

HOW TO IDENTIFY A NEED

In industry, the need will often have been identified for you. You then work to a design brief which you could discuss with the client.

In your project you could be your own client, which means you will have to produce your own design brief.

There are a number of starting points. You should work through this process until you feel confident. You will need to discuss this with your teacher.

STAGE 1

Do you have an idea of your own?

This could be:

- Something you want for yourself.
- Something for a friend or relation.
- A good idea you have for a new product.
- A need you have already identified.
- An idea that has arisen from your school's industrial links.

Do you have an idea of your own?

No - Go to stage 2

Yes - go to stage 5 'How to produce a specification'.

STAGE 2

Here are some ideas to start you thinking. You could use one of these or they may help you to come up with your own idea:

- Aids for people with physical difficulties or for elderly people.
- Gardening or DIY tools.
- Jigs and tools to make batches of items to be made and sold by a school enterprise scheme.
- Signs or display items for the school or local community.
- Secure display stands for valuable items on display, for example, in a museum or a shop.
- Devices to encourage and help the recycling of waste materials.
- Bicycle attachments.
- Devices to help keyboard operators - disk storage, holding paper to help read and type, ergonomic aids to avoid back strain or repetitive stress syndrome.
- Toys and puzzles, activity toy box, educational toys.
- Sports equipment.
- Making hospital easier and more pleasant for children.

Do these help you come up with an idea?

No - Go to stage 3

Yes - Go to stage 5 'How to produce a specification'.

QUALITY CIRCLES

Quality circles are increasingly being used in industry. A quality circle is a team of four to twelve people. They usually come from the same work area, and meet regularly to identify, investigate and analyse their work-related problems. The team is responsible for both selecting and solving the problems.

APPLYING QUALITY CIRCLES TO SCHOOL

During your project, you will often be working on your own. It will help you solve some of your problems by forming quality circles with three or four others. In this way, you can share your problems and produce a wider range of possible solutions. It should also improve the quality of your product.

STAGE 3

Here is more information about one area

Making a holding device

A wide variety of holding devices are commonly used. These range from:

- Photographic holders.
- Map holders.
- Holders to display items in a shop.
- Paper tray.
- CD, tape, record, computer disk holders.
- Book holders, eg. for recipe books, when typing, reading in bed or in hospital.
- Plate holder.
- A case for drawing instruments or tools.
- Letter rack.
- Saucepan rack.
- Collapsible storage for camping.

You could choose one of these or develop an idea of your own.

Do you have an idea?

No - Go to stage 4

Yes - Go to stage 5 'How to produce a specification'.

STAGE 4

Here is an idea for a design brief

The design brief

If you are cycling long distances or in an area that you are unfamiliar with, you will need to look at a map. If you carry the map in a bag it is inconvenient. It would be easier to have the map open at the right place and attached to the handlebars.

Design and make a suitable holder for a map which can be used when cycling.

Would you like to work on this problem or has it given you another idea?

Yes - Can you think of some idea to solve it?

No - talk with your teacher

STAGE 5

*How to produce a design brief
and specification*

- The design brief - this is a concise statement of what is needed. See stage 4 for an example of a design brief.
- A product specification - this is a more detailed description of what a product will be like, what it will do and who will use it. To do this you need to think about:
 - all the factors that might influence your design;
 - all the information you need including measurements;
 - the sort of resources you might need such as materials, equipment, skills, money or time;
 - all of the health and safety aspects.

Here are some questions to help you:

- Who will use the device?
- Where will they use it?
- When and how?
- Do you need to do any research to find out more?
- What constraints does this put on your design?
- What materials and equipment are available?
- How much time do you have?
- How much money do you have?
- What skills do you have?
- Can you acquire any new skills?
- What health and safety issues should you consider?
- Are there any British Standards you need to consider?

