Quality pop-up books

A Capability Task for graphics
Line of interest – card engineering

The task
To design and make a pop-up book and associated card cut-outs activity.

Task setting
Pop-up books have a long history as children's books. They provide an added dimension to reading, especially if there are elements of interactivity in the pop-ups.

The student's task is to develop a book of eight double-page spreads for young readers, each page having a pop-up illustration. The book might tell a story, which can be based on either a traditional children's tale or an original work, or be factual and present interesting information in an attractive manner. Associated with the book should be a set of card cut-outs which can be used in a play activity linked to the contents of the book.

The aims of the task
- to enable students to design for a particular consumer group
- to develop an understanding of the appeal of particular images
- to develop an understanding of simple card engineering
- to enable students to develop high-quality making skills and consider production issues.

Values

technical
Students should consider the accuracy required for producing pop-ups that assemble correctly and easily into a book.

moral
Students should consider the possible exploitation of low-paid workers in the production of pop-up cards and books.

economic
Students should consider the size of the market for children's books.

social
Students should consider the role of play activities in children's social development.

aesthetic
Students should consider the aesthetics that are likely to have lasting appeal to the user of the book.

environmental
Students should consider the role of recycling in card- and paper-based products.

Nature of the product
Students should produce:
- a high-quality, full-colour prototype of a pop-up book, complete with working pop-ups, text and stiff cover
- a high-quality, full-colour card cut-outs activity related to the contents of the book.

Technical knowledge and understanding

- knowledge of materials – the types of card and paper suitable for packaging
- knowledge of processes – cutting, creasing and folding
- knowledge of card-engineered mechanisms.
**Specialist tools, materials and equipment**
- a range of suitable card and paper in different colours
- access to a colour photocopier
- access to CNC sheet-scoring and cutting facilities.

**Cross-curricular links**

**Maths**
- use of geometrical drawing for construction of accurate pop-up plans.

**Science**
- investigation into means of increasing the durability of pop-up card mechanisms.

**Art**
- analysis of existing visual material intended for similar markets.

**Useful Resource Tasks**

To enable students to design for a particular consumer group:
- SRT 2 Questionnaires
- SRT 5 Attribute analysis.

To develop an understanding of simple card engineering and to develop high-quality making skills and consider production issues:
- PCMRT 1 Pop-ups mechanisms.

To develop an understanding of the appeal of particular images and to develop high-quality making skills:
- LIKT 5 Card engineering – the fantasy pavilion.

**Useful Case Studies**

‘Pop-up cards’ (Student’s Book, page 72).

**Design brief**

To design and make a high-quality prototype pop-up book and associated card cut-outs activity suitable for the younger reader and likely to be on sale in a large newsagents such as W H Smith.

**Specification**

What the product should do:
- present either a story or facts by means of limited text and pop-up visuals.

What the product should look like:
- attractive to those who will use it.

Other features:
- eight double-page spreads, each with its own pop-up
- in full colour
- with stiff cover
- with associated card cut-outs activity.
IDEAS FOR THE POP-UP BOOK OF SPACE

3. A SLIDE MECHANISM TO SHOW THE MOON'S CYCLE OF PHASES

BACKING
SLIDER

DRAWING OF MOON
MIDDLE WITH SLOTS FOR SLIDER
EARTH TO BE JOINED TO SLIDER

AN EXPLODED DRAWING TO SHOW THE PARTS OF THE SLIDING MECHANISM

FRONT WITH CUT OUT

1. A SIMPLE FOLD OUT ROCKET

2. A FOLD UP SATELLITE

A CYLINDER FOLDS FLAT AND THE TOP FOLDS IN

If these pop-ups have to fit onto an A5-size page, what sizes should they be?