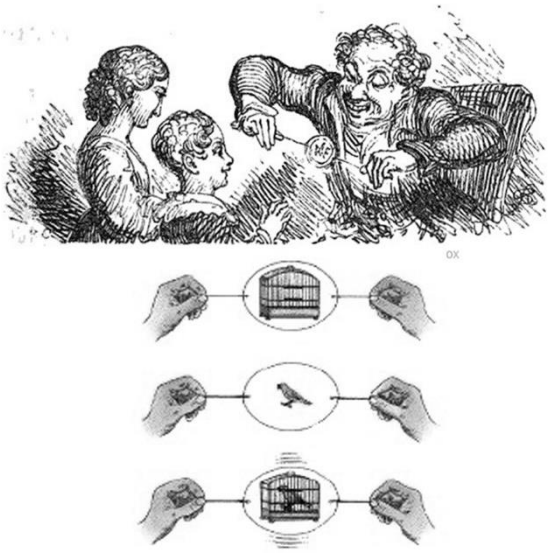
DIMBOLA
MUSEUM & GALLERIES

Thaumatrope
'The Wonder Turner'



A thaumatrope is an optical toy popular in the 1800's.

It is a disk with two pictures on either side, when spun it appears that the two pictures combine together. This is due to ***'persistence of vision'*** where your retina keeps responding to an image for a short time (1/30 of a second)

The word '**Thaumatrope'** has Greek roots:

Thauma- '*magic'*
Trope- *'something that turns'*

Charles Babbage (1791-1871) mathmatican, tells a story in his diaries about going to a dinner party with **John Herschel** (1792-1871) astronomer and photographer. John asks the guests *"Is it possible to see two sides of a coin at once?"* Babbage thinks it is to look at it in a mirror, but Herschel betters this by spinning the coin.

The dinner party experiment led to another guest, Dr Fitton, a geologist, making possibly the first simple 'thaumatrope' which had a bird on one side and a cage on another. In 1825 John Paris printed a set of thaumatropes which he sold, setting off a new craze.

Thaumatropes are a very early example of animation, they can give an illusion of something moving.

1st set of Thaumatropes printed by John Paris 1825. Richard Balzer collection.

John Herschel was a friend of **Julia Margaret Cameron**, he showed her some of the first photographs that she ever saw. He was a great inspiration to her, supporting and informing her photographic work. Julia said he was *"a teacher and high priest, illustrious and revered as well as a beloved friend"*

John Herschel coined the term 'photography' and made important discoveries about how to 'fix' photographs so that they did not fade.

Sir John Herschel 1867
Photograph by JMC

Resource devised by Hannah Ray
IW Museums and Schools Programme

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Make a Thaumatrope

You will need:

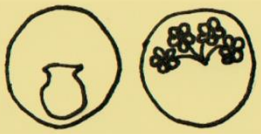
* Paper
* Thick card or cardboard
* Scissors
* String
* Pens and pencils
* Glue
* Hole punch

1. Draw out 2 circles the same size (8-10cm diameter). Draw on your design.

The main **variations that you could try-**

* Pictures which combine together in the middle *(like a fish and a fish bowl)*

* Pictures each on different sides that then combine together. *(like a bird with a worm & her chicks in a nest)*



* Pictures which are mainly the same but feature a movement *(i.e. a jumping person to standing)* ***Spin these slower for better effect.***

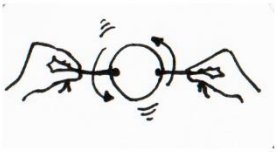
2. Cut the circles out and cut a piece of card the same size.

3. Use the glue, stick the front picture on the card, then flip over and stick the back picture on upside down.

4. Punch two holes into your disk- into the middle of each side.

5. Take two pieces of string, fold in half and push through each hole, open up the loop and push the other ends through to make a larks knot

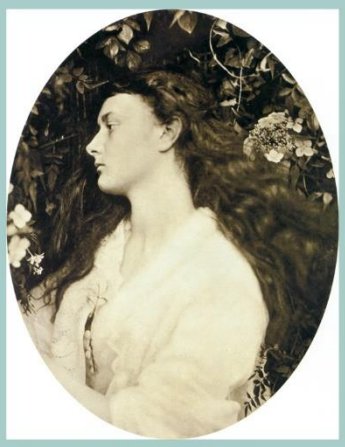
6. To use it hold both ends of the string and turn the disk around and around winding the string up. Let go and watch the magic!



Julia Margaret Cameron took photos of **Alice Liddell,** they met whilst Alice was on holiday visiting Freshwater.

Alice Liddell was a friend of Lewis Carroll, author and mathematician.

She is the real **'Alice in Wonderland'** and was the inspiration for the famous story published in 1865.



Alice Liddell 'Alethea'
JMC 1872 Photograph

Alice Liddell aged 8
Lewis Carroll, 1860
Photograph

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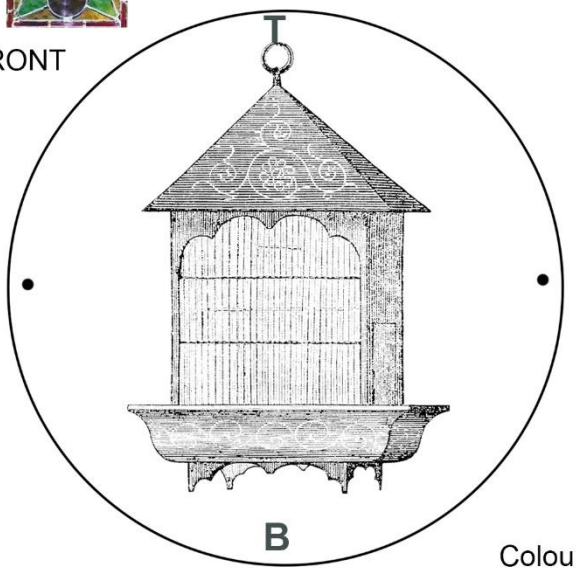
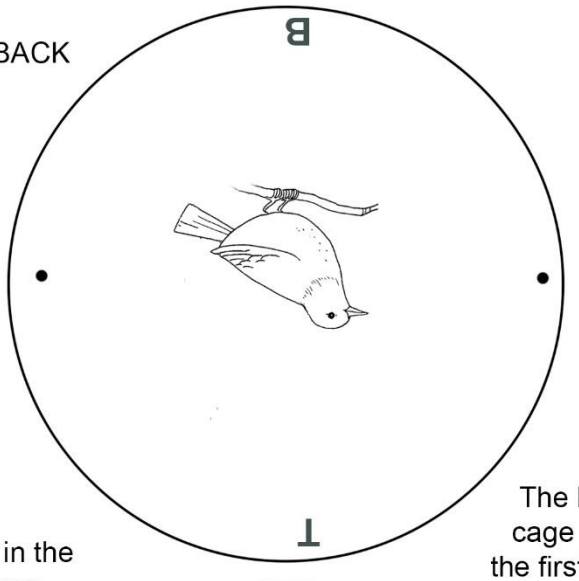
Thaumatrope Templates

FRONT

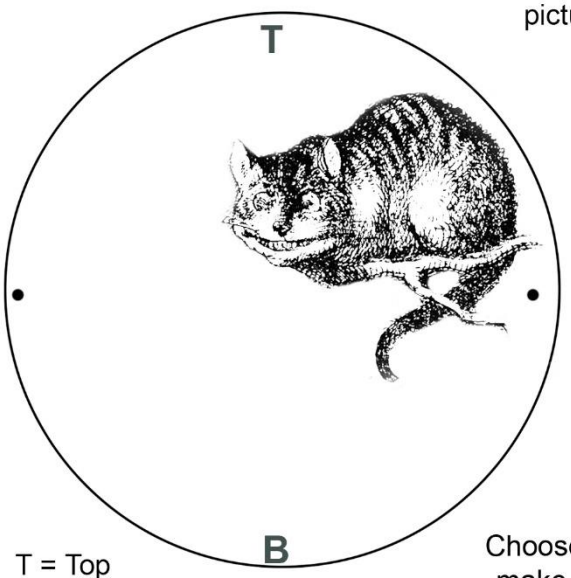


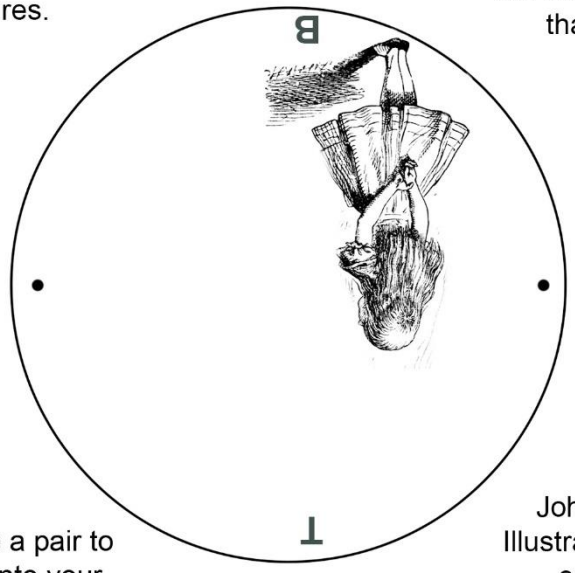
BACK



Colour in the pictures.

The bird and the cage is said to be the first example of a thaumatrope

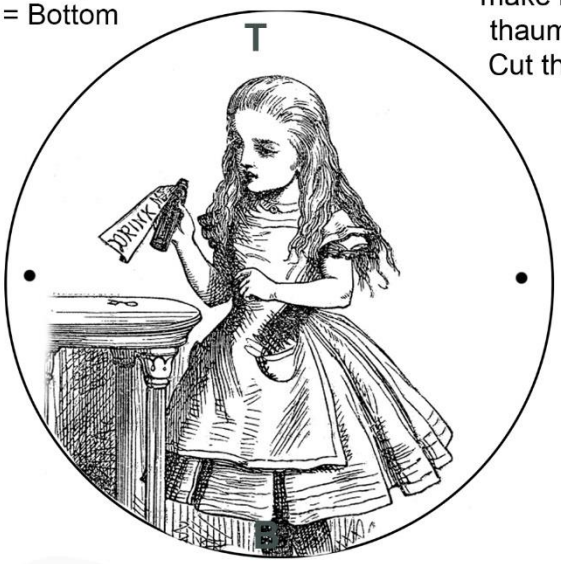


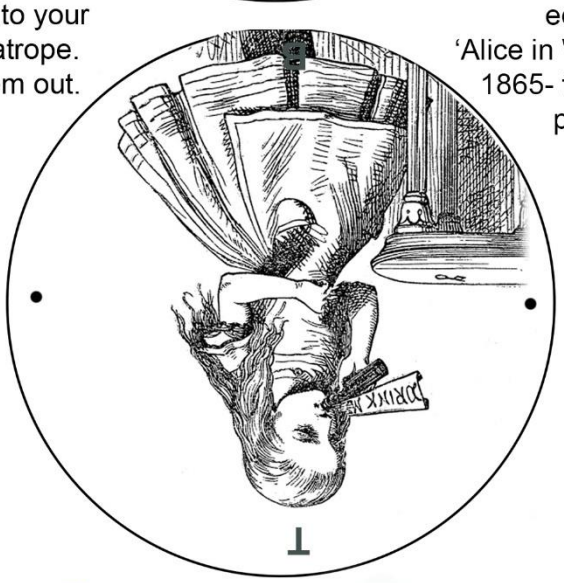


T = Top
B = Bottom

Choose a pair to make into your thaumatrope. Cut them out.

John Tenniel Illustrated the first edition of 'Alice in Wonderland' in 1865- these are his pictures





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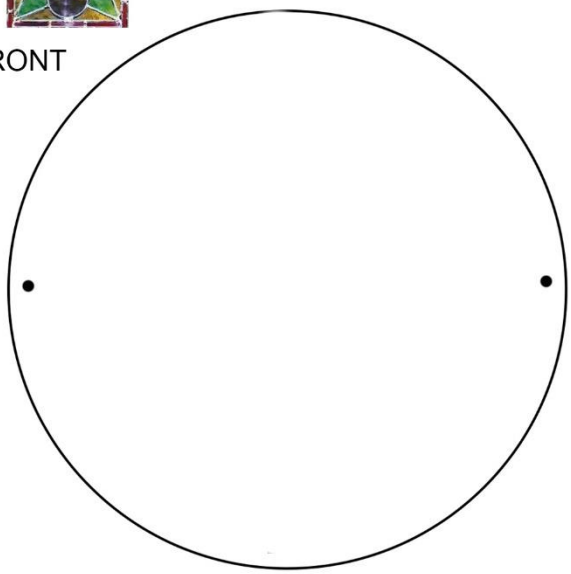
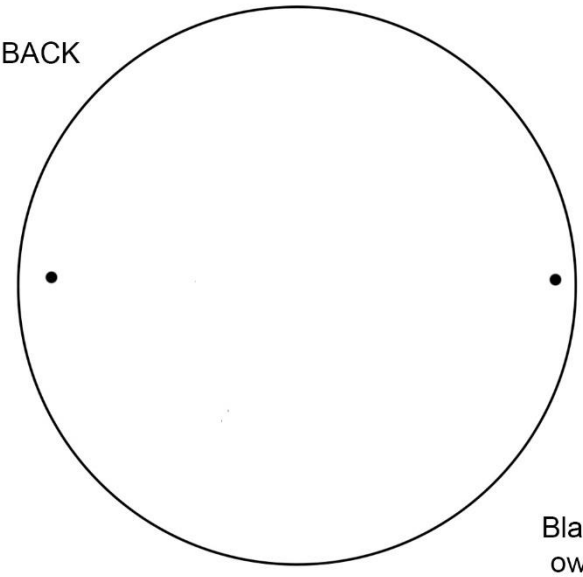
Thaumatrope Templates

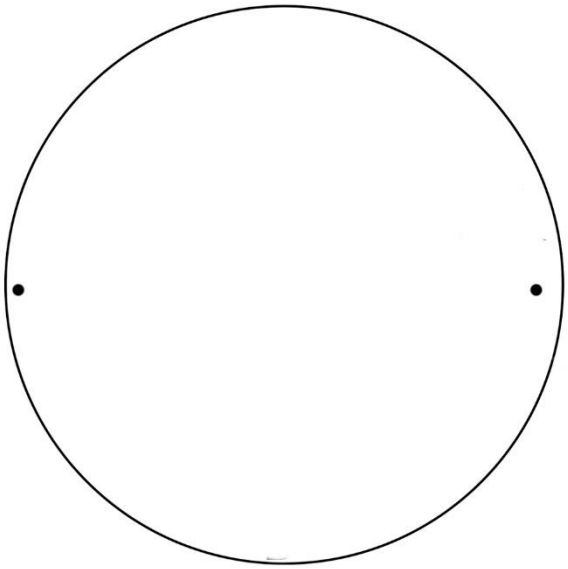
FRONT

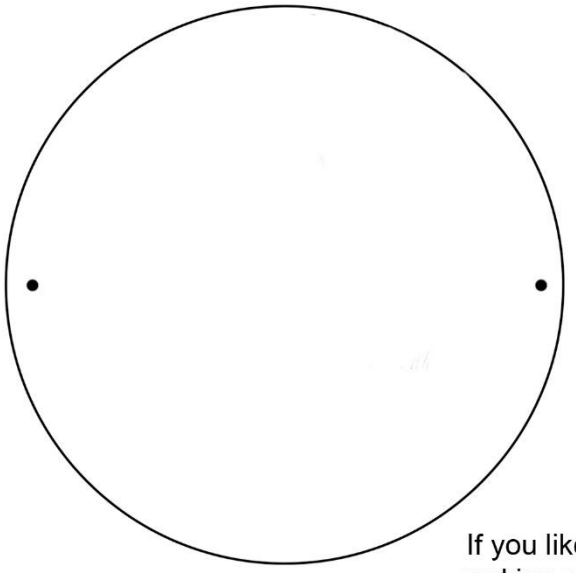
BACK





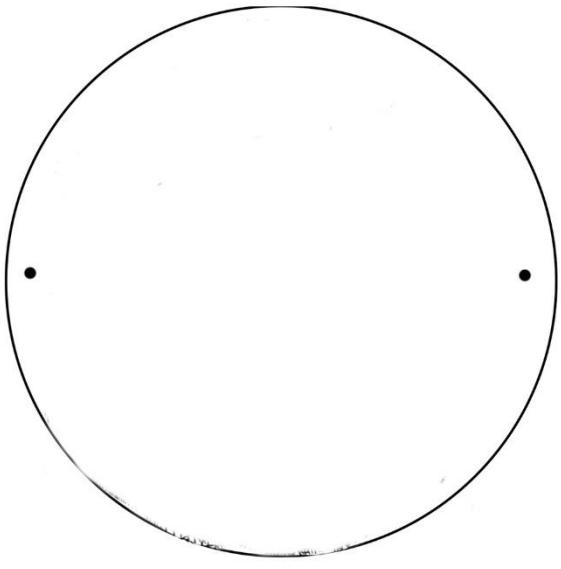
Blank for your own designs

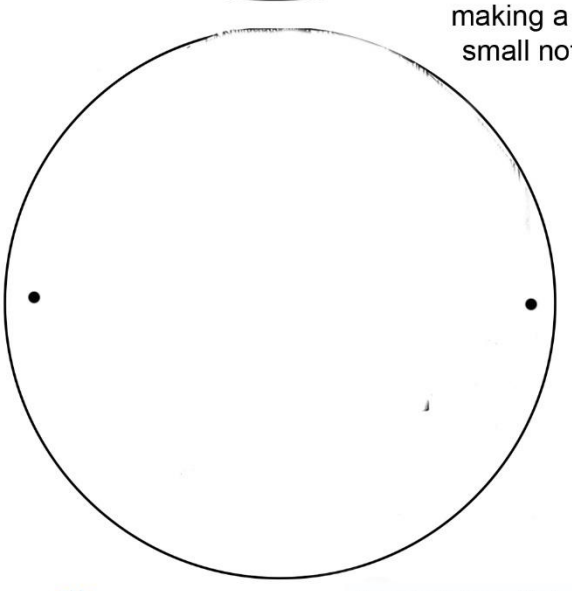




If you like animation, try making a flipbook from a small notebook or pad.

Find out about 'zeotropes', have a go making one...





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