## Exploring anamorphosis: revealing hidden images with mirrors

## Photoshop instructions

## Making anamorphic images using Photoshop

Images can be converted to polar coordinates in Photoshop using the polar coordinates filter (Filter $\rightarrow$ Distort $\rightarrow$ Polar Coordinates), but this creates full-circle images and the parameters can't be adjusted, so many images will not work well with this method. It is much easier to control the parameters (centre point, arc curve, etc.) by using the 'warp' function, as described below. However, this gives a simple semi-circular arc, which works with the cylindrical mirror but isn't optimal.

1. Launch the Photoshop application and create a new file. Create a square canvas ( $600 \times$ 600 pixels should be sufficient) and set the 'Background Contents' to 'transparent'.

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2. Drag the image you want to use into the canvas.
3. Select Edit $\rightarrow$ Transform $\rightarrow$ Flip horizontal to maintain the orientation of the image once reflected on the mirror.
4. Select Edit $\rightarrow$ Transform $\rightarrow$ Scale, and then drag the handle to resize the image and make it fit into the canvas.

5. Select Edit $\rightarrow$ Transform $\rightarrow$ Warp.
6. Change the 'Warp' type to 'Arc' and the 'Bend' to $100 \%$.

7. Click on the layer name, or any of the tools at the side, to dismiss the warp function. Then select Edit $\rightarrow$ Transform $\rightarrow$ Scale, and drag the handle to resize the image to fit the canvas.
8. Click on the layer name, or any of the tools at the side, to dismiss the scale function, and then select File $\rightarrow$ Export to export the image as a PNG file.
