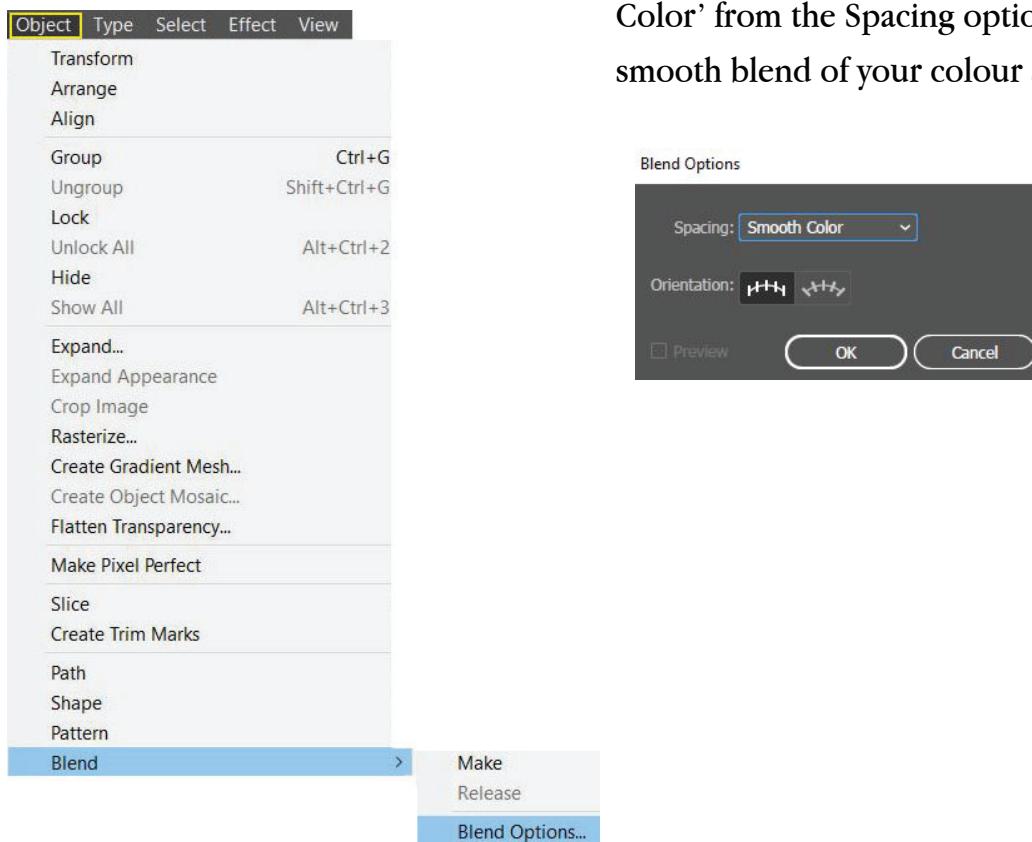
2. With it selected, go to Object>Transform Each (Alt+Ctrl+Shift+D). Enter 25mm in the Move>Horizontal field then select Copy.

3. Use Ctrl-D to duplicate the copy until you have as many copies as you want for your blend.

4. Change the colours of your circles (select each in turn then select a colour from the Swatch palette).

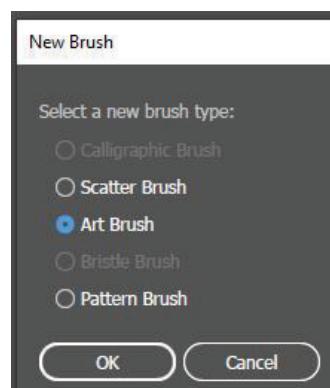


5. Select all the coloured circles then go to Object>Blend>Blend Options then 'Smooth Color' from the Spacing options to produce a smooth blend of your colour spots:

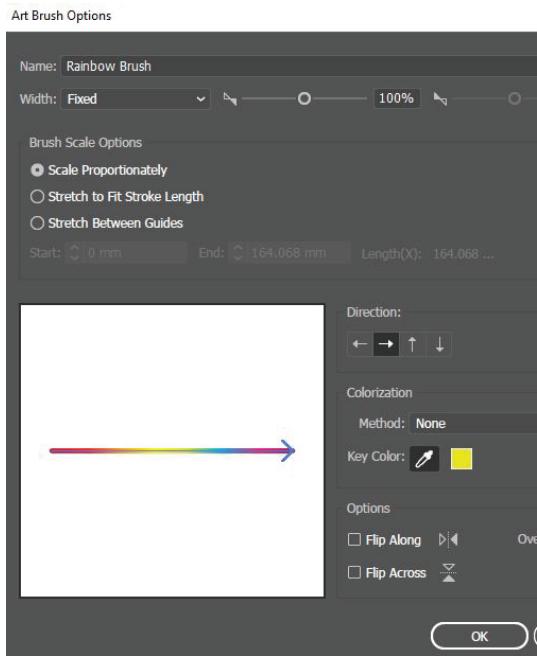


Turn the blend into an art brush

1. Drag the blend onto the Brushes palette.
2. Select Art Brush from the New Brush options.



3. Name your brush, select 'Scale Proportionally' then OK.



4. Select the Pencil Tool (N) and draw out a squiggly line to represent a line drawn by our pencil and then select the new rainbow brush to apply a rainbow to it (the stroke only).

If it's too big or small, double-click on the brush and change the width settings accordingly.



Place the squiggly line under your pencil.



And there you go. :) All done.