

# Teaching a Capability Task

## *Ten crucial teacher decisions for teaching a Capability Task*

Once the Resource Task work and Case Study work have been completed, design and technology comes into its own with students tackling Capability Tasks. To ensure that your students are successful in a Capability Task, you need to manage the learning effectively. You can decide on the best way to teach a Capability Task by asking and answering these ten questions.

### **1 How should I introduce the task?**

You can choose from one of the following ways.

#### **A 'talk' start**

Here the teacher introduces the task through description. Identify six key words related to the task. Set the scene by reading out 'The story so far' from the Capability Task. Ask open questions about each of the key words so that the class can discuss important issues: for example, not 'Do children play with toys?' but 'What sort of toys do children play with?'

#### **A 'walk' start**

Here the teacher takes the students outside the classroom environment to a location which is relevant to the Capability Task and where design decisions are easy to spot, for example a museum, a shop, a gallery. It is important to keep the students focused so use no more than four questions, for example 'Who would come here?', 'What would be popular here?', 'How much would you pay for things on sale here?', 'What is the style of this place?'

#### **A 'hand' start**

Here the teacher uses a handling collection and focuses the students' attention on the objects by asking them to handle the items and to write the answers to some questions. Here are some possibilities.

- 'Hold it. Does it feel heavy or light?'
- 'Touch it. Does it feel rough or smooth?'
- 'Look at it. What colours can you see? What different parts can you see?'
- 'Do any of the parts move? Try pulling; pushing, twisting. What happens?'
- 'Can you work out what the parts do?'
- 'Whom do you think would use it? Why do you think that?'
- 'What would they use it for?'

At this stage ask the students to draw a simple sketch of the product they have investigated and use the answers to the questions as the basis for annotations.

#### **A 'read' start**

Collect a mixture of printed resources about a theme relevant to the Capability Task: for example, Case Studies, newspaper articles, articles from books and magazines. Give a single resource to each student. Give the students 15 minutes silent reading time in which they have to read an article and identify six key points. It is important that the students can mark the reading matter with highlighters and pens. Once they have finished, their next task is to draw a map showing how the six key points relate to one another. These maps can be put on display and act as the basis for class discussion.

### **A 'computer' start**

Divide the class into five groups and ask each group to research an aspect of the Capability Task using the Internet. You can give each group help in finding the right entry into a search engine. The results of the research can be displayed and shared with all members of the class.

### **A 'look-and-see' start**

Collect images from a wide range of sources – magazines; books; postcards; catalogues, newspapers – and produce a pack for each table. Give the class 15 minutes to look at the pack so that each student can identify images that:

- have a strong impact;
- he or she particularly likes;
- he or she particularly dislikes;
- he or she can associate words with.

The class can then identify a range of powerful images and their associated words, which can act as a stimulus for the Capability Task.

### **A 'show' start**

Show the class a pair or small collection of products and ask them some specific questions through which they describe and compare the products. This can help the class understand ideas that will be important for the designing and making they will carry out.

### **A 'self' start**

Set a research task as homework. Students bring the results to the next lesson to be read out to the rest of the class. Each student has a 30-second slot. You capture key words on the board and use these to explore the task setting.

## **2 Do I link the task with other subjects?**

You can choose whether or not to link the task with other subjects. Effective links with other subjects will not happen by accident. Only a few students will naturally make connections with other areas of the curriculum. To ensure that the majority make good use of other subjects, it is best to choose a definite subject that lends itself to links with the Capability Task and then to teach that task with this in mind.

## **3 How open do I make the brief?**

At Key Stage 3 the teacher is expected to provide students with the brief. The more open the brief, the wider the range of products that students in your class will want to design and make. It is important that the brief is not so open that you cannot support different students' attempts at designing and making. It is equally important that the brief is not so narrow that all students end up designing and making very similar products. It is essential that the individual signature of each student can show through the work.

## **4 How do I ensure good design ideas?**

You have to decide on the range of ideas that it is best to get from the class. Do you want just one from each student or lots? It is particularly important that all the students receive feedback on their ideas. This is much more manageable if you limit the number

of ideas they are asked to produce. If each student is asked to produce one idea on a large Post-it® note, the notes can be displayed and each student can hear feedback from the rest of the group. In this way; all students receive feedback and can adapt their ideas accordingly

## **5 How complex should the specification be?**

More able students should be working to more ambitious specifications than less able students. You can use the same framework for specifications with all students in a class (that is, what the product must do, what it should look like and other features) but you can negotiate the detail with individual students, which is a good way to achieve differentiation.

## **6 How will students model solutions?**

Decide on the diversity of experience that is appropriate and manageable. How many different sorts of modelling will be happening in your class to produce prototype products – just sketching, 3D mock-ups, working models and computer images?

## **7 How do I ensure they stay on track?**

The design ideas are now more fully developed but it is still important that they are scrutinised. This process can be more dynamic if students work in pairs, taking alternate roles of client and designer. The client has the specification and the designer the prototype product (in whatever form this has been developed). The client has to question the designer about the prototype. You can provide questions or expect the students to make them up. It is important that this feedback informs the final design.

## **8 What sort of written feedback do I give?**

You can give three-point feedback to each student based on their Nuffield Notebook and any prototypes they have produced. Give a comment:

- about the design, either overall or on a point of detail;
- about the production, such as where particular care is necessary;
- to motivate, personal to the student.

## **9 How do I ensure quality making?**

It is important that students are able to make their designs. You have to decide on the range of tools, equipment, materials and components they can use and the amount of help you can give. You may need to demonstrate or set up specialist making stations. It might be important to encourage students to help each other.

## **10 How will I organise final evaluation?**

There are several different strategies for final evaluation:

- comparison of performance against specification;
- user response;
- performance in the light of wider issues (winners and losers or appropriateness).

These can be carried out by individuals, in pairs or small groups, and sometimes through general class discussion.

You will need to ensure that students are taught these methods of evaluating and given the opportunity to use them in a variety of ways.

These teacher decisions are summarised in Table 3.

**Table 3: Ensuring your decisions make a difference**

Capability Task activity	Teacher decisions							
<i>Introducina</i>	Talk start	Walk start	Hand start	Read start	Computer start	See start	Show start	Self start
<i>Linking</i>	Which other area of the curriculum do you want your students to use in this Capability Task? Is it maths, science, art and design, IT, one of the key skills, literacy, citizenship?							
<i>The brief</i>	What is the scope of the brief? Just how open or closed should it be for your students? <b>Closed</b> ←—————◆—————→ <b>Open</b>							
<i>Trapping ideas and first feedback</i>	Use getting design idea strategies for students to produce initial design ideas. Do you want them to produce just one idea each or lots of different ideas? Display the ideas so that each student can get feedback from the rest of the group. <b>Just one idea</b> ←—————◆—————→ <b>Lots of ideas</b>							
<i>The specification</i>	How complex should the task be for particular students? Negotiate the specification with individual students to achieve good differentiation. <b>Simple</b> ←—————◆—————→ <b>Complex</b>							
<i>Modelling solutions</i>	What's the diversity of experience here? How many different sorts of modelling will be happening in your class to produce prototype products? <b>Just one sort</b> ←—————◆—————→ <b>Several different sorts</b>							
<i>Second feedback</i>	Working in pairs students take on alternate roles of client and designer. Client has specification and designer has prototype product. Will the product meet the specification? Will it delight the client? What questions will the students ask? Will you give them questions or will they make them up? <b>Given questions</b> ←—————◆—————→ <b>Free questions</b>							
<i>Teacher feedback</i>	Use prototypes and students' Nuffield Notebook to give three-point feedback to each student ● a comment about the design either overall or a point of detail ● a comment about the production ● personal to the student a comment to motivate							
<i>Production</i>	What range of tools, materials and technical components will students use <b>Narrow range</b> ←—————◆—————→ <b>Wide range</b> Will all the students be able to make their design? How much help will you need to give? Can they help each other? Will you need to demonstrate? Will you need to set up specialist making stations?							
<i>Final evaluation</i>	How will your students evaluate their products? On their own? In pairs or small groups? Through general class discussion? What criteria will they use for this evaluation?							

**Key:** See the ◆ as a slider which you can move to the correct teaching decision.