

Textiles: Generating design ideas

Brainstorming

You probably did some brainstorming at Key Stage 3. Here is a reminder.

Brainstorming is:

- ▲ a process for getting ideas out of your head!
- ▲ a process for getting ideas you didn't know you had!
- ▲ a process that uses questions and associations and links ideas to actions;
- ▲ a process you can do on your own, but it is usually better in a group.

Brainstorming an idea can help you to identify a wider range of options for your designing and making and can help you to work out how best to develop these ideas.

How to brainstorm

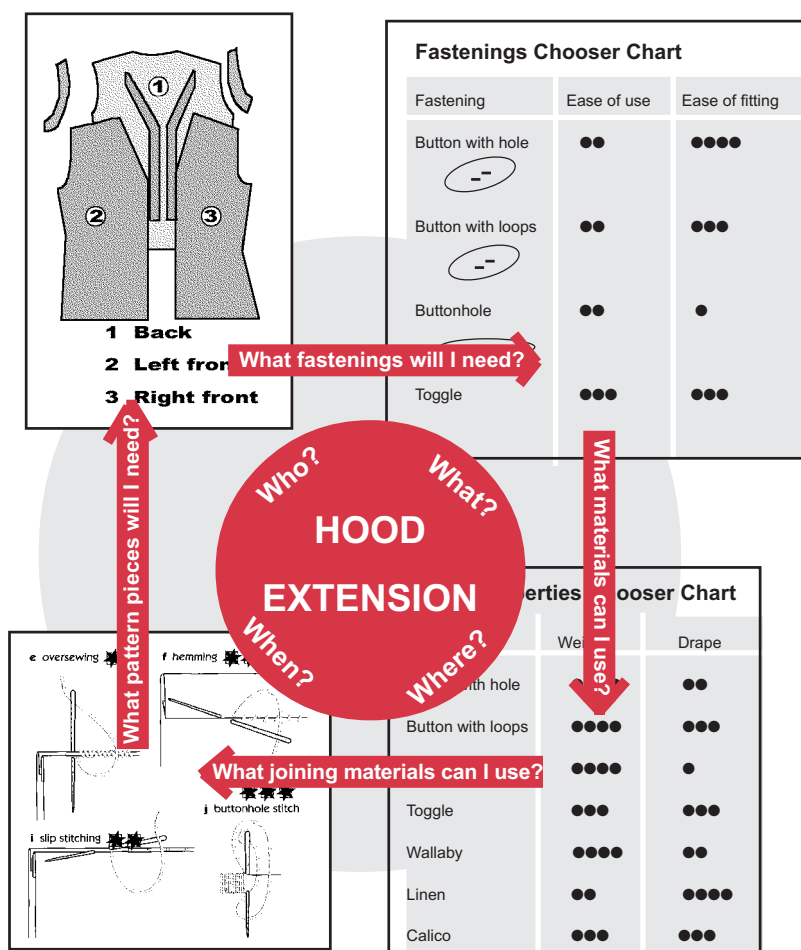
- ▲ First state the problem or need.
- ▲ Record every idea suggested as words, phrases or pictures.
- ▲ Produce as many ideas as possible.
- ▲ Don't make judgements until the brainstorming pattern is complete.
- ▲ Allow enough time for new and diverse ideas to emerge, but agree a time limit so that ideas remain fresh.
- ▲ Sort out ideas by considering which are unrealistic, inappropriate and unachievable and remove them. What is left will give you a focus for action.

What can I use for this?

By asking this question 'What can I use for this?' you can identify design options. You can give each possibility a yes/no verdict based on specific criteria – availability, cost, effectiveness and feasibility. You can refine the remaining options using similar criteria until you are left with a 'best' solution. Here is an example.

Ramblers often walk in the rain. Unless there is shelter or they carry umbrellas, lunch or any mealtime is a soggy experience. What sort of lightweight, easily transportable solution is there to this problem?

This brainstorming session came up with the ingenious idea of a hood extension, made of waterproof nylon, that provided a canopy for the person's head, arms and food. Note that the brainstormers used the Chooser Charts concerned with fabric properties and fastenings to answer some of the questions.

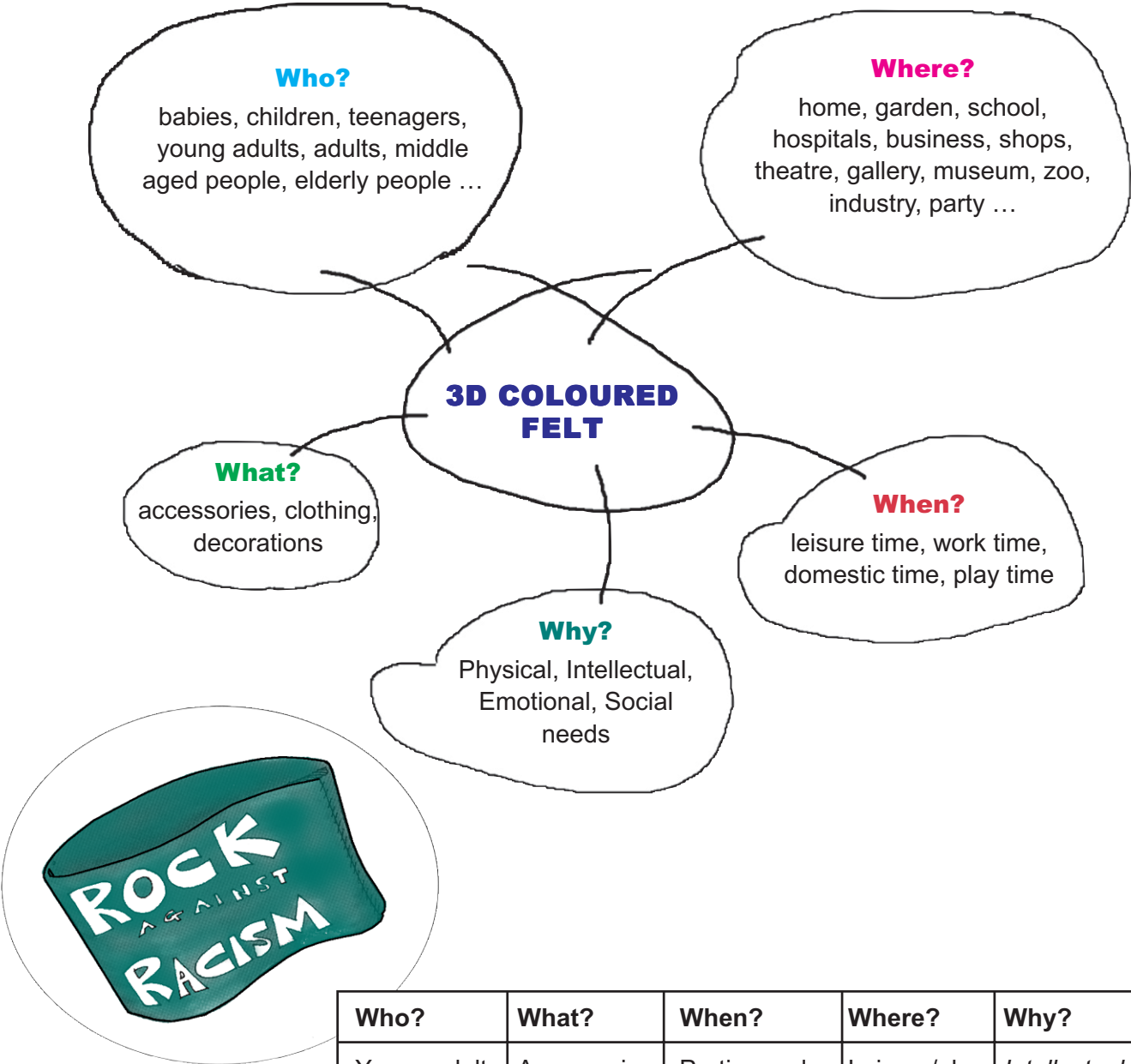


What can I use this for?

This is the sort of brainstorming that you use when you have some technical capabilities and aren't sure what to do with them.

Imagine that you produce felt in a variety of colours and control its shape and form. This allows you to produce attractive 3D forms in a tough material. You can use brainstorming to find something useful to do with all this know-how.

Here is an example. Notice how the brainstormers have used the PIES approach within their brainstorming.



Who?	What?	When?	Where?	Why?
Young adults	Accessories	Parties and political demos	Leisure/play time	<i>Intellectual:</i> making a statement <i>Emotional:</i> pleasure <i>Social:</i> acknowledging an allegiance

Attribute analysis

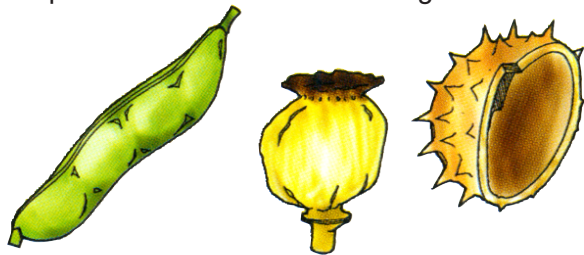
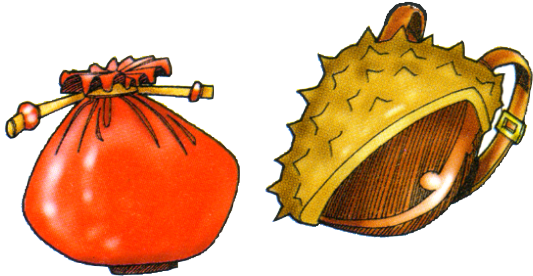
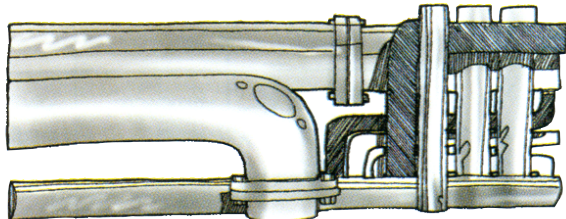
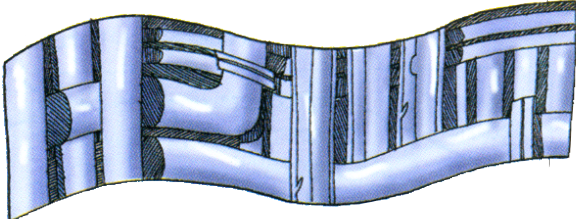
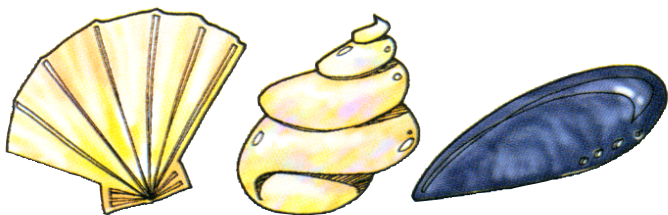
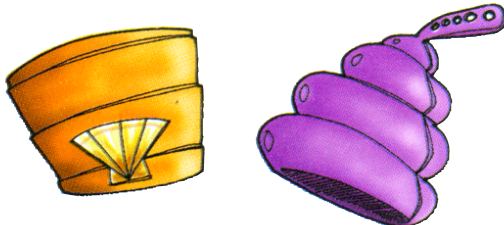
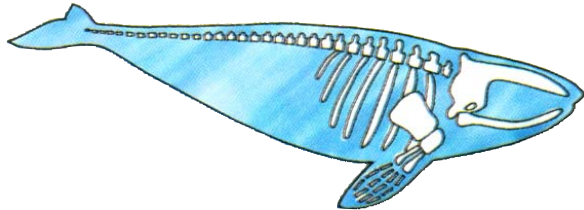
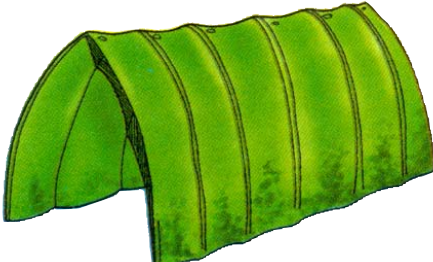
You may have used attribute analysis at key stage 3. Designers and engineers use it to help them produce new designs for familiar products.

Here is an attribute analysis table for a kite. The headings describe attributes which will affect the final design. You can read across the columns and combine different words from each column to create new designs. In this case it will be important to compare each set of attributes with the known performance characteristics of different kite designs (see xxxdesign guide). Some combinations will be totally inappropriate, while others will offer viable design ideas. The kite characteristics from this attribute analysis are met by the Nagasaki Hata (Japanese fighting kite); the natural world's decoration, and use of synthetic rod and tyvek would be a departure from traditional construction.

Manoeuvrability	Suitable for these weather conditions	Lifting power and flight height	Skill level	Decorative theme	Materials	Cost
low medium high	slight breeze medium breeze steady wind strong wind variable winds	low medium high	low medium high	natural worlds imaginary worlds other cultures geometric abstract symbolic	framework natural synthetic rod tube fabric: tissue paper lining paper polyester cotton ripstop nylon tyvek	low medium high

Observational drawing

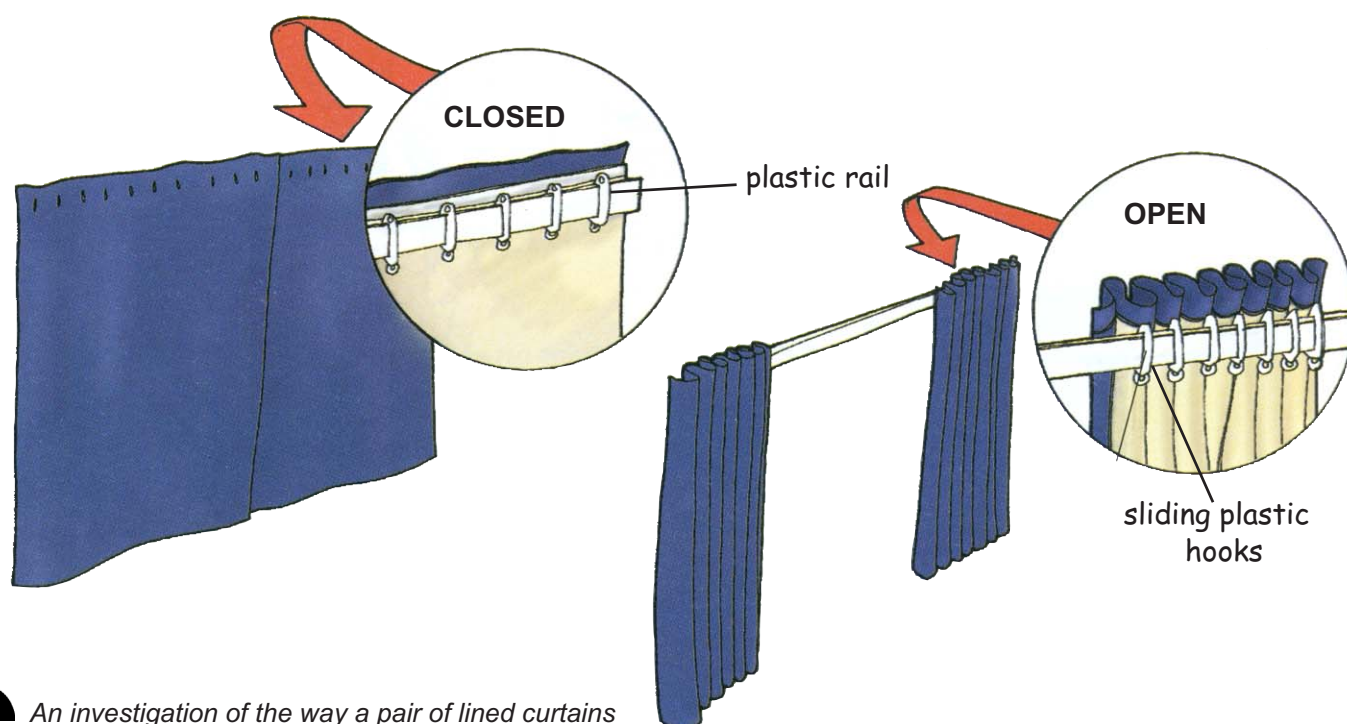
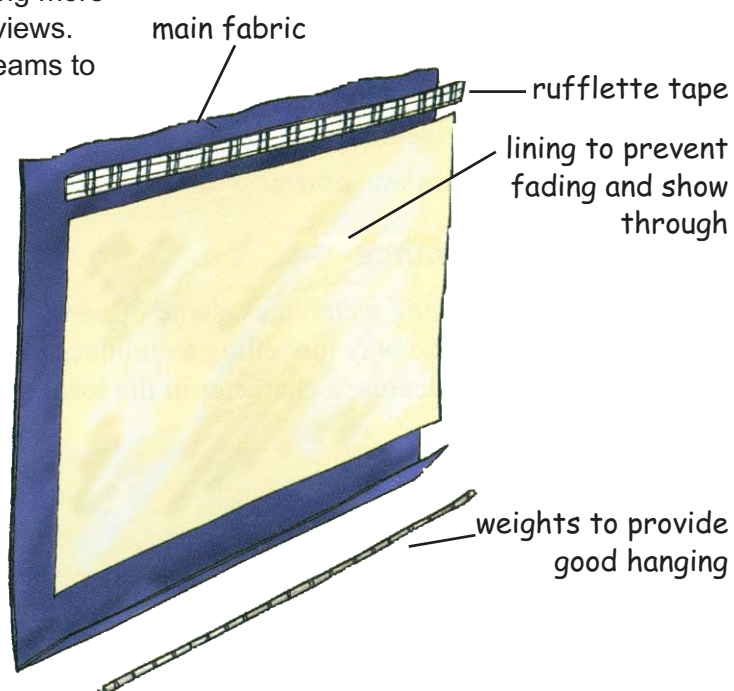
You can use observational drawing to give you a reference for what things look like and to help you get ideas. Here are some examples showing where observational drawing has been used to help with designing.

Observational drawing	Resulting design
<p>These drawings of a peapod, poppy head and conker case provided new ideas for bags and carriers.</p> 	
<p>These drawings of gas pipes suggested patterns for fabric blinds.</p> 	
<p>These drawings of shells helped with the shapes of turbans for the school play.</p> 	
<p>This drawing of the skeleton of a whale helped with ideas for a play tent.</p> 	

Investigative drawing

You can investigate the way something works by doing careful drawings that try to explain how it works. Here's how to do it.

- ▲ First find out how it works by using it and looking at it quickly.
- ▲ Write down what you have to do to make it work and what you think might be happening when it works.
- ▲ Then investigate how it works by looking more closely. Use a hand-lens for close-up views. Look inside and if necessary unpick seams to get a good view.
- ▲ Draw the pieces you can see and add notes and other drawings to show what the different pieces do.



🔍 An investigation of the way a pair of lined curtains works produced this series of drawings. By looking closely at the different section you can begin to understand the purpose of each