

# Birmingham Museums & Art Gallery

## Learning and Outreach



Schools Loans Service  
Traditional Toys (Replica) Loans Box:  
Teacher's Notes

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## 1. Introduction to the Schools Loans Service

Welcome to Birmingham Museum & Art Gallery's Loans Service. We have over 200 loans boxes or packs available, supporting a variety of curriculum areas.

Whilst using any loans box be sure to look at the Schools Liaison website to find relevant ICT activities and resources for use in the classroom. The website address is [www.schoolsliaison.org.uk](http://www.schoolsliaison.org.uk)

The Loans Service is just one of a variety of education services offered by Birmingham Museums & Art Gallery. You will find details of all other services offered to schools on the web address above.

Alternatively contact the Schools Liaison Administrator on 0121 303 3890 for further information.

We would appreciate any feedback that you could give us regarding the use of the box and teacher's notes. Please complete the evaluation questionnaires provided and return them to the museum with your loan.

## 2. The Loans Box and Teacher's Notes

This loans box has been produced to support the teaching of the curriculum in the classroom. While it is particularly useful for supporting those teaching KS1 & 2 History QCA *Unit 1* 'How are our toys different from those in the past?' and KS1 & 2 Science QCA *Unit 1C* 'Sorting and using materials;' it is also of great value for cross curricular teaching. It can be used to support Design & Technology - pupils can make their own moving toys.

The teacher's notes are photocopiable.

## 3. Background Notes: Artefacts

There are five Traditional Toys (Replica) Loans Boxes in the School Loans Collection, each containing five different objects. Included in the notes which follow are information sheets about all of these artefacts. Apart from the zoetrope there are three examples of each toy, allowing pupils to use the objects in small groups and rotate in these small groups around the classroom to share and experience the different toys.

## Jacob's Ladder

### Background

The Jacob's ladder is a traditional toy.

It gets its name from the biblical figure Jacob. In the Bible (*Genesis 28.12*) Jacob has a dream in which angels continuously go up and down a ladder to heaven. The seemingly endless tumbling of blocks of the Jacob's ladder are reminiscent of this.

### Technology

The Jacob's ladder is made up of wooden blocks which are held together by strings or ribbons.

By holding the sides of the block at the top of the ladder and then slowly bringing the block down to touch the face of the block below, the rest of the blocks then appear to fall down the ribbons.

The effect is a visual illusion which occurs because one block after another is flipping over. A Jacob's ladder is usually made of six wood blocks. The blocks are interlaced with ribbons in a way which allows each block to act as if hinged to the next at either of its two ends.

The same mechanism is used in the 1980s toy Rubik's Magic but with plastic strings running diagonally across squares, with the result that the squares can hinge along either of two adjoining sides.



## Archie Acrobat

### Background

Acrobat toys like this came in all shapes and sizes. While this one shows the figure of a man, other versions use the figures of frogs and monkeys.

### Technology

This toy is made of wood and string. If you squeeze the sticks at the bottom together, it pulls the string at the top taut (tight) and causes the acrobat to somersault.

See how many somersaults your acrobat can do.



## Cup & Ball



### **Background**

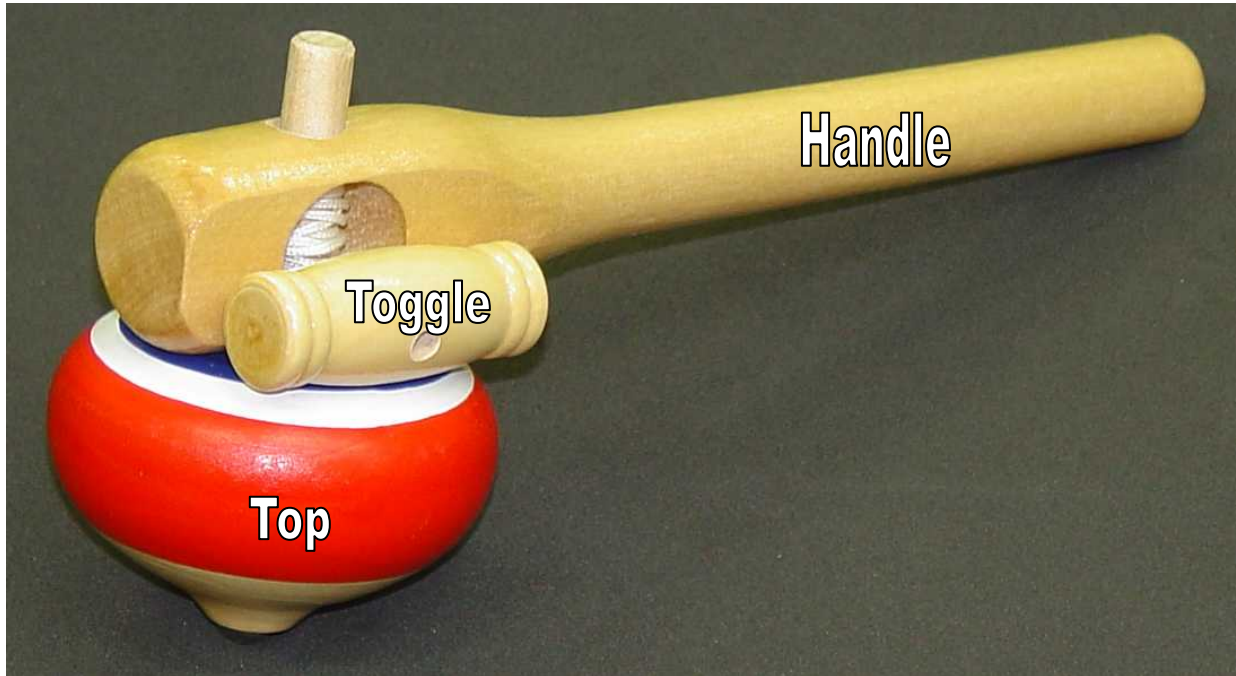
Toys like the traditional Cup and Ball were made as long ago as Tudor times, perhaps even earlier.

### **Technology**

This toy is made of wood and string. There are similar toys today which are made of plastic.

How many times can you get the ball in the cup?

## Wooden Top



### Background

A top, or spinning top, is a toy that can be spun on an axis, balancing on a point. The top is one of the oldest toys found on archaeological sites. Besides toys, tops have also historically been used for gambling and prophecy (seeing into the future).

### Technology

This top is made of wood and string.

To use the toy, firstly fit the top through the handle. Then thread the string on the toggle through the hole in the top. Now wind the string around the top by turning the top around. Once done pull the toggle and remove the handle to let the top spin away.

# Zoetrope

## Background

A zoetrope is a drum shaped optical toy which makes a series of drawings appear to move. It can be enjoyed by several people at the same time. It was first invented by W.H. Horner of Bristol in 1834 and patented in the USA in 1867 by Milton Bradley.



## Technology

The drum of the zoetrope is made of metal and the base is made of wood. The drum sits on the base and can be spun. The sides of the drum are pierced with a regular pattern of slits.

The drawings, the number of which corresponds to the number of slits, are printed onto a strip of paper which is placed inside the drum. These drawings differ only slightly from one another and follow a logical sequence. The drum is spun and the viewer watches the images through the slits where they become animated and appear to move.

The praxinoscope is a similar toy to the zoetrope but the pictures are seen reflected in a mirror. This makes the movement appear smoother.

## Customs

The zoetrope reflected the 19<sup>th</sup> century interest in movement and light, which eventually led to the invention of the camera. The zoetrope was also an important first step in the development of cinematography.

It was enjoyed by children of wealthy families.