Animating a 'running' deer from the Dordogne, circa 12,000 BC

Use this worksheet to put together your own spinning disc!

Re-writing the (Pre-) history books:

A re-assessment of a decorated bone disc from the Dordogne area of South-Western France is making academics - and the rest of us - look at Prehistoric peoples in a fresh light.

Since its discovery in 1868 this decorated disc - otherwise known as a rondelle - was believed to have been just that, a decorated disc, though it has been suggested that it could have been used as a spindle whorl or pendant. New research, however, by archaeologist Marc Azéma and artist Florent Rivère suggests that it was used as a very early form of animation!

Previously, it was understood that the first spinning disc, or thaumatrope*, was invented by the astronomer John Hershel in 1825. But Azema and Rivere discovered that if they threaded string through the centre of their disc they could spin the rondelle and experience an image of the chamois deer apparently 'running', the images on both sides blending into each other because of the 'persistence of vision' we experience, one of the key principles of animation.

And neither is this deer an isolated example: Several other such decorated discs are known from northern Spain and the Pyrenees.

We hope you enjoy making and playing with this spinning disc as much as we did!

Actual size. Photo: Alain Roussot.

This bone disc, depicting a chamois or doe, is thought to be the most convincing example of a Prehistoric thaumatrope.

1

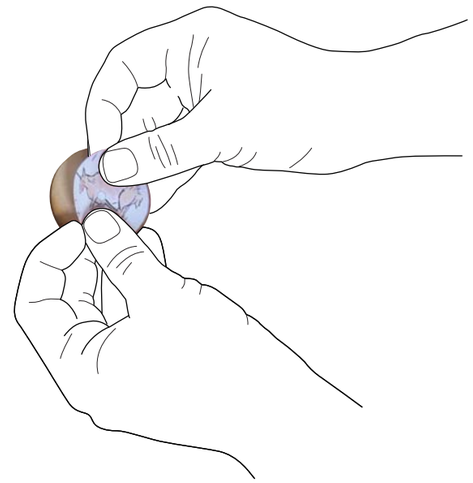
Use the above images to create your own spinning disc. (For added impact, these have been made slightly larger than the originals.) In addition you will need a matching circular template of thick card or foam-board to stick these images onto. In this instance a wooden disc with a central hole was used.

2

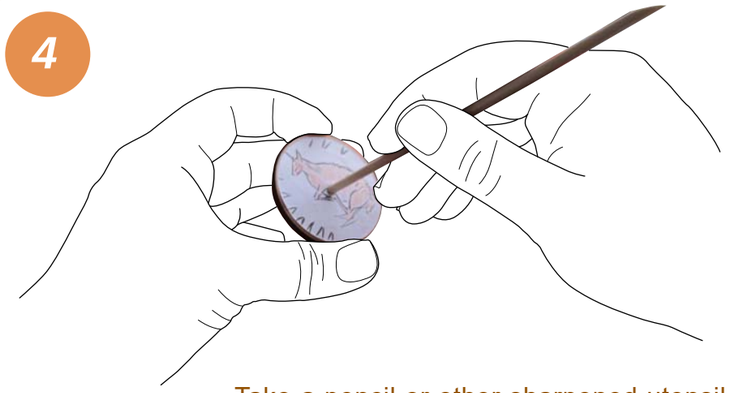
To give your disc more life feel free to colour in your deer: It is quite likely that these discs would originally have been coloured, and lost their pigment millenia ago.

3

Carefully cut out both sides of the disc, following the circular outline using a pair of scissors. Then, using adhesive,(eg: glue-stick), attach the images to either side of the wooden disc, making sure each side is carefully aligned so that their orientation is matching.

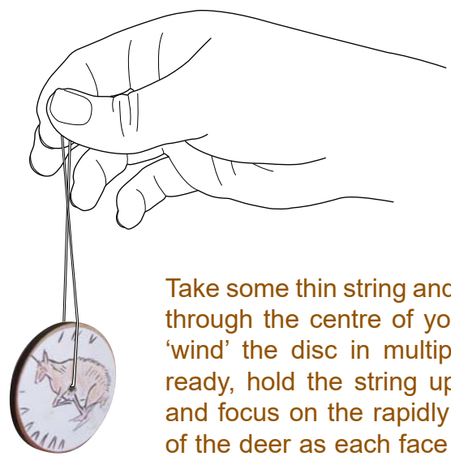


4



Take a pencil or other sharpened utensil and 'puncture' the central hole of each image to allow for string to be threaded through the centre of your wooden disc.

5



Take some thin string and, having threaded it through the centre of your disc, proceed to 'wind' the disc in multiple rotations. When ready, hold the string up, release the disc, and focus on the rapidly alternating images of the deer as each face of the disc spins in quick succession.

*literally "miracle wheel," from the Greek thauma, "prodigy," and tropion, "turn".

Worksheet produced by Thomas Small: www.smallfindsdesign.co.uk