

Flat Pack Hats

The big picture

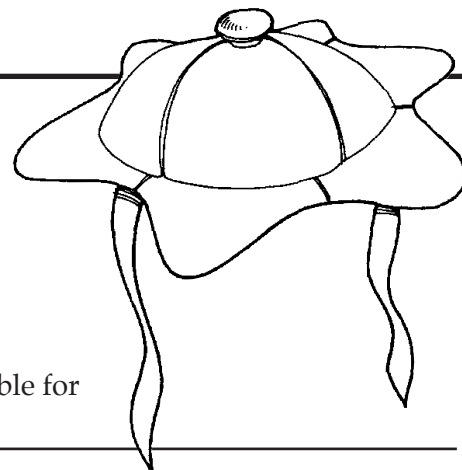
Task

To design and make a toddler's hat for either winter or summer wear, suitable for production as a ready-to-sew kit.

The story so far

Flat Pack Hats is a company that specialises in sew-it-yourself headgear kits. The students' task is to develop a new range of products for toddlers, to include both winter and summer styles, and for one particular product, to produce an assembled hat

and a hat in kit form, complete with packaging, and assembly and care instructions. The project is suitable for developing as a real enterprise or for modelling an enterprise, which would extend the work to include marketing and costing.



Learning

Designing

Designing simplified patterns and construction processes so that others can make the product.

Making

Pattern drafting and construction techniques for simple items.

Technical matters

Matching properties to purpose with regard to hot- or cold-weather wear.

Other matters

Care of textile items.
Clothing 'kit' market.

Design decisions

The sort of product

This has been decided by the teacher – a hat.

The user

This has been decided by the teacher – a toddler, although the purchaser is likely to be a parent or other relative.

The point of sale

The student can choose the type of retail outlet – a large department store, a specialist children's clothes shop or a mail order catalogue.

The purpose of the product

The student can decide what the product will do, provided it is suitable for either hot- or cold-weather wear.

The appearance of the product

The student can decide the overall shape and form of the product although this will be governed to some extent by the purpose of the product and where it will be sold. The student can also choose any decoration for the product.

The way the product works

The student can decide the way in which the product works in terms of how it achieves both

the 'fitting' function and the 'suitable for hot/cold weather' function.

The way the product fits together

The student can decide how the product fits together by considering how the required shape and fit can be achieved from separate pieces of fabric joined together.

The fabrics, fastenings and finishes

The student can choose from the following:

- a range of ready made woven fabrics made from fibres such as wool, cotton, synthetic, e.g. acrylic, nylon, polyester;
- a range of appropriate fastenings and fixings: elastic, ribbon, Velcro®, laces, press studs, hooks and eyes;
- a range of decorative finishes: block printing, appliqué, machine embroidery.

The packaging/instructions

The student can decide:

- the branding and product image;
- the nature of the packaging;
- the detail in the instructions.

Products

The teacher instructed the class to design 'flat pack hats' for toddlers.

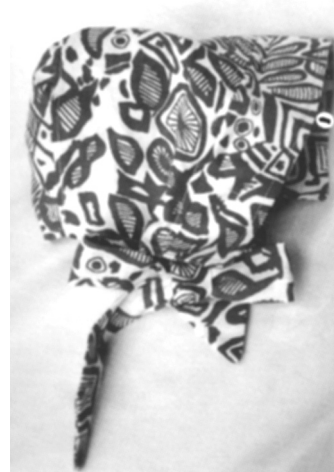
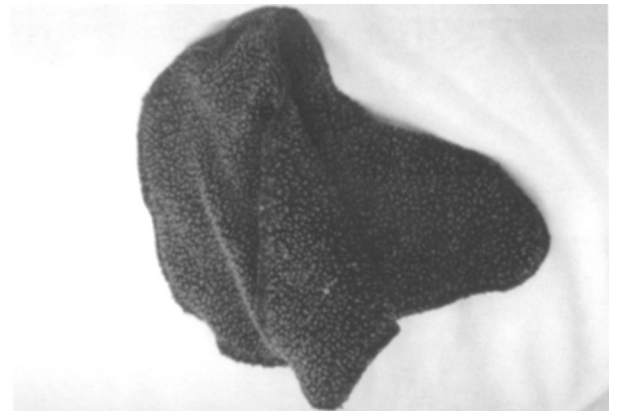
This student produced a helmet style hat for winter. It is made from a fleece material for warmth. The construction is very simple – just four pieces of fabric, the ear pieces just hang down, there is no fastening under the chin.



This student produced a hood-style hat for winter. The construction is quite complex – six pieces of fabric plus wadding held in place by simple quilting and Velcro® fastening beneath the chin.

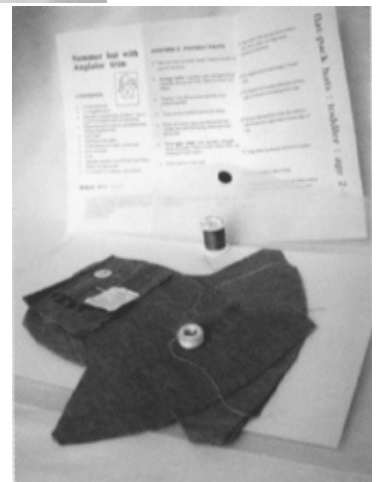


This student produced a summer bonnet, quilted for comfort. The construction is complex: 16 pieces of fabric for the bonnet plus a trim with a bought in decorative motif.



This student produced a summer bonnet. The construction is quite complex – seven pieces of fabric. It ties under the chin by using a simple bow.

Here is an example of a flat pack hat ready for assembly with simple word processed instructions.



Values

Technical

Students should consider the implications of changing their designs to simplify the construction.

Economic

Students should use the idea of value for money to think about the influence of price on marketability. They should consider how they might ensure that their design is appropriately priced.

Environmental

Students should consider the source of the materials used, their disposal after the garment or accessory has completed its useful life, and the effect of the manufacturing processes.

Social

Students should consider the role of self-assembly items in the way people dress themselves and members of their families.

Moral

Students should consider the way textile items are manufactured in both developing and developed countries.

Aesthetic

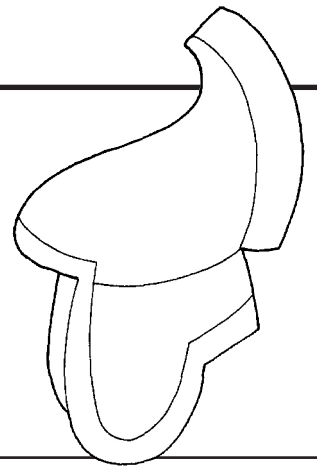
Students should consider the relationship between the appearance of their designed items and the style they are trying to achieve.

Flat Pack Hats

The detail

Sample brief

Design and make a toddler a hat for either winter or summer wear, to be part of a collection of such hats and suitable for production as a ready-to-sew kit.



Sample specification

What the product has to do:

- be suitable for hot- or cold-weather wear by a toddler;
- fit comfortably;
- be easy to put on and take off

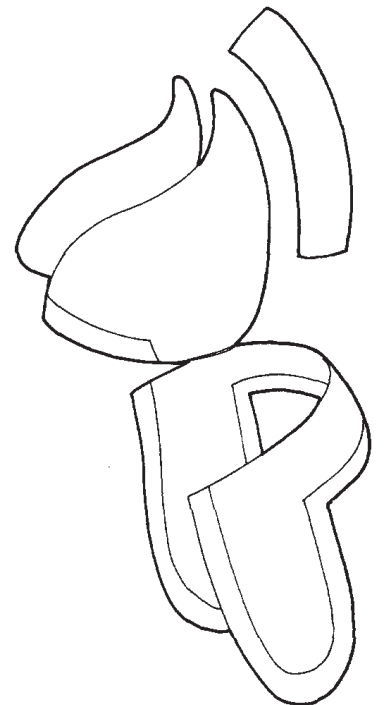
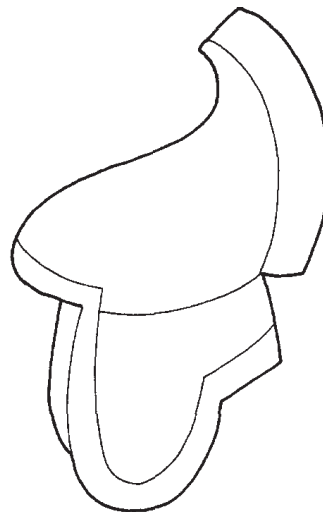
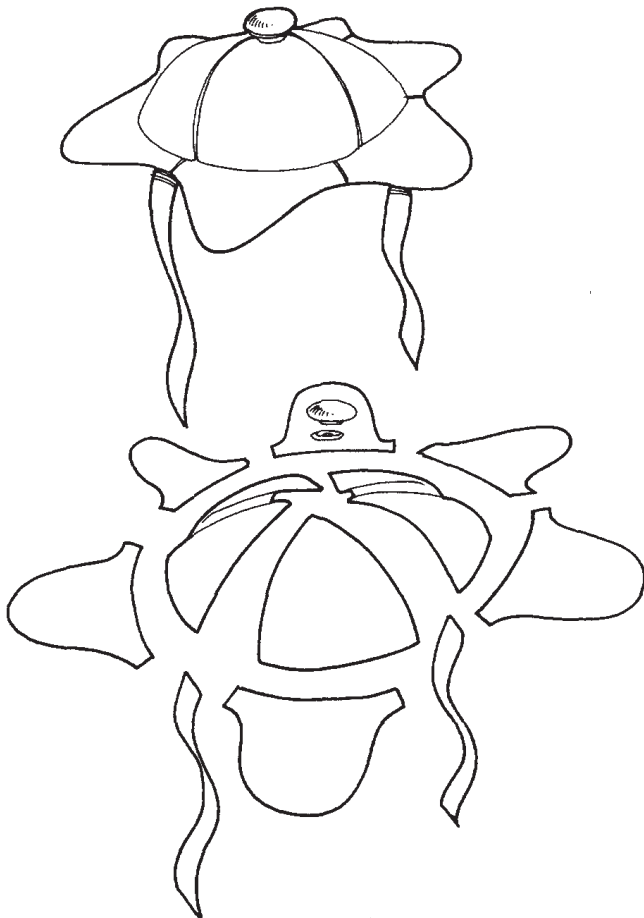
What the product should look like:

- be appealing to those likely to purchase the hat.

Other features:

- be available as a self-assembly kit requiring minimal skill.

Starter sketches



Nuffield teacher talk

'OK, it's for hot weather, so what sort of fabric? You think cotton – why not wool? That's right, it'd be much too hot. What colour? You think white – why's that? It'll reflect the sunlight and you've seen lots of white sunhats. OK – how are you going to make it look different, then? You want to do a pattern all the way round using a printing block. So have you got a design for your block? A small child doing head over heels – I get it – you just rotate the block a bit between printing. Sounds good, but how will you check on getting the spacing right? You're going to print it on a paper pattern. Sounds good – go for it!'

'OK, it's for cold weather and you've decided on wool. You like the idea of a cap but you're not sure how to get the pattern right. Use the dummy head we've got and fit a thin band of paper all the way round and then two across the top, one from side to side, one from front to back. Use a stapler to hold it together. That's it. Now the trick is to divide it up again with a couple of cross pieces. Now lay some pattern paper over the head and trace out the triangular shapes. Add a bit for seam

allowance and cut them out. You should find that you can pin them together to make up a cap that fits.'

'You're worried about your instructions. Why's that? You can't draw and you want it to be illustrated. Let's think about exactly what you need to show. All the separate parts – they're all just simple flat shapes and you've already drawn those for your pattern, so we know you can draw them. You need to show which part joins to which. You can do that by showing them in pairs – still simple shapes. You need to show the best order for joining the parts together. Do a very quick rough using simple shapes and then see what you need to do, if anything, to make it look better.'

'You want to have a brim. Why's that? To give shade over the eyes and the back of the neck – OK. So what's the problem? The brim's too floppy. What can you do to make it stiffer? Yes – you could add some cardboard. Would that make it too stiff? And what might happen if the hat gets wet? Yes – it'd go soggy. What about a stiffer fabric? You don't know of any! Well, now's your chance to find out!'

Resource Tasks

General design

For the first Capability Task in Year 9:

SRT 6 *Writing a fuller specification*

SRT 31 *Graphs*

SRT 39 *Evaluating outcomes – Is it appropriate?*

For the second Capability Task in Year 9:

SRT 7 *Research*

SRT 20 *Harmony and scale*

SRT 27 *Modelling with CAD*

Communication

CRT 8 *Presenting fashion designs*

Making

TRT 11 *Simple one-piece sunhat*

TRT 12 *Sunhat*

Technical

TRT 15 *Investigating fastenings* (unless tackled in Year 8)

TRT 16 *Is it woven or knitted?* (unless tackled in Year 8)

TRT 20 *Testing for strength and stretch* (unless tackled in Year 8)

Commercial

TRT 6 *Care: looking after clothes*

Case Studies

Colour and colourways, *Student's Book* pages 145-6. Clothing manufacture. *Student's Book*, pages 142-4.

ICT opportunities

Use the Internet to find out about on-line marketing of needlecraft kits. Try putting '+needlecraft +resources' in the search engine. Look directly at <http://www.craftsfaironline.com/>.

Use CAD to develop patterns for decorating any woven fabric used.

Use CAD/CAM to develop printing blocks for decorative patterns.

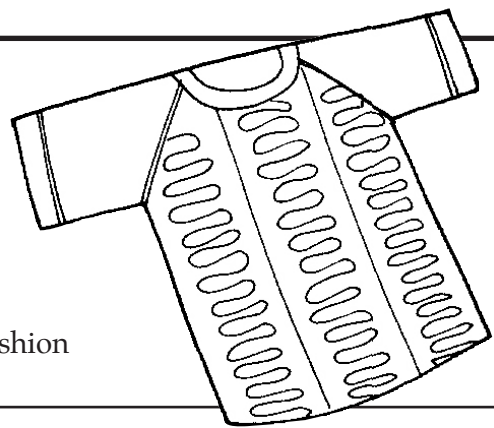
Use CAD/CAM to produce embroidered motifs.

Strut your stuff

The big picture

Task

To produce a quantity of printed fabric and use this in a collection of fashion garments and textile accessories suitable for the teenage market.



The story so far

Better Wear is a company that wishes to increase its market share of teenage fashion sales through selling fashion garments and textile accessories – hats, waistcoats, shorts, T-shirts, belts, armbands, scarves, etc. It has identified students in Year 9 as a possible market for its products. The students' task, working

in small teams, is to investigate the styles sold by leading retail outlets, to design alternatives, involving appropriate colourways, that will appeal to 14-year-olds and to produce a collection that can be shown to Better Wear and worn either in a live fashion show or by dummies in a shop window.

Learning

Designing

Using the style of a leading retail outlet as a starting point for designing.

Making

Pattern drafting and construction techniques for simple items.

Technical matters

Producing printed cloth in some quantity with quality control.

Other matters

Care of textile items. Teenage fashion market.

Design decisions

The sort of product

The student can decide the contents of the collection.

The point of sale

The student can choose the starting retail outlet unless the teacher decides that all teams will work from the same retail outlet.

The customer

This has been decided by the teacher – Year 9 students.

The purpose of the product

This has been decided by the teacher – to provide fashionable attire.

The appearance of the product

The student can choose the overall shape and form of the items comprising the collection although this will, to some extent, be governed by the nature of the retail outlet. The student will also choose the pattern and colourways used in the collection.

The way the product works

The student can decide the way in which the product works in terms of how it achieves both the 'fitting' function and the 'fashion' function.

The way the product fits together

The student can decide how the product fits together by considering how the required shape and fit can be achieved from separate pieces of fabric joined together.

The fabrics, fastenings and finishes

The students start with white polyester cotton and can choose from the following to produce the patterned stock fabric:

- cold-water Dylon® dyes, fabrics paints, block printing inks, screen printing inks.

The students can choose from a range of appropriate fastenings:

- thread, string, laces, press studs, hooks and eyes, Velcro®, buckles, zips, buttons.

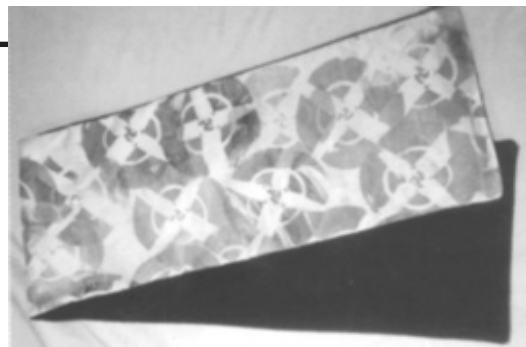
The student can choose from a range of additional decorative techniques:

- appliqué, hand embroidery, machine embroidery, quilting, transfer printing, direct painting.

Products

The teacher ensured that the class had access to a range of decoration techniques, both traditional (e.g. block printing and tie and dye) and hi-tech (computer assisted embroidery). The students were required to develop a design for fashion wear that made good use of one of them.

This student produced a scarf using a block printed fabric she had designed and made herself.



This student produced a bag from block printed fabric she had designed and made herself.

This student produced a sleeveless T- shirt decorated with a computer embroidered emblem she had designed herself.



This student produced a sleeved T-shirt with a patch pocket and an applique emblem she had designed on screen.

This student produced a waistcoat and hat which he decorated by airbrushing. He also produced simple yet effective applique decorations.



Values

Technical

Students should consider the implications of changing their designs to simplify manufacturing.

Economic

Students should use the idea of value for money to think about the influence of price on marketability. They should consider how they might ensure that their design is appropriately priced.

Environmental

Students should consider the source of the materials used, their disposal after the garment or accessory has completed its useful life, and the effect of the manufacturing processes.

Social

Students should consider the influence that fashion items have on various consumer groups and whether this influence is desirable.

Moral

Students should consider the way textile items are manufactured in both developing and developed countries.

Aesthetic

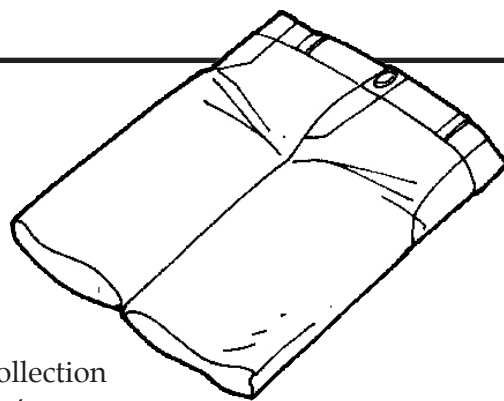
Students should consider the relationship between the appearance of their designed items and the style they are trying to achieve.

Strut your stuff

The detail

Sample brief

Develop a fabric pattern in a number of colourways and use these in a collection of fashion garments and textile accessories suitable for the teenage market.



Sample specification

What the product has to do:

- be suitable for wearing by a 14-year-old;
- fit comfortably;
- be easy to put on and take off

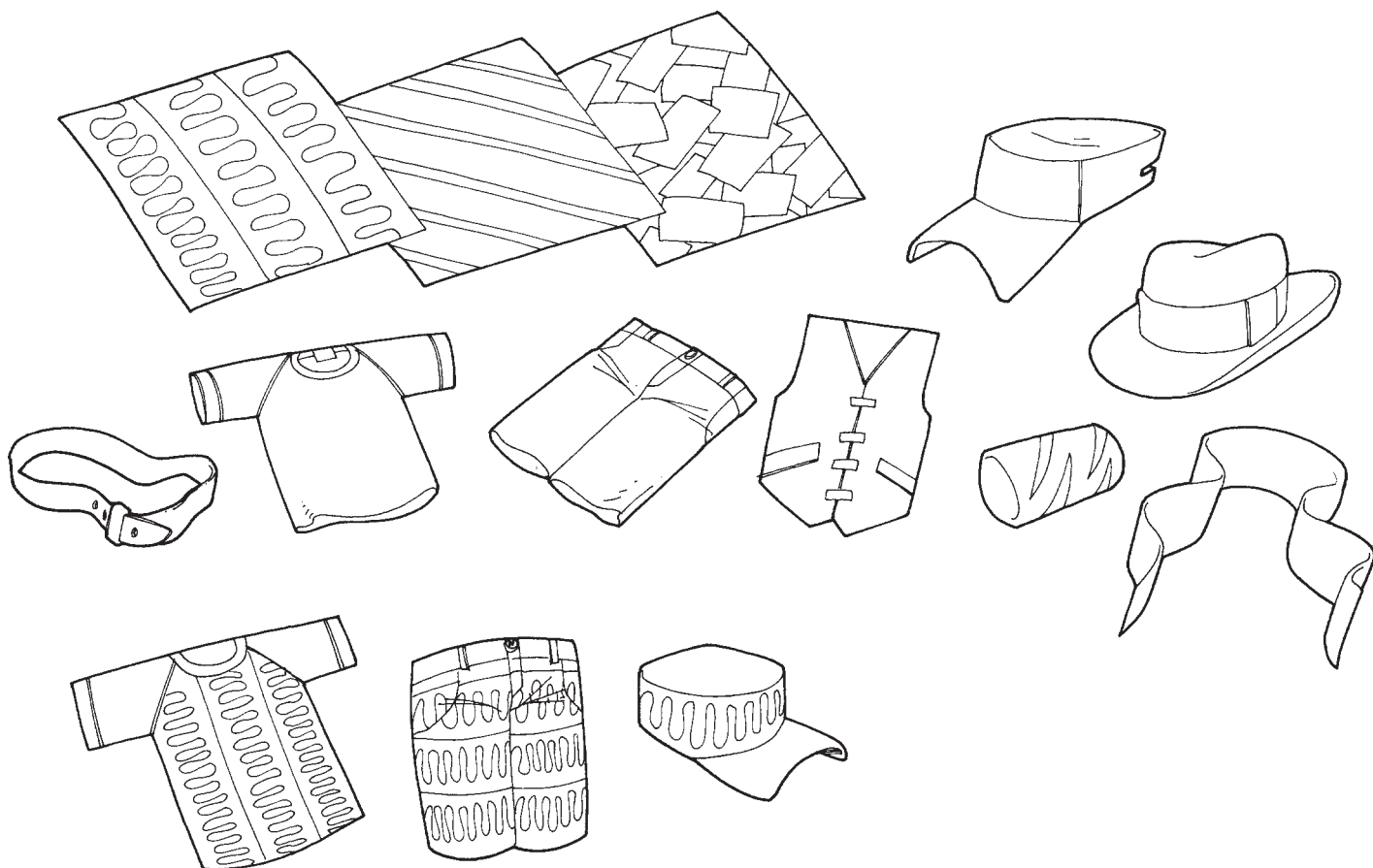
Other features:

- be part of a collection of fashion garments and textile accessories;
- be based on a single pattern available in several colourways.

What the product should look like:

- be appealing to 14-year-olds.

Starter sketches



Nuffield teacher talk

You want to print a simple flower motif onto white polyester cotton. Your flower has pale blue petals with a yellow centre. And you want to print each flower with one impression. How will you get two colours at the same time? You've designed a block with a hole in it. The blue ink goes on this block. Then a circular block which has yellow ink on it fits into that hole. You have to ink each part of the block separately but you can print them more or less at the same time. Sounds good to me.'

'I get it. Same pattern of alternating triangles in different colour ways. What are your colourways? Red triangles on green cloth, yellow triangles on green cloth, blue triangles on green cloth. And then you ring the changes – blue cloth with red, green and yellow triangles etc. OK, I get it. What's the problem? You're not sure about the best way to produce the pattern – screen printing or block printing. How can we think about that? Which one takes the longer to actually print? That's right – the block printing – because with one screen you can print the equivalent of four blocks. Which takes the longer to prepare – the block or the screen? In your case, the screen. So it's not clear. Which have you done before? Block printing. Did it go OK? Well then, you can think like this – go with what I know will work, or learn to do something new. How much time have you got? Well, the worst-case scenario is that you try screen printing

and if it doesn't work that well you've still got time to do the job with block printing.'

'You think you've got a good idea but you're not sure. Try me! A set of armbands and head bandanas. Same pattern, different colourways and you can mix and match. What's the problem? They seem a bit simple to make. If they work and it's what people want, there's not much point in making it more complex. Are you sure it's what kids of fourteen will wear? You've done a class survey and over seventy per cent like the idea. Did you ask about variations on the idea? Like coloured binding on the edges or customised hand-painting on the pattern. That would make it more complicated but they might have more appeal. How could you find out?'

'You think the waistcoat should hang loose but the rest of the team think it should do up. Why can't you go with the majority vote? 'Cos you've done a survey and over sixty per cent said they wanted it to hang loose. What did the rest of the team say? They said you'd fixed the results? Did you? Well, not exactly. You didn't include them in it. Have you got drawings of loose fitting and done up? Not very good ones. What about making it loose and taking a digital photo and then adding some Velcro® fastening so that it does up. Then take another digital photo and run a whole class survey on which looks best? Can the team agree to that?'

Resource Tasks

General design

For the first Capability Task in Year 9:

SRT 6 *Writing a fuller specification*

SRT 31 *Graphs*

SRT 39 *Evaluating outcomes – Is it appropriated?*

For the second Capability Task in Year 9:

SRT 7 *Research*

SRT 20 *Harmony and scale*

SRT 27 *Modelling with CAD*

Communication

CRT 8 *Presenting fashion designs*

Making

TRT 9 *Pair of shorts* (unless tackled in Year 7)

TRT 10 *T-shirt style top* (unless tackled in Year 7)

TRT 11 *Simple one-piece sunhat*

TRT 12 *Sunhat*

TRT 13 *Waistcoat*

Technical

TRT 15 *Investigating fastenings* (unless tackled in Year 8)

TRT 16 *Is it woven or knitted?* (unless tackled in Year 8)

TRT 20 *Testing for strength and stretch* (unless tackled in Year 8)

Commercial

TRT 6 *Care: looking after clothes*

Case Studies

Colour and colourways, *Students Book*, pages 145-6. Clothing manufacture, *Student's Book*, pages 142-4.

ICT opportunities

Use the Internet to find out about trends in young people's fashions. Try putting 'fashion +clothing +trends' in the search engine. Look directly at <http://www.exite.com/> (then 'search +shopping +clothes +accessories +teen').

Use CAD to develop patterns for decorating any woven fabric used.

Use CAD/CAM to develop printing blocks for decorative patterns.

Use CAD/CAM to produce embroidered motifs.