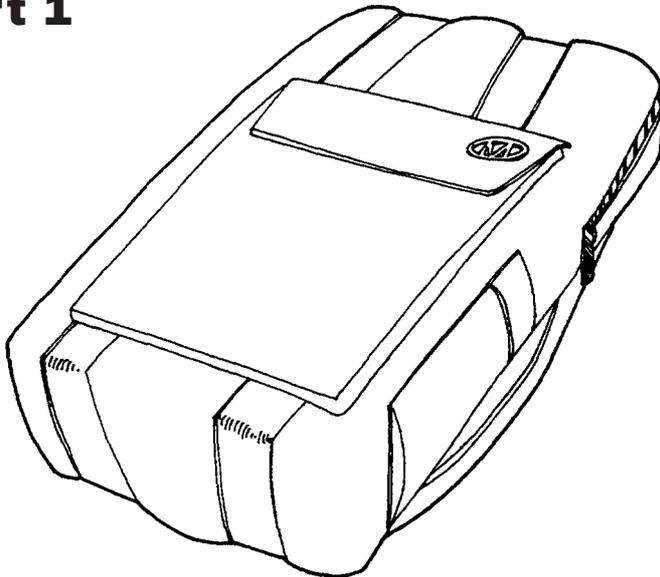
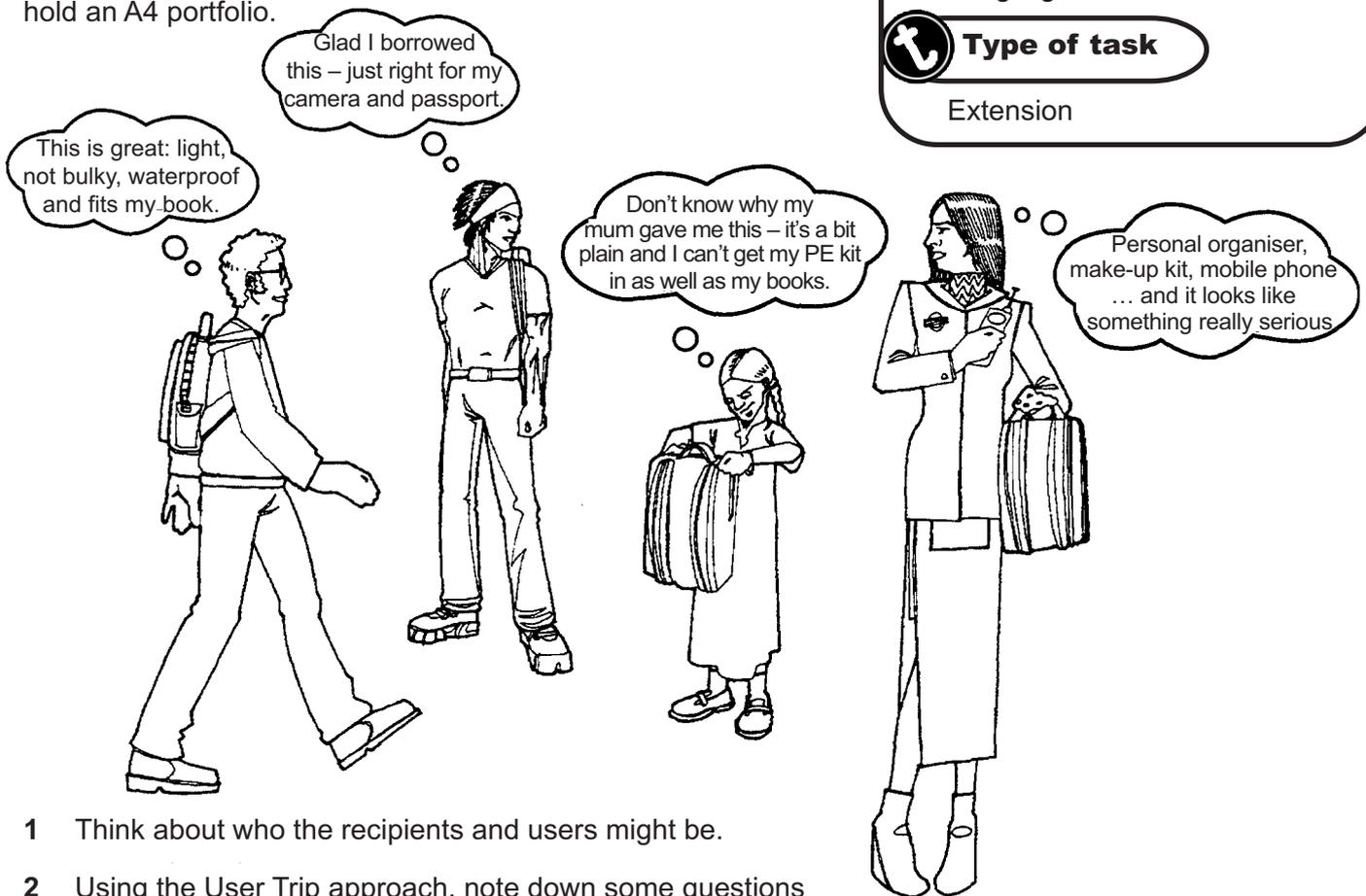


Part 1



The backpack shown in the illustration has been designed as a promotional gift for the staff, models and clients of a model agency. The backpack includes the agency logo and is shaped to hold an A4 portfolio.



- 1 Think about who the recipients and users might be.
- 2 Using the User Trip approach, note down some questions you might ask people about this product.

**L Learning**

To extend your understanding of how to evaluate a design by thinking how it affects people, whether it performs as expected and whether it is appropriate.

**Student's Booklet**

Evaluating design ideas, pages 1-3

**Timing**

Part 1: 40 minutes  
Part 2: 40 minutes

**Equipment and materials**

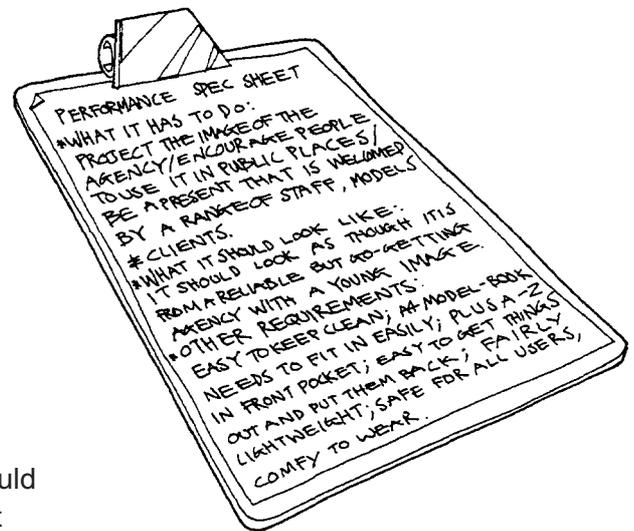
- workbook
- pen, pencil
- highlighters

**Type of task**

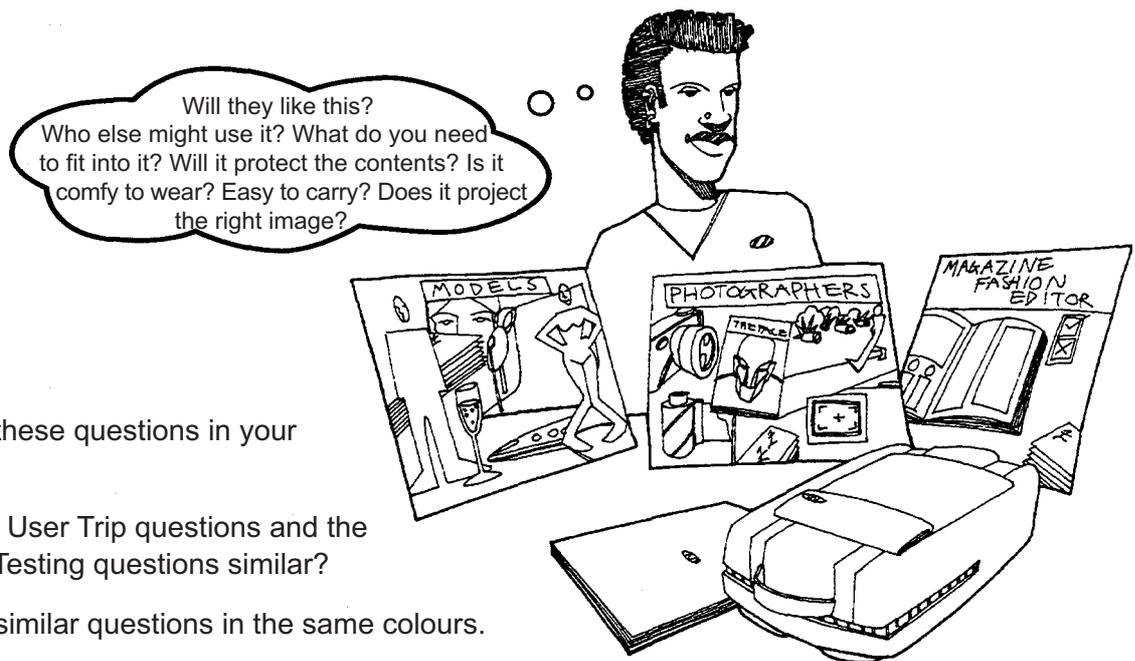
Extension

- 3 Make two lists – one for the likely recipients and one for the likely users.

The performance specification for this product might look like this:



- 4 Think about what questions you might ask which would help you to compare the performance of this product against the specification.



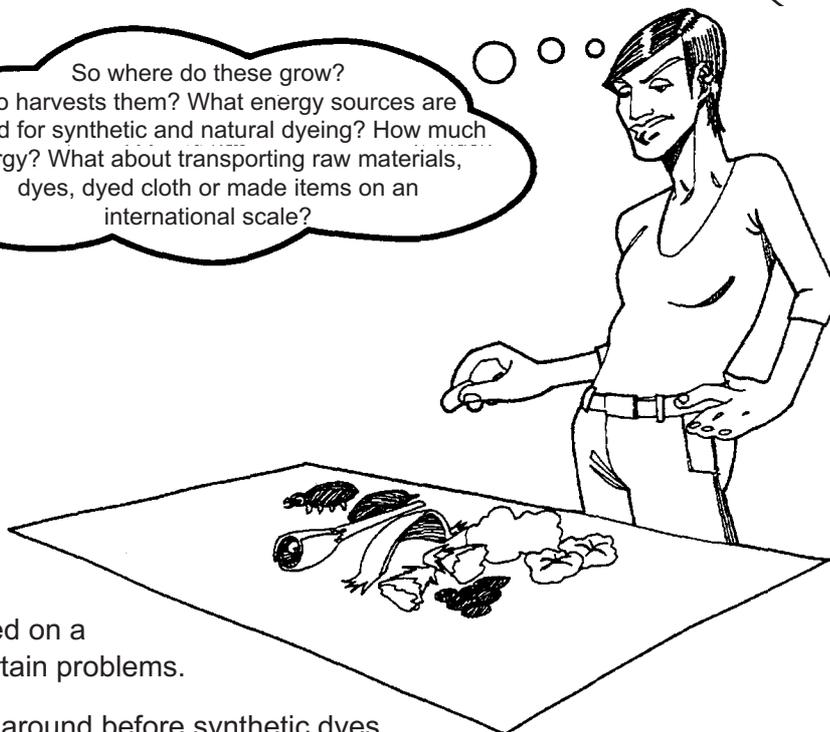
- 5 Write a list of these questions in your workbook.
- 6 Are any of the User Trip questions and the Performance Testing questions similar?
- 7 Highlight any similar questions in the same colours.

### Further/homework

- 1 Draw up a simple chart of User Trip questions and/or Performance Testing questions for a textile product that you have at home – for example a sleeping-bag, a tea-cosy, bathrobe.
- 2 Identify four or five likely users of the product.
- 3 Ask the users the questions. Record their answers in writing or on audiotape.

## Part 2

So where do these grow?  
Who harvests them? What energy sources are  
needed for synthetic and natural dyeing? How much  
energy? What about transporting raw materials,  
dyes, dyed cloth or made items on an  
international scale?



If natural dyes were to be used on a wide scale there might be certain problems.

Synthetic fibres were not around before synthetic dyes were introduced. Natural dyes have an affinity with natural fibres and are not generally suitable for dyeing synthetic fibres.

Mordants (such as tin, lead, chrome, copper, alum and iron) are often used in the natural dyeing processes to increase the fastness of the dyes. They also allow a wider range of hues to be obtained from the same natural substance. However, if these mordants are discharged into effluent they can cause toxic pollution; legislation currently restricts their use because of this.

Natural dyes require quite large quantities of natural resources to produce even small amounts of dye. For example:

- 155,000 dried cochineal insects are needed to produce 1 kilogram of red cochineal dye;
- 140 crocus stigmas supply 1 gram of dyestuff;
- 12,000 Purpura or Murex shellfish are required for 1.4 grams of Tyrian purple (which is why only Roman nobles wore this rare purple colour).

Natural dyes have always been associated with difficulties in colour-fastness (they are 'fugitive'). For example, they may fade quickly in sunlight.

On the other side of the picture is the consideration that the chemical industry is powerful and international.

In many developing countries natural dyestuffs are used to produce fibres and goods – some which reflect their own culture – for more wealthy markets. They can often produce goods more cheaply and currently consumers are showing preferences for many products which seem to be more 'natural'.

Establishing chemical-based dyeing plants in such countries might reduce environmental hazards from mordant toxic waste but might also have long-term impact on the culture and degree of independence from outside control. Local workers would need to be trained in new skills and, possibly, dyeing with synthetics would be less labour-intensive.

Some people feel that positive action is the best way forward – that research should be encouraged which will explore natural dyeing processes and develop ways of making them safer and better.

- 1 Use the questions on page 3 of *Evaluating your design ideas* to think about whether or not a wider-scale use of synthetic dyes is an appropriate thing to encourage.
- 2 With a partner, discuss answers to these questions and note these in your workbook. Then use another strategy to think about this issue – winners and losers:
  - ◆ Draw a winners and losers target chart.
  - ◆ Write ‘Wider Use of Synthetic Dyes’ in the middle.
  - ◆ Write down those people directly affected by encouraging a wider use of synthetic dyes in the spaces in the first ring.
  - ◆ Write down those indirectly affected by encouraging a wider use of synthetic dyes in the spaces in the outer ring.
  - ◆ Highlight the winners in one colour and the losers in another colour.
- 3 Think about whether this idea is appropriate. Draw up a simple chart like this:

Column 1: List some questions that you can ask yourself about the idea (your earlier “is this appropriate” questions may help).

Column 2: Award marks for each question by using an evaluation scale – for example:  
1 = poor      2 = only adequate      3 = average      4 = good      5 = excellent

Column 3: Put a reason for why you have awarded each mark.
- 4 Look at your overall scores and reasons.
- 5 Compare this chart with your winners and losers target chart from number 2.
- 6 Think about:
  - ◆ whether this idea seems to be a good or bad one;
  - ◆ what the consequences might be;
  - ◆ what can be done to make sure that people are not exploited.
- 7 Write and explain your thoughts in your workbook.

#### Further/homework

- 1 Imagine that you are setting up a small-scale business enterprise in your school making batik sarongs using natural dyes.
- 2 Draw up a winners and losers target chart.
- 3 Think about whether this idea is appropriate – in your school, your locality, your likely client-market etc.
- 4 Note and explain your conclusions.