

Differentiation

Objectives:

To identify the reasons why Differentiation is so important and to consider the best methods

To plan a topic or module which incorporates differentiation strategies

Some misconceptions about differentiation:

- **Differentiation cannot happen because it would mean creating a personalised programme of study for every pupil we teach.** *Only pupils with statements have to have Individual Education Plans but teachers do need to know their pupils well and they do have to plan differentiated activities carefully. The preparation of differentiated work can be a very time-consuming process and that is why it is recommended that teacher/trainees work in teams to develop appropriate activities and the necessary resources to support them.*
- **All work can be differentiated.** *The best teachers use a variety of learning and teaching techniques – differentiation would be one of them. It is not always appropriate to use this strategy, however. Pupils learn best when the teacher is enthusiastic and the work is interesting, when a variety of approaches are employed and when they are given some autonomy in their learning.*
- **Setting is a form of differentiation.** *It is not, but it is the means by which differentiation can be more efficiently and effectively implemented.*
- **Differentiation only has to feature in the classroom.** *It is equally vital that it should also guide the activities you set for Homework.*
- **Extension tasks are an effective way of targeting the most able in any group.** *Extension tasks which are tagged on to the end of a series of activities are not a very effective way to stimulate and develop the most able. Able pupils are not necessarily the fastest workers and an additional task can be seen as extra work and a kind of punishment. It is much more effective to develop parallel activities for the most able to attempt.*
- **You can differentiate by outcome.** *Differentiation involves teacher intervention. If all pupils are given the same task there is no teacher intervention taking place and so no differentiation.*
- **You cannot rely on pupils to get all the facts down if they are given differentiated tasks.** *That is true, but do all pupils need exactly the same information and in the same quantity? Exercise books can be full of factual detail but it does not mean that the pupils have understood it, can remember it or have learnt it.*

Differentiation: Some Opening Thoughts

Differentiation has been defined as, *'A planned and on-going process of intervention in the classroom to maximise the potential of pupils based on their individual needs.'* Chris Dickinson

In other words, *'Differentiation is about teachers trying to ensure that the right pupils get the right tasks.'* Ruth Sutton

We need to take responsibility for differentiation in our classes because –

"The purpose of education for all children is the same: the goals are the same. But the help that individual children need in progressing towards them will be different." Baroness Warnock

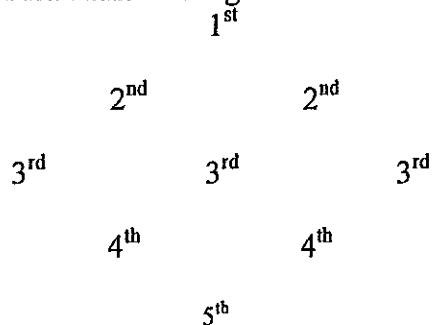
"Our ultimate goal is... helping children to learn." Mike Hughes

"Differentiation helps to break down the learning barriers."

"It means that we recognize and accept that children's learning needs are different."

Task 1: A Diamond Nine Activity

In your subject groups consider the statements in the envelope and produce a rank order of them showing what you consider to be the most important ways of enabling pupils to be successful learners. Arrange the statements like this:



One card will have to be discarded.

Then consider any issues arising from these methods from your perspective and that of the pupils you teach. List the key issues here:

From the teacher's perspective

From the pupils' perspective

During the course of this session I hope that most of these issues will be raised and discussed

Essentially there are four main ways to differentiate:

- 1. by resource** - this may mean that you use simpler texts for some members of the group, or you have additional and/or more complex resources for others, or pupils use a variety of resources or some use more resources than others.
You could also use study guides or Independent Learning Units.
You could also deploy your Teaching Assistants/mentor/supervising teachers as additional resources. The key is to have planned to use the appropriate resources in advance of the lesson based on your knowledge of the students gained from assessment of their work.
- 2. by task** - the objective here is to provide a variety of tasks which match pupils' abilities and aptitudes while covering the main content area. One way here to differentiate is to think about their preferred learning style and provide activities which match Visual, Auditory and Kinaesthetic learners.
An issue here is ensuring that pupils stay on task. One way to overcome lapses of concentration is to set short-term targets with rewards for achievement; training also helps. The more differentiated work pupils do the more they come to understand its requirements and become involved in the process. Class rules, agreed by all, help to create a learning environment but the most important strategy of all is to provide support.
- 3. by support** - Some pupils need more help than others to complete a given task. This help can be provided by giving individual help or help to the group he or she belongs to. Sometimes the group can work together to solve problems.
Encouragement and the celebration of achievement also helps to motivate reluctant learners
- 4. by teacher response** - Whether pupils have been working on a differentiated activity or a common task the outcome of their efforts will show differences. Each pupil is unique and has a different combination of strengths and weaknesses and so the teacher will need to respond differently to meet their learning needs. It can help if you make it clear what the objectives are for the lesson(s) and how any work will be assessed. This is the idea of the advanced organiser. It is also a good idea to set meaningful targets when you mark the work. Some marking systems can be effectively employed to show an individual pupil how his or her present work compares with their past achievements.

Which is more important - to give each child the best chance to show what he or she knows, or to think you are being fair to all children by treating them all the same? Ruth Sutton

Differentiation Checklist:

Task 2: Use this grid to list the ways in which you have already differentiated work in your classes. Then add any other ideas suggested by the members of your group.

| Differentiate by Resource | Differentiate by Task |
|---------------------------|---------------------------|
| | |
| Differentiate by Support | Differentiate by Response |
| | |

**Differentiation:
a Practical Handbook of
Classroom Strategies**

*Chris Dickinson
and
Julie Wright*

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Introduction

Recently the Inspectorate of Nottinghamshire LEA produced a review document entitled 'Differentiation: "not a very familiar word in schools"'. In the short intervening period 'differentiation' has become a much more familiar word as school after school requests INSET on the topic and LEAs produce guidance documents for their teachers.

Undoubtedly the structure of the National Curriculum, based as it is on Attainment Targets and Statements of Attainment, is the driving force behind this interest in differentiation. (For a full examination of the relationship between the National Curriculum and teaching approaches, see *Supported Self-Study at National Curriculum Key Stage 3*, NCET, 1991.)

Whilst some schools are looking to organisational responses to the National Curriculum through the way they group their students, many others are recognising that a more sophisticated response is needed. These latter schools have anticipated that once publicly reported SATs are in place, they will become so rich in information on each student that setting or banding will not on its own deal with the wide variation in ability and attainment in each group. They are therefore looking to a response of changed teaching and learning styles, and this more sophisticated response is at the heart of differentiation.

The purpose of this handbook is to show that achieving a teaching and learning style which allows for differentiation need not be an insurmountable difficulty. Indeed it is hoped that after working through the book, the only thing you will find difficult about differentiation is that it has six syllables! To help you with this, the topic has been broken down into a number of areas so that a starting point should be easier to identify. These areas are referred to as forms of differentiation: within each form a number of strategies are identified using examples that are being carried out by teachers now. The intention is that this handbook will help you to identify some strategies that you can also put into practice now.

What is Differentiation?

Differentiation is a planned process of intervention in the classroom to maximise potential based on individual needs

A planned process

Differentiation doesn't just happen, it is a *planned* process. 'Differentiation implies that the teacher is doing something intentionally . . . thus differentiation is about the planning that teachers do for the characteristics of individuals . . .' (Nottinghamshire LEA)

So differentiation has to be *planned* by you.

An ongoing process

Differentiation is not just an event. 'The commonest characteristics of differentiation between individual learners tend to be an emphasis on dialogue in the form of regular review between teachers and individual pupils about their progress and their learning needs . . .' (Saunders and Weston, *Differentiation in Action: a whole school approach for raising attainment*, NFER, 1991)

So differentiation is *ongoing*. Gloucestershire LEA states that 'differentiation is a process which accommodates differences in the abilities and characteristics of the learner . . .' (Differentiated support materials for training in secondary schools, 1990). All students show differences. You know from your classes that there is wide variation in:

- the amount of work students complete in a lesson
- the amount of homework they do
- their ability to work cooperatively
- their ability to work independently
- their listening skills
- their presentation skills.

Intervening to make a difference

Allowing these differences to show themselves is not what differentiation is about. Differentiation is about intervening to make a *difference*. As the Warnock report states, 'The purpose of education for all children is the same; the goals are the same. But the help that individual children need in progressing towards them will be different.'

'Whether a class is setted or mixed ability, it will have a range of attainment and interest. The presence of bilingual pupils and pupils with special educational needs further widens the range . . .' (NCC, *Non-Statutory Guidance for Modern Foreign Languages*, February 1992)

In mathematics at Key Stage 3, students will be working on five Attainment Targets between levels 3–8 for each AT. For this subject alone their attainment can be mapped on a matrix with 30 cells in it. The corresponding figures for Science and English are 20 and 30 respectively. Such wide variation in attainment cannot be dealt with organisationally through forms of grouping, and setting or banding will still leave a range of attainment within each class, to say nothing of variations in interest, motivation, aptitude and learning style. Differentiation therefore, is something that needs to happen in your classroom.

Maximising potential

Maximising potential is central to the notion of differentiation, and is the aim of the intervention. It is not the differences between students – these will show themselves anyway. It is the difference between where a student is now and where he or she has the potential to be.

The National Curriculum will help teachers to:

- a) assess what each pupil knows, understands and can do
- b) use their assessments and programmes of study to identify the learning needs of individual pupils
- c) plan programmes of work which take account of their pupils' achievements and allow them to work at different levels
- d) ensure that all pupils achieve their maximum potential.

NCC, *Information Pack N° 2*

We also have to recognise that students have different preferred ways of getting from where they are now to where they could potentially be.

Differentiation is based on an understanding of individual difference, also the worth and value of each pupil's learning. Because of these fundamental precepts teachers need to differentiate in their curriculum planning.

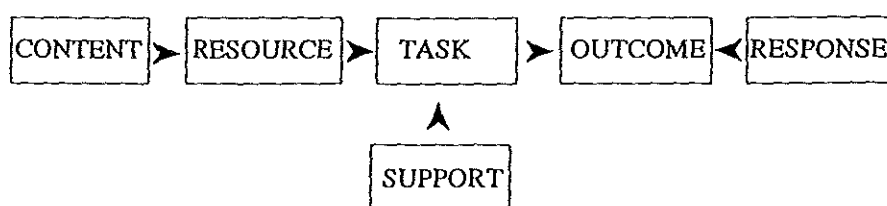
Barthorpe and Viner, *Differentiation, your responsibility*, NARE, 1991

Forms of Differentiation

Differentiation is not a single event, it is a *process*. This process involves recognising the variety of individual needs within a class, planning to meet those needs, providing appropriate delivery and evaluating the effectiveness of the activities in order to maximise the achievements of individual students.

The purpose of this handbook is to give practical advice on strategies for providing differentiated learning opportunities in the classroom.

The model below can be used to identify the forms differentiation can take.



While pupils' outcomes will vary, it is the teacher's *response* to these outcomes that allows differentiation to take place. The content of the curriculum is nowadays defined by statute. To deliver the content of the curriculum, *resources* are necessary and *tasks* have to be designed to enable students to acquire knowledge and understanding as well as developing competences. Whilst working at the tasks, students will have your *support* as you help and guide them through the process.

When your students produce work you will provide feedback to them by correcting and marking that work and by commenting on how it can be improved. In giving different comments and advice to different students according to their strengths and weaknesses, you provide each student with a different *response*.

The remainder of this handbook, therefore, concentrates on those aspects of differentiation over which the classroom teacher has control.

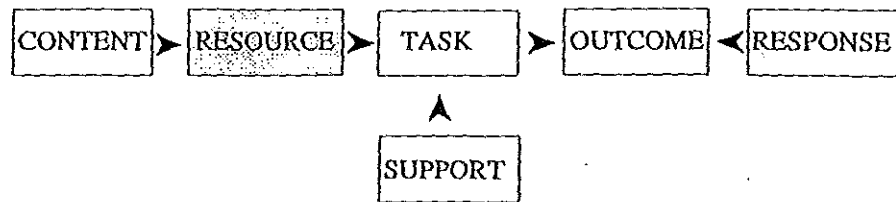
These are:

- differentiation by resource
- differentiation by task
- differentiation by support
- differentiation by response.

Appendices

The appendix contains an interactive exercise on differentiation, checklists, action planning aids and a bibliography.

Differentiation by Resource



You will already have resources which enable your students to learn the content of your subject area. They may already take the form of individualised programmes such as KMP or SMILE in maths. Alternatively, you may rely on a class textbook. You may also supplement commercially available resources with ones you produce in school.

This section looks at some strategies you might use to enable differentiation to take place through the resources that you make available to your students. These strategies are:

- 1 Selecting resources for:
 - appropriate readability levels
 - ease of use
 - good design
- 2 Replacing class texts with a wide variety of media and other sources
- 3 Use of technology
 - tape recordings of key passages
 - Concept Keyboards
 - CD-ROM
- 4 Use of study guides
- 5 Well managed storage and retrieval systems
- 6 Student preparation
- 7 Building study skills into course programmes.

Selecting resources

There are a variety of criteria to consider when selecting resources. The two examples below illustrate some of them.

Using the Bible

Key Stage 3

Short sentences

- 1 Open the Bible at any page
- 2
 - a) Find the name at the top of the page. This is the name of the book. (The Bible is made up of 66 different books)
 - b) Find the large black numbers on the page – these are the chapters.
 - c) Find the very small numbers.

3 Now find the reference you have to look up:

- ☞ step 1: Find the right book (e.g. Mark)
- ☞ step 2: Find the right chapter (e.g. chapter 6)
- ☞ step 3: Find the verse (e.g. verse 1)

☞ Jesus left that place and went back to his home town, followed by his disciples.

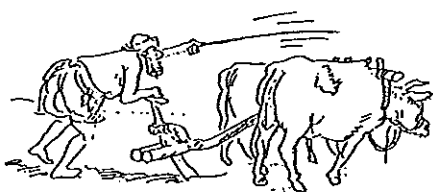
(Mark Chapter 6 Verse 1)

Use of the personal pronoun to appeal directly to the reader

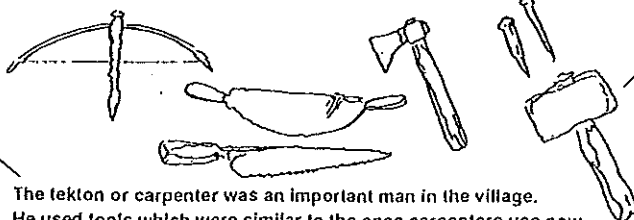
Provision of examples

Clear, explained sequencing of the task

The Life and Times of Jesus



The farmer worked with simple tools.
All the family helped with the jobs on the land.
The shepherd had small flocks of sheep, and they often lived on the hills with the animals.



The tekton or carpenter was an important man in the village.
He used tools which were similar to the ones carpenters use now.

Printing is ragged right, but justified to the left to provide visual cues to the next line of text

Visual images to improve appeal

Selection of language appropriate for the age group

Appropriate illustrations to break up passages of text

Replacing class texts with wide variety of media and other sources

Students differ in the way they make use of these resources to acquire new information. We need to provide a wide variety of media and resources to cater for these differences.

The paragraph below is taken from a West Sussex school. The activity requires students to prepare a school prospectus and consider how it would differ from that for an Indian village school.

Maps

The resources needed would be: the school prospectus, large scale plans of the school (from the local studies packs), West Sussex gazetteer for routes to school, atlases/globes/world wallmaps, Action Aid photograph pack on Chebolaki village, database to store and retrieve information about the school, Concept keyboard to annotate school plan and photographs of school here and in India, and English caretaker, cook, ancillary. etc.

Visual Resources

Information Technology

People

Use of Technology

This example comes from the Flexible Learning in Modern Languages Project in Devon. It makes use of the Concept Keyboard with Touch Explorer software.

Arc-en-ciel 1

Filename French 1

| | | | | | | | |
|------------------|----------------|-----------------------|---------------------|--------------------|---------------------------|-------------|----------------------------|
| le père | la mère | fait la lessive | joue du piano | dans le jardin | dans la chambre | et | Point . |
| Pierre | Marie | fait la hamburger | mange un hamburger | en classe | dans la salle de bains | mais | 18 c Majuscule " E R |
| la grand-mère | le bébé | regarde la télé | fait le lit | dans la cuisine | dans le garage | le matin | Espace ns. |
| le chat | le poisson | écoute son waltman | fait ses devoirs | dans le salon | au collège | le soir | Effacez |

Remember to add your accents! CONCEPT KEYBOARD

The overlay for the Concept Keyboard enables students to construct sentences in the target language which can subsequently be printed out for them. This enables the student to write in the language irrespective of his or her own writing ability.

This example is taken from the Network Education Press Business Studies Pack.

Margin notes

Activities

Introduction

The changes to the European Community in 1992 is a vast subject. The activities below provide a range of possible investigations. The structure below may help in the planning.

| ACTIVITY STRUCTURE FOR '1992' | | Optional/ Recommended |
|-------------------------------|---|--------------------------|
| Activity 1 | Brainstorming/ Listing what is already known | Recommended |
| Activity 2 | Research EC 1992 | Recommended |
| Activity 3 | Analysing Research | Recommended |
| Activity 4 | Survey of Community Knowledge | Optional |
| Activity 5 | Survey of Local Business Plans for 1992 | Optional |
| Activity 6 | Debate/Discussion involving Community | Optional |
| Activity 7 | Exchange of Information via Twinning Town | Optional |
| Activity 8 | Video Presentation | Optional |

Activity 1

Space for student and teacher comments

This activity can be done individually or as part of a small group. Make a list (or hold a brainstorming session if part of a group) of what you already know about 1992.

Do not worry about the phrasing or wording of your list – just put the ideas down on paper.

Once you have done this, try to sort your ideas under headings. (*Employment, Trade, Cultural etc.*)

Ideas and stimulus offered

Activity 2

Provides advice on resources

Collect as much information as you can on each of the headings you decide on in *Activity 1*.

Use the sources listed in the Resources section.

If you write to organisations or people, explain what you are doing and what it is you want to know.

'Please send me information on EC 1992' is not enough. Highlight. Be specific.

E.g.

'I am interested in finding out more about the laws on employment across the European Community'

When you write, be sure to enclose a large stamped, self-addressed envelope.

Advice provided

Use of Study Guides

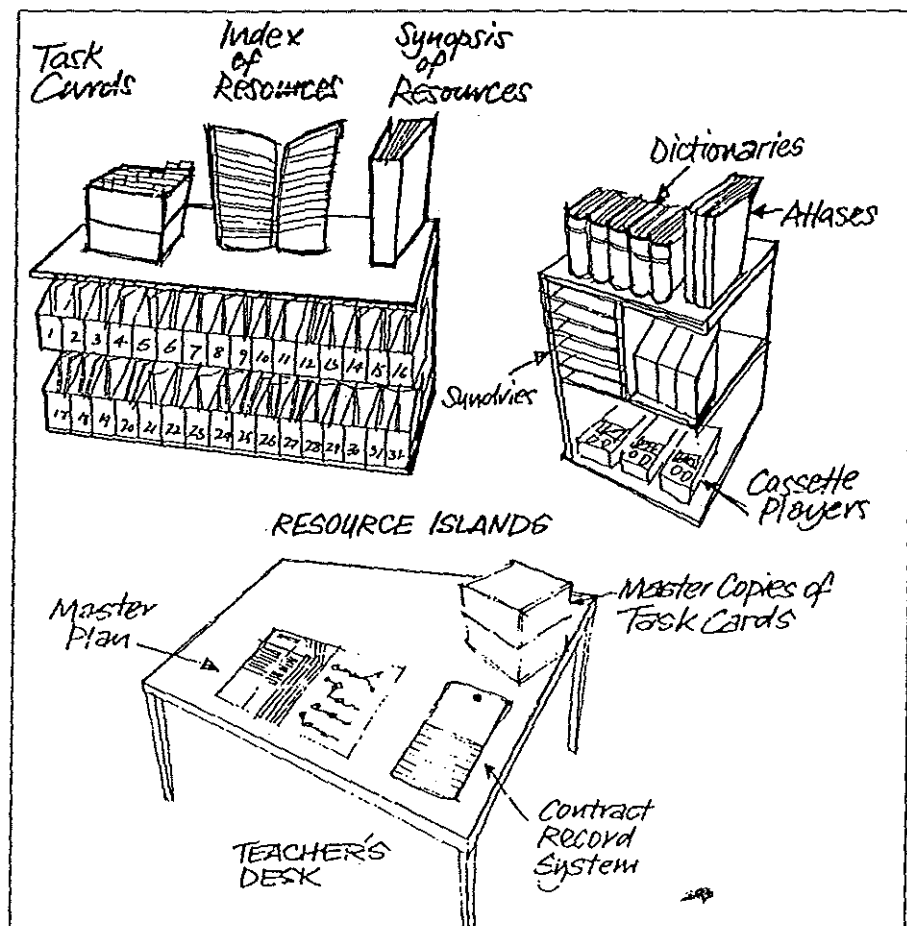
Writing resources from scratch takes a lot of time. We know it takes about 10 hours of teacher preparation to produce one hour of student work if we produce the whole learning package. We do not have this time available, so you might look more carefully at the preparation of study guides to go with existing resources.

Well-managed storage and retrieval systems

Where classrooms have a rich variety of resources it is important that the students are able to access the resources when they need them. If the students are dependent on you for the storage and retrieval of resources your time will be diverted away from the important activities of providing differentiation by support and response.

Careful labelling and printing on different coloured paper will help students to manage the use of resources successfully.

Avon Resources for Learning Development Unit developed the use of resource islands to ensure ease of use for students, as shown below.



Student preparation

Just as you need preparation for new ways of working in the form of staff development, so do your students. It cannot be assumed that they will cope successfully with new methodologies.

This example, taken from a school in Avon, illustrates how the staff provide induction to Year 7 students embarking on the course. The guide introduces the concept of investment time, i.e. time inserted at the beginning of a new way of working in introducing the methodology rather than covering the content. Like any investment it pays a dividend. The dividend here is in the way students will subsequently be able to meet the expectation set by you. It means that the time you would spend on organisation and control issues is freed for more useful purposes.

Name _____

MY GUIDE TO HUMANITIES

What we shall be exploring

In Humanities our job is to discover as much as we can about humans. We try to answer questions such as:

- What is it about humans which make us human?
- How did we become humans?
- How have humans affected their world?
- How can we become more human and make the world a better home for humans?

How we shall explore

During the year ahead we shall make a number of different explorations on different topics. Some explorations will last one week, others four weeks or even longer. We shall use methods of exploring from the subjects of geography, history, religious and social studies. These will include: visits outside school both near and far; radio and TV programmes; cassette tapes and filmstrips; study kits, books, photographs, diagrams and statistics; surveys, simulation games and drama.

For each exploration you will have a contract or agreement about how much work you will do during the exploration. Everyone will have to complete their contract and there will be a chance to do bonus work in each exploration.

What we shall need for our explorations

As part of your contract you will agree to bring the following six types of equipment to every Humanities lesson:

| | |
|-------------------------|-----------------------------|
| Humanities Journal | 2 lead pencils |
| Humanities folder | 4 coloured pencils or felts |
| 2 ink or ballpoint pens | 1 ruler with centimetres |

If any equipment is forgotten (you can borrow from friends *before* lessons start) you will be given extra work to be written at home in your own time.

How we shall use our humanities journals

We shall always remember six things:

- 1 Put headings for each new piece of work.
- 2 Underline all headings.
- 3 Put titles on all drawings.
- 4 Cross out neatly with a ruler like this – ~~wrongly~~
- 5 Write neatly and waste no space.
- 6 Do corrections on our Favourite Mistakes Sheet in our folders as soon as our Journal has been marked.

How we shall use our humanities folders

Our folders are for storing our collections (corrections, opposites, places), contracts, answer sheets and projects. Every time you put a new sheet in your folder you must:

- give it a page number on both sides
- put the title against that page number in the index at the front of your folder.

How we shall behave

Successful explorers always have two qualities which they need because they have to work together with other people to make their discoveries. These qualities are:

| | | |
|----------------------------|-----|---|
| <i>Self-Control</i> | and | <i>Self-Reliance</i> |
| Paying attention | | Making your own mind up as much as possible |
| Not calling out | | Not getting answers from other people. |
| Discussing quietly | | |
| Doing a fair share of work | | |

Now start your Glossary in the back of your journal by writing and underlining these two phrases and then putting their meanings.

Building study skills into course programmes

In some schools study skills are taught separately from the subject being studied. They might, for instance, be covered as part of a pastoral programme. For some students this raises difficulties in transferring the skills to their subject area.

In this example, again taken from a Network Educational Press study guide, the necessary skills are identified at the point at which they become relevant.

Presentation: General Hints

You need to make your Final Report as interesting and informative as you can.

- Aim to maintain interest by variety – this applies whether your presentation is spoken or written.
- Use visual aids – a pie chart, bar-graph, photographs and diagrams, all make a report more attractive.
- Label all diagrams, maps, photographs carefully and say where they came from.
- Remember to include any suggestions for further work that you might have done given the time.
- Describe ways in which you might have improved your study and note any problems you faced when completing the coursework.

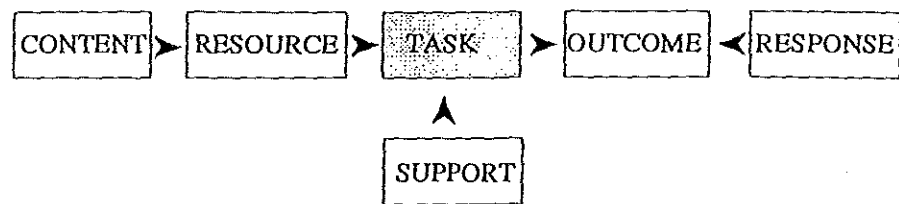
When you have finished your work, number all pages and make out a Contents Page to put in at the beginning of your report, immediately after your Title Page.

Finally, put in a written 'thank you' (acknowledgement) to all the people and organisations who helped you to carry out your investigation.

Go back and check your work – Be neat, Be careful, Be organised!

© NEP

Differentiation by Task



Students work in a variety of ways and bring different abilities and aptitudes to that work. One form of differentiation is to provide a variety of tasks that cover the main content area in order to cater for the variety of individuals in the class.

There are six strategies you might think about to help you with this:

- 1 Providing an appropriate variety of tasks
- 2 Matching tasks to student abilities, aptitudes and interests
- 3 Finding mechanisms to ensure that students stay on task
- 4 Identification of the outputs tasks lead to
- 5 Providing a range of tasks to allow choice
- 6 Building learning routes.

Appropriate Variety

When designing tasks, it is important to allow for different starting points for pupils' varying abilities. Remember also to provide variety in type, level, media, skills and styles.

The example below, from West Sussex LEA, provides several starting points.

Lessons In Mathematics

A Consider a 'snake' made of matchstick squares.

4 segments need 13 matchsticks

B Investigate how many matchsticks will be needed for 25 segments and see if you can find a relationship between the number of segments and the number of matches.

C Pupils can be introduced to the task with a view to reaching the following stages:

start with simple cases (1 segment, 2 segments ...)

look for patterns (going up in threes)

produce a table of results (perhaps a graph too)

establish a relationship/rule

try other geometric snakes (triangles, pentagons, hexagons etc.)

establish a generalisation relating the matchsticks to the number of sides of the polygon

use symbols to represent the generalisation and try extensions like:

find the number of segments given the number of matchsticks;

even work in 3-D.

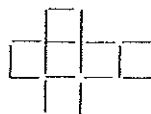
D An alternative entry point to the activity for the more able would be to reverse the relationship and ask them how many matchsticks given a certain number of segments, perhaps using algebra. Then by moving them on to examining two-deep snakes,



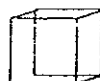
they could start to explore matchstick squares and rectangles, i.e. size related to matchsticks.



Then they could move on to examine more complex growth patterns,



or even 3D ones ...



*Sequencing
from simple to
complex*

*Differing levels of
task to cope with
ability spread*

*Opportunities
for extension*

Matching tasks to students

In the two examples that follow, the first (from Hampshire LEA) shows how an introductory activity in history can be tailored to differing levels of ability; the second (from West Sussex LEA) relates to the example of page 7 and illustrates different methods of grouping.

Consider the nature of the task, and whether it is:

- core or extension
- closed or open
- for individuals, pairs or groups.

Ways of teaching Causation

Case Study: The Peasants' Revolt: Key Stage 3

True/False statements about Causation.

Pupils make three piles of these cards

True:

False:

Unsure:

You might wish to differentiate this activity by offering pupils some of the more basic cards first, then introduce the more complex ones gradually. Try to encourage pupils to talk about the cards and to resist the temptation to assign them to the piles willy-nilly.

Events always have more than one cause

The more important events have more causes

If it happened a long time before the event it cannot be a cause

The most important causes happen just before the event

Some causes might be accidental and not planned

Every history book agrees about the causes of an event

The order in which events happen is very important

All events in history are bound to happen (inevitable)

There are some causes which were not very important

People at the time always knew what the causes of the event were

Most events in the past could have been avoided

Things always turn out as people in the past planned

All events that follow each other must be connected

Some causes are more important than others

The connection between causes is important

It is always possible to know all the causes if the historians do their research properly.

Different starting points

Vary between paired or group work

Statements allow discussion to proceed at different levels of complexity

Contribution to the task not dependent on writing skills

Allows teacher to group students in different ways to suit the purpose of the activity

The methods used are:

whole class discussion and a synthesis of the issues raised by the whole class, to apply initial criteria to the existing prospectus

paired work on mapping the school using the existing school plan

paired work (pairs chosen by the teacher and by pupils) to interview people in the school

grouped work (3 or 4 maximum) to investigate aspects of the school that arise from class discussion (e.g. jobs, use of rooms, equipment, transport to school etc.)

Whole-class discussion to provide understanding for all members of the class

Opportunity for extension work

Ensuring students stay on task

With the teacher more actively involved in supporting students through small-group tutoring (see the section on Differentiation by Support), it is important to use strategies which ensure that the rest of the group stay on task. One mechanism might involve a learning contract, such as the example below, from Avon LEA.

Name:

Humanities Contract 3

Exploring Basic Needs

Purpose:

To discover the basic needs of humans and how they are satisfied.

To discover why some humans cannot satisfy their basic needs.

To encourage concern for humans who cannot satisfy their basic needs.

To develop map skills, vocabulary, thinking and independent learning skills.

Remember to put a task number by each answer in your Journal.
Tick each box when the task is finished.

Tasks:

1 Study pages 1 to 3 in the gold coloured "Food and Survival Book 1".
Answer question 1 on page 3.

Get help from Task Card 3.1 if you need it.

2 Answer either question 2 or question 3.

3 Read "How to survive a shipwreck" on page 4 of the booklet.
Answer the question on that page.

Task Card 3.3 will help.

4 Organise yourself into groups of 5. Work as a group to complete Groupsheet 3, "What is Economics about?".

Reinforcement of the teacher's expectations

Students don't need to wait for help from the teacher

Ticks in boxes show the pace at which students are working

This is an example of a contract which helps to ensure that students stay on task; it would be appropriate with sixth-form students, for example.

FLEXIBLE LEARNING CONTRACT

Name: _____ Subject: _____

Tutor: _____ Topic: _____

Clarification of what is to be done

| Learning Objectives | Standards Expected | |
|---------------------|--------------------|------|
| | | |
| | | |
| | | |
| | | |
| | | |
| Tutorial Times | Study Time | |
| | School | Home |
| | | |
| | | |
| | | |
| | | |

Total time for activity

Timescales (to be negotiated)

| Resources to be used |
|----------------------|
| |
| |
| |
| |

Signed _____ (Student) Date: _____

Signed: _____ (Tutor) Date: _____

Identifying the outputs a task leads to

Students have different aptitudes, which can be demonstrated in the way they present the product of an activity. To allow differentiation, tasks need to be designed so they enable a variety of outputs.

Lessons In English

- A The class reads extracts from *Thunder and Lightnings*, by Jan Mark.
- B The class is divided into groups, each of which examines one character and discusses the issues he or she faces, the type of character he or she is, the involvement in the plot and the style of writing.
- C The groups are then asked to select an episode from the book involving their character, and to rehearse the episode and produce a still photograph or freeze frame. They perform their episodes and the rest of the class question the participants about their roles, feelings and intentions.
- D The class are then asked to focus on Mitch Milligan, the hero of the book, in best comic book traditions. Pupils work in groups on different tasks:
- Some analyse comics which portray heroes, negotiate agreed criteria and produce a database reflecting their research into the common characteristics of heroes and heroines
 - Some recast the story as a storyboard for TV or a comic strip
 - Some analyse the character and represent him through a TV interview, or contributions to a radio programme
 - Some promote a cause or issue raised in the text, involving the character, through a poster, pamphlet or radio documentary
 - Some create a book poster or book-jacket.
- E The different tasks lead groups to produce text, audio, video and display material. The class is brought back together to examine the conventions used in text, audio and visual material to represent heroes and heroines. They finish the section of work by producing their own short chapter from a book involving a hero, either in the archetypal mode or presented quite differently.

*Variety of outputs
to allow individual
strengths to
emerge*

West Sussex LEA

Allowing choice in tasks

Allowing students choice in the tasks they carry out will enable them to develop their differing aptitudes and interests. Discretion will obviously need to be used by the teacher, however, so that students do not make unsuitable choices.

LESSONS IN SCIENCE

A Initially, the class is given a few questions about investigating forces and energy by using toy vehicles. They are asked to extend the list and build up a set of questions like:

- are bigger cars faster?
- do plastic cars go faster than metal cars?
- does a long-life battery make a car go faster than an ordinary battery?
- is a clockwork motor better than a battery powered motor?
- are large wheels better than small wheels?
- is carpet a better surface than vinyl for testing cars?
- does the length of the test route matter?
- does the number of turns to a clockwork car affect its maximum speed?
- what difference do tyres make?
- what is the heaviest load a car can pull?
- does the colour of a car matter?
- which car needs the largest force to start it?

B The class is invited to list the questions in the order of perceived difficulty.

C Groups are then organised to undertake (with guided choice) certain of the investigations. All must note how they approach the problem, and organise their investigations and their findings scientifically. They report back in a mixture of text, tables and display diagrams.

D A final class session draws out principles and conclusions.

Students define their own area of investigation

Students are allowed choice in the complexity of the investigation

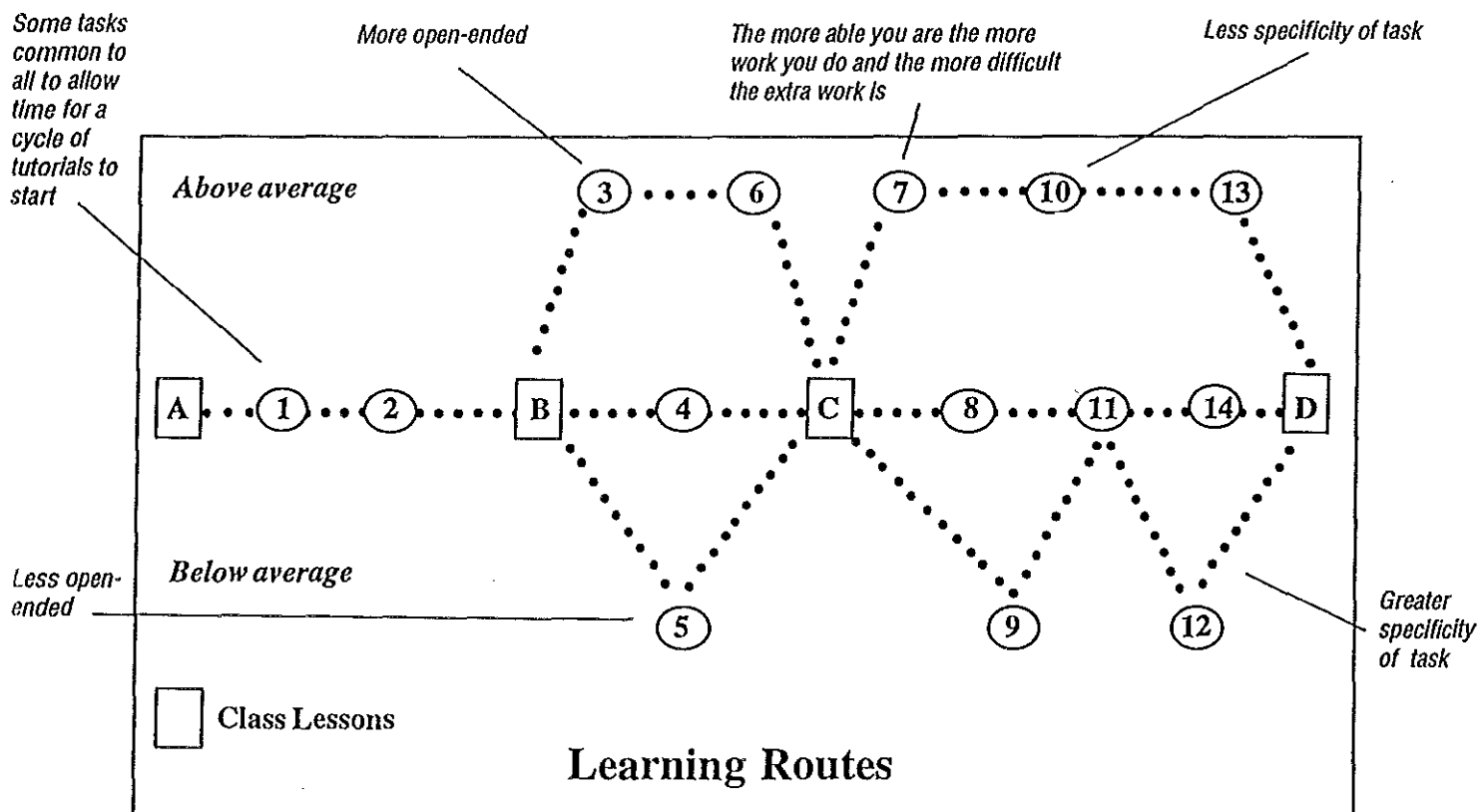
Students choose investigations to ensure ownership of the task

This provides teachers with the opportunity to 'stretch' individual students

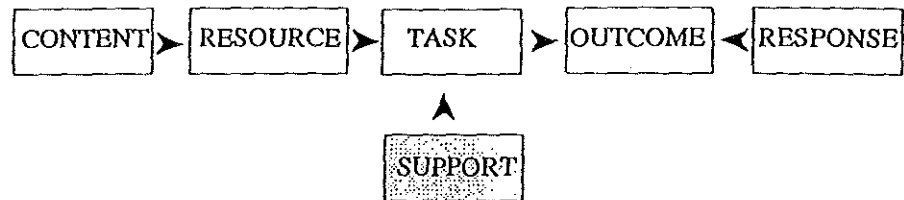
National Curriculum Council

Learning Routes

Some teachers design modules which cater for different levels of ability, by designing ability-specific tasks. The route a student takes depends on individual ability. One drawback with this approach is that it may reinforce teacher expectation of performance.



Differentiation by Support



We know that some students need more help than others to complete a given task. If we provide help we are also providing differentiation by support. The six strategies suggested in this section provide guidance on how differentiation by support may be given more systematically.

These strategies are:

- 1 Support from other adults and students
- 2 Individual support from the teacher
- 3 Support from carefully selected systems and technology
- 4 Celebration of achievement
- 5 Cooperative teaching
- 6 Small group tutoring

The first five of these strategies are illustrated by the example below, which comes from a school in Coventry.

Poetry Assignment

The aims of the work were:

- to produce a class file of poetry from established poets and from the class which would cover a range of writing
- to consider some abstract ideas about the nature of poetry as a starting point to the file
- to assess students' skills in poetry writing, involvement with and enjoyment of poetry.

A year 8 mixed-ability class with two teachers carried out this work – the class's own English teacher and a support teacher working with a Records of Achievement brief – over 5 weeks. Planning time was given by the school before the project began. The pattern of work was as follows:

- 1 The class were given at random a statement about the nature of poetry. These ranged in difficulty: some concepts were simple – “poems are fun”, others complex – “Poetry is the synthesis of hyacinths and biscuits”. Students were asked to seek support, and talk through their statement till they came to an understanding of it. If it proved too difficult, they would be ‘dealt’ a new statement and start again. Much purposeful talk followed till understandings were reached.

- 2 They then had to find a poem which best illustrated their statement. The room was filled with poetry books alongside the usual class library materials. Students researched the materials available, and made visits to the library. Teachers were asked for guidance/advice on best choices.
- 3 Once the class had decided on some aspects of poetry, they were asked to write some of their own. Then followed a sequence of lessons in which patterns and ideas for poems were given based on Sandy Brownjohn's book.* Some students wrote one poem, others five or six – all were collected in the class file. A word processor was on hand for group drafting of ideas, students negotiating its use for themselves. A tape recorder was available for oral 'drafting' of ideas.
- 4 Students then returned to other published poems, chose those which they enjoyed and discussed which poems to include.
- 5 Other published poems were used as a stimulus for further student writings.
- 6 The file grew and was celebrated. It was read by students who commented on each other's work, was shown to every visitor to the classroom, and was available for display on parents' evening. Unsolicited poems, written at home, were brought in by students. A nearby primary school working on poetry heard of the file, so they sent their poems for students to comment on.
- 7 The class made a 'boaster poster' in which they 'shouted' their achievements. All the students wrote a sentence on what they felt they had achieved.
- 8 Some members of the class wrote letters to both teachers, spontaneously expressing their enjoyment of the project and demanding that it be repeated. Teachers replied.
- 9 The file joined the class library materials for general reading.

Small Group Tutoring

At its simplest, differentiation by support may come down to the talks you have with your students. Whilst support for individual students is a vital ingredient in differentiated teaching, you will need to be aware of a number of constraints:

- lack of time will prevent you from supporting all students in this way
- some students are intimidated by one-to-one conversation with the teacher
- individual conversation of this type will not facilitate the flow of ideas between group members.

* *Does it have to Rhyme?* by Sandy Brownjohn, Hodder & Stoughton, 1980

To overcome these difficulties, some teachers are adopting the strategy of small group tutoring. This can support students by ensuring that they have clarity about the nature of the task and how they might tackle it. The following example is a transcript from a video sequence (*Supporting Students in Flexible Learning*, NCET/SCET, 1991) and shows how a year 7 maths class begin an individual investigation based on a box of Smarties.

Tutor Following our investigation we need to decide as a group what everyone is going to do, and know exactly what everyone is doing. So what ideas have you got?

Steven I want to know how many Smarties there are in the box, we are going to do bar charts.

Tutor So you are checking all the information from all the class. So what are you going to do then?

Naweeda I am getting all the information from the class.

Tutor You remember last time when we did the other one it was really difficult, wasn't it? So you need to be prepared, what are you doing first of all?

Naweeda I am going to write down the names and when I've asked them I am going to cross out their names, so we know we have asked them.

Tutor So what information are you going to record?

Naweeda How many Smarties, what are the most Smarties. Ask what the most popular colour is.

Tutor Biggest number there is. You are going to look at just how many Smarties they have got in a box or anything else?

Naweeda Just how many Smarties there are in a box.

Tutor So you are not going to ask them about colours?

Naweeda No.

Carley Going to ask what the most popular colour is and just mark it off to tell us what we've got and come back here and do a bar graph.

Tutor So you are going to mark them off the bar graph. What are you going to do then if they have got three blue ones and three yellow ones?

Carley I'm going to ask which one they prefer.

Tutor You are not asking them how many there are, the biggest number, you are asking...

Carley Which ones they think are the most popular.

Tutor Sorry, I misunderstood what you are doing. So you are asking them which colour they like best, everyone. What are you doing then, Darren?

Darren I'm going to weigh all the Smarties.

Teacher What, everybody's?

Darren Going to divide it by the number of boxes to get an average.

Tutor If Darren is doing that, and working out the weight of one Smarties, do you think that is going to be accurate doing it that way?

Paul No.

Tutor Well how could it be more accurate? I thought it was really good.

Paul He can weigh one.

Tutor Where? You think weighing one is more accurate than the way he is doing it?

Darren Yes.

Tutor Right, let's talk about this as a group then. We want to know the weight of one Smartie, and we want it to be as accurate as possible. Let us think about how we can make it as accurate as possible. Paul is saying that we weigh one Smartie, and Darren is saying that he weighs a whole box and divides it by how many Smarties there are. Why do you want to do it that way, why do you think that is more accurate?

Paul It's not more accurate because they all weigh the same.

Tutor So what is wrong with just weighing one, what is the problem with just weighing one?

Paul Too light for our scales.

Tutor So getting an average is better. Do you think that is better, are you sure now?

Carley We won't weigh the box, just the Smarties.

Tutor If Darren is weighing one box of Smarties and finding the average, could we be even more accurate than that?

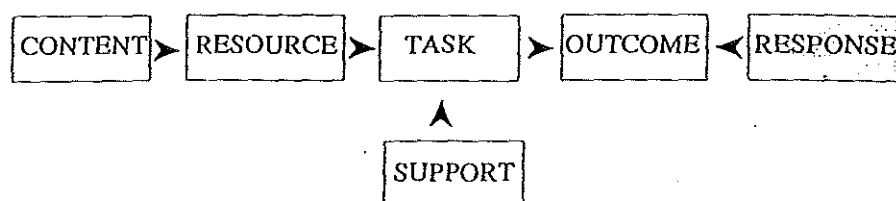
Steven We could weigh more boxes, we could go round all the tables.

Tutor So we could weigh all your tables together, shall we see if we get different answers? So put your heading 'weight', so you know what you are doing for weight.

Paul Miss, I'm going to do a pie chart.

Tutor Right, we have got a weighing experiment going . . . what else are you going to do?

Differentiation by Response



Even when they work on a common task, the products of any group of students will exhibit differences. This is what we mean by differentiated outcomes. Each individual has a unique combination of strengths and weaknesses and so the work of each will need to be responded to differently.

In this section we suggest seven strategies that you might look at to develop differentiation by response. These are:

- 1 Making course objectives accessible
- 2 Making assessment criteria explicit
- 3 Creating a system of response partners
- 4 Providing learning logs
- 5 Small group tutoring
- 6 Individual action plans
- 7 Ensuring that response reflects what the student has achieved.

Making course objectives accessible

An advanced organiser is the equivalent of the picture on the box lid of a jigsaw puzzle. It gives the students a picture of what it is they are trying to achieve. Such a picture is necessary if students are to understand how the teacher's response to their work relates to the task they were given.

The example below is the advanced organiser for the activity referred to previously on page 7.

LESSONS IN HUMANITIES

The aims are to:

- extend and apply pupils' knowledge of the school community and link it to a school in India
- offer opportunities to extend pupils' knowledge of the school's relationship to other places in the home region
- learn how particular human activity has altered the landscape
- develop pupils' appreciation of how others contribute to the school community
- improve pupils' knowledge of the wider world

Often we keep course objectives to ourselves. By making them accessible to students we are able to relate our response to what was required in a way that is meaningful to the student.

Making assessment criteria explicit

The following examples come from teachers in Dudley. They show how they made explicit the assessment criteria for different ability groups working on the same activity.

The purpose of the following task may be common, but the criteria for assessment will be particular to the needs, interests and abilities of individuals.

Teachers should plan to include times which give opportunities for differentiated responses to be made to students.

| Red Group: Use these targets to help improve your work! | |
|---|---|
| Sentences | 5b I can write using accurate use of sentences and structural punctuation |
| | 6b I can write and include accurate use of commas, brackets, dashes |
| Drafting | 5d I can gather ideas on paper/V.D.V. and produce a draft from these, revising if necessary |
| | 6d I can draft independently, taking appropriate action |
| Presentation | 6c I can use different ways to present my work, eg Art, graphics, DTP |
| Stories | 4b I can write stories with openings, characters, settings, events, end, and gaining interest |
| Purpose | 5e I can discuss the differences in vocabulary, depending on the purpose and audience. |
| Checklist | 5b |
| | 6b |
| | 5d |
| | 6d |
| | 6c |
| | 4b |
| | 5c |
| Group Meeting _____ date _____ time _____ | |

Teachers should plan to include times which give opportunities for differentiated responses to be made to students.

Yellow Group: Let's talk about these ideas
Can you put them in your writing?

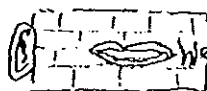
1. Is the writing clear and joined up?
2. Is my writing done in sentences?
3. Have I used Capital letters and full stops?
4. Have I asked for help with spellings?
5. Can I tell Mrs Bates my ideas for my story?
6. Does my story have a beginning, middle and end?
7. Does my story have characters in it?
8. Does it have events... how many?
9. Who have I written my story for?
10. I can read my story to Mrs Bates and my friend.

Response partners

This work, developed by Somerset teachers, allows students to respond to one another's work. With objectives and assessment criteria made available to them, students can discuss their work. Often putting thoughts into words helps the student who is having to make a response as well as the student who is receiving it.



Ever talked to a brick wall?
It doesn't do much good you know! Unless the wall is helpful
and full of advice.



Well the thing you need to do is.

Too often, though, walls don't answer back.
This is where human beings come in handy! They can be...

... Response Partners. 1

What is a Response Partner?

This is the posh title for the person who helps you with your writing. You read each others work and offer advice on it.

Why?

The idea is then that you try to improve.

How?

By using your Response Partner you can get an idea of how a reader feels about your work. He or she can point out things you may have missed or just not thought of. You then read the work of your partner and try to help them in the same way.

It is often a good idea to bounce ideas off each other to test them and see if they have value.



What to say about another's writing: (Some Ideas.)

I liked the ending.

I like these words ----

How did you get this idea?

Why did you write that?

I thought this was very strong --- powerful!

This is realistic.

You've got that across well.

You haven't got that across very well.

Good beginning

You need a stronger beginning.

You build up the atmosphere well.

You got me involved in the story.

This is a well written character.

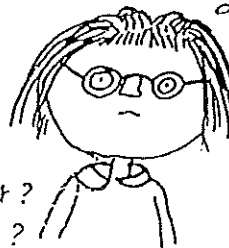
This character needs more work.

Why did you write that bit like that?

Are you happy with the bit where ---?

These are golden lines.

Fantastic!



Providing learning logs

Teachers will want to respond to the ways in which students are working as much as to the quality of what they are doing. If this is to be effective, it requires that students also pay attention to the ways in which they are working – students will need to think about their thinking, and learn about their learning. One way of doing this is through the use of learning logs. These may simply be spaces in a homework diary or a small 'vocabulary' book. Towards the end of each lesson, time is made available for students to reflect upon the lesson. These reflections are recorded in the learning log and become an additional source in guiding the teacher's response.

Small group tutoring

As with the previous section on differentiation by support, responding to students' work may often be fulfilled by finding time for detailed conversations with them. In finding time you have to juggle two variables: length of discussion and frequency. If discussion relates to individual performance against assessment criteria, it is likely to be lengthy; moving on to discussing strategies for improvement and involving action planning requires even more time. This is likely to result in contact time being very infrequent.

Small group tutoring is one strategy available, providing more support than class teaching, whilst addressing time constraints.

For a full account of this approach, you may find it useful to see the video package *Supporting Students in Flexible Learning*, published by NCET/SCET, 1991.

Individual Action Plans

To be effective, differentiation by response requires that students incorporate the teacher's ideas in future action. Individual action plans are one way of formalising this, as the example overleaf shows.

for PRACTICAL PROJECT

Name Tutor Group

Course Art 'A' level Target Exam Grade A/B

Areas of study Drawing method/composition/markmaking/tone

Project title Monochromatic study Target project grade B

AREA Identified as a STRENGTH Drawing method (very accurate)

Strengths identified, with suggestions for further development

IDEAS for DEVELOPMENT Not too confident about applying this method with a different subject e.g. figures

STRATEGIES (ie EXERCISES) 2x single figure drawings, using my current method - A3, pencil ~~homework~~

DEADLINE DATE 11/11/92

AREA(S) Identified as PROBLEMS ① Tone - not enough variation
② Markmaking - ok for some surfaces, but not all

Problems identified with strategies for improvement

IDEAS for IMPROVEMENT ① Tone - more exploration exercises
② Practise different surfaces, eg foliage

STRATEGIES (ie EXERCISES) ① Fill A5 sheet with sample weights of pencil marks - B, HB, 2B, 4B ~~homework~~
② 3x direct observation studies of foliage

Deadlines

DEADLINE DATES ① Tone - 11/11/92 ② Markmaking 18/11/92

PAIR GRADE AWARDED C+

DATE 24/10/92

DATE OF GROUP REVIEW SESSION 4/11/92

Ensuring that response reflects what the student has achieved

Improvement in the quality of student's work is individual, and may only be gradual. To be effective, teacher response should respond to an individual's work based on past achievement, rather than on measurement against an abstract idea.

| HSFC ART DEPT. STUDENT INDUCTION SHEET 2 | | |
|---|--|---|
| Art A Level skills | Where am I? | |
| The skills I Need: | Where am I now: Practiced? | Confident |
| a) Think CREATIVELY Think LOGICALLY | Art, 3D work in GCSE / Design in graphics Planning design etc in graphics | Confident in creative thinking in certain areas. Confident as I was able to overcome most design problems |
| b) PROBLEM-SOLVING | Product design, etc in graphics (shopping centre design) | Confident as I've had to solve practical problems |
| c. An understanding of the VISUAL LANGUAGE 1 Drawing methods 2 Colour 3 Markmaking 4 Composition | Experience in using different equipment practised in different areas. Tried various techniques such as abstract, pointillism etc Work experience at Design Studio | Confident as I've tried different equipment in both Art and Graphics such as pastels, paint, crayon, airbrush. Got an A in both Art and Graphics |
| d Express PERSONAL POINT OF VIEW | English essays on various subjects such as abortion, animal rights | Very confident Grade A in Eng. lang |
| e Record from DIRECT OBSERVATION | Done still life paintings/drawings in Art | Good grades for pieces |
| RESEARCH from DIRECT SOURCES | Spoken to designers on work experience Spoke to artist and Art students | Confident |
| RESEARCH from OTHER SOURCES | Read books and magazines. watched programmes on Art and Design | Very confident as I read a lot. |

Hyde Sixth-Form College