

Thinking Through Geography

Second Edition

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THE GEOGRAPHICAL ASSOCIATION

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THINKING THROUGH GEOGRAPHY

Thinking Through Geography is the result of a team of ten young teachers involved with the PGCE at Newcastle University. In its introduction it states that it is about “geography with a difference” and that the book was written to help teachers to move away from the overview that geography is a load of content to be delivered. It aims to assist teachers who do not want their pupils to be bored and demotivated, to encourage them to question and become independent learners. It is a book about professional development, introducing teachers to new strategies which require the practitioner to take risks in order to make the lessons more interesting.

All the strategies have been used in classrooms, undergoing thorough “road testing” in real life. The geographical content is high quality and appropriate to many teaching situations from Y7 to Y13 in a wide variety of schools. The trials are reported in detail to give guidelines to avoid predictable pitfalls to make teachers think about issues which will need to be addressed with the class. The latter part of the book encourages teachers to take the ideas further, both in developing their own strategies and in developing the learning of the pupils. There is some theory about learning and curriculum development to develop a “teaching thinking curriculum”. It effectively combines geography and pedagogy adding to the professionalism of the practice of teaching.

The teaching approaches outlined are novel and a worthy addition to the geography teacher’s repertoire. The resources are photocopyable and this is facilitated by the binding of the book and its black and white format. The exemplars have interesting titles such as “Mind Movies” and “Living Graphs” and the carefully prepared material will engage, stimulate and stretch students of all ages and abilities. Examples are wide ranging and up to date from around the world, addressing important “big concepts” in the teaching of geography and elsewhere.



Table: The Exemplars

C = Concept developed through debriefing the exemplar (see page 167 for the concepts).
 O = Other important learning outcome, relating to language, listening, writing, groupwork, etc.
National Curriculum (NC) Thinking Skills: IR = Information-processing; R = Reasoning;
 En = Enquiry; CT = Creative Thinking; Ev = Evaluation.

<i>Strategy</i>	<i>Topic and Year</i>	<i>Outcome</i>	<i>NC Thinking Skills</i>
Odd One Out Exemplar 1	River basins and flooding Y7	C: Classification O: Developing vocabulary	IP, R, CT
Odd One Out Exemplar 2	Traffic management Y10	C: Classification Cause and effect O: Developing vocabulary	IP, R, CT
Odd One Out Exemplar 3	Population and migration Y9	C: Classification Cause and effect O: Developing vocabulary	IP, R, CT
Living Graphs Exemplar 1	The demographic transition model Y10	C: Cause and effect O: Using pupils' knowledge Speculating	IP, R, CT, Ev
Living Graphs Exemplar 2	Daily energy consumption Y7	C: Cause O: Using pupils' knowledge	IP, R, CT, Ev
Living Graphs Exemplar 3	The stage model of tourism Y9	C: Cause and effect O: Using pupils' knowledge	IP, R, CT, Ev
Mind Movies Exemplar 1	The Kobe earthquake Y9	O: Active listening Using pupils' knowledge Remembering	IP, CT
Mind Movies Exemplar 2	A local nuclear power station disaster Y8	C: Effects O: Active listening, speculating	IP, CT
Mind Movies Exemplar 3	Down and out in Sunderland? Y10	C: Effects O: Active listening Remembering	IP, CT
Mysteries Exemplar 1	Industrial change in South Wales Y8	C: Cause O: Group work Handling information Explaining	IP, R, En, CT, Ev
Mysteries Exemplar 2	Who is to blame for Sharpe Point flats? Y10	C: Cause O: Group work Handling information Explaining	IP, R, En, CT, Ev
Mysteries Exemplar 3	The lost livestock of Loxley Coppice Farm Y12	C: Cause and systems O: Group work Handling information	IP, R, En, CT, Ev

<i>Strategy</i>	<i>Topic and Year</i>	<i>Outcome</i>	<i>NC Thinking Skills</i>
Story-telling Exemplar 1	The story of Kingsley Osufu Y10	C: Cause and effect O: Active listening Speaking Remembering	IP, En, CT, Ev:
Story-telling Exemplar 2	The Lynmouth floods Y12	C: Cause and effect O: Active listening Speaking Remembering	IP, En, CT, Ev
Story-telling Exemplar 3	The Nevado del Ruiz volcanic eruption Y9	C: Cause and effect O: Active listening Speaking Remembering	IP, En, CT, Ev
Fact or Opinion? Exemplar 1	The future of Antarctica Y12	C: Classification Decision making O: Handling data	IP, R, En, CT, Ev
Fact or Opinion? Exemplar 2	The Los Angeles riots Y8	C: Classification Decision making O: Handling data	IP, R, En, CT, Ev
Fact or Opinion? Exemplar 3	Nature's numbers Y12	C: Classification Decision making O: Handling data	IP, R, En, CT, Ev
Classification Exemplar 1	The great Kanto earthquake Y11	C: Classification and planning O: Handling information Explaining	IP, R, CT, Ev
Classification Exemplar 2	The response to Hurricane Gloria Y8 and 9	C: Classification Planning and development O: Handling information	IP, R, CT, Ev
Classification Exemplar 3	Changing iron and steel location Y9 and 11	C: Classification Cause O: Explaining	IP, R, CT, Ev
Reading Photographs Exemplar 1	Using photographs to introduce geography Y7	C: Classification O: Visual scanning Geographical vocabulary	IP, R, En, CT, Ev
Reading Photographs Exemplar 2	Urban land use models Y10	C: Classification O: Visual scanning	IP, R, En, CT, Ev
Reading Photographs Exemplar 3	Impact of tourism Y12	C: Development O: Visual scanning Handling data	IP, R, En, CT, Ev

Thinking Through Geography

Introduction

This book is about geography with a difference. Geography is a brilliant, exciting subject—at least it should be. However, our main concern is not with geography, it is with children’s learning and that is the difference. Geography is not an end or a thing in itself, it is a view of the world that changes as our knowledge and thinking changes. Its *raison d’être*, therefore, is not that it should be learned for its own sake, but rather that it should assist learning. The book is written to help teachers move away from statements like ‘*Pupils should be taught that...*’, away from the view that geography is a load of content to be delivered, and away from bland double-page spreads written to a formula that end with ‘*Why not investigate?*’. We want to assist teachers who:

- DO NOT want pupils to be bored and demotivated;
- DO want pupils to become independent learners who are excited by learning;
- DO want pupils to ask questions (even when we don’t know the answer);
- DO want pupils to say things that make us say ‘*Hmm... I’ve never thought of that*’;
- DO want parents to come to parents’ evening asking about lessons that their offspring have actually talked about at home.

Therefore this book is also about professional development because, as we have discovered, making these strategies work effectively requires you to take risks, develop your practice and learn more about students’ learning.

Genesis

Many of these strategies started life with no theoretical basis at all. Some are original and some have been borrowed from other contexts, but they were developed to make lessons more interesting. They have all been used many times, some dozens of times and on occasions they have fallen flat, but generally most pupils really enjoy them. Most pupils do like being made to think, once they get used to the idea.

Over time, as we have thought and read more, we have realised that there is more to them than just making more interesting lessons, especially when we start to use debriefing. We have learned not only why they work, but also how to make better use of their potential for promoting learning. This has helped provide an antidote to the uniformity triggered by the National Curriculum (NC) Orders.

The **strategy exemplars** were all written up by classroom teachers, some experienced heads of department, others with a few years under their belts, and two in their first year of teaching! All had a close connection with Newcastle University Department of Education, all being ex-PGCE students or mentors in the teacher-training partnership. These teachers teach in a wide variety of contexts: 11–16s, 11–18s, 13–18s, disadvantaged catchments, more favoured catchments, Roman Catholic schools, inner city areas, suburbs, old mining communities and a new town. This says a great deal about the potential in the strategies for differentiation. It also can give you confidence that these strategies and materials DO WORK.

Levels of use

This book can be used at 4 different levels. The higher the level the greater is the potential impact on students' learning. But correlated with the level of use is an increased need to restructure practice—and that costs time and effort.

Level 1

You use the photocopiable materials as they are to create more interesting and challenging lessons.

Level 2

All the strategies are flexible and adaptable and can be used across a wide spectrum of ages and ability ranges. To demonstrate this, each strategy is exemplified by three contexts that range in subject matter and age range. Many of the exemplars can be used with equal success with Year 7 and A Level classes, with only the smallest of changes. (One *Mystery* concerning the Kobe earthquake, found in SCAA's (now QCA) KS3 'Optional Tasks and Tests' publication, has been used with Year 7 and Geography HMI.) Many teachers will be able to use the templates and adapt the strategies for other topics.

Level 3

To the above, you start to add **debriefing**. There are two main lines of questioning signified for this: (i) 'What is your answer/solution/outcome?', with supplementary questions to encourage pupils to be explicit, and encouragement to other pupils to comment, chip in and question; and (ii) 'How did you tackle the problem/How did you do it?' through which one gets pupils to talk about their thinking. Thinking and talking about thinking is termed **metacognition**. It is through this process that pupils start to gain an insight into thinking and learning, and build up an explicit understanding of **major concepts in geography** which can be **transferred** to other contexts. We freely acknowledge that debriefing is very hard to do well, especially at first, and can have the effect of making one feel like a novice again. At this level, professional development really becomes a very significant issue. Further guidance on debriefing can be found in *More Thinking Through Geography* and Leat & Kinninment (2000).

Level 4

Beyond Level 3, one is very definitely into the area of school policy relating to curriculum and staff development. If you want to make teaching thinking fully effective, it needs to be an approach to teaching which extends beyond just one department or faculty. There would need to be changes, for example, in policies and practice related to assessment, pupils' reading and writing, and an integrated whole school approach to the curriculum. This is demanding, but a growing number of schools are developing meaningful teaching and learning policies.

We have written this book primarily for those who are concerned with Levels 1 and 2. The strategies are presented to deal with those primary levels with some guidance on starting to address debriefing (Level 3). The last part of the book (pages 157—166) is aimed at those who wish to consider Levels 3 and 4 in more depth.

We make no apology for the appearance of some theory about learning and curriculum development. For too long teaching has drifted towards a utilitarian, delivery mentality. One of the dangers inherent in this is that it makes the profession very vulnerable to politicians, an imposed curriculum and OfSTED judgements. A **teaching thinking curriculum**, for example, allows you to resist the winds of political debate, because you know what works and why, and you can continue to steer this course, whilst adjusting to the external forces. We know that everyone is too busy, heavily burdened by too much paperwork, but understanding about learning has to be a priority for teachers, otherwise our claim to be professionals is hollow. We expect doctors to know a great deal about physiology, illness and treatments—teachers need to know about how to get students to learn.

To some extent the educational system has been following where **Thinking Through Geography** has lead. The Key Stage 3 Strategy includes geography in the Teaching and Learning in Foundation subjects (TLF) strand. This strand includes thinking skills. This reinforces the trend in the revised National Curriculum which requires all subjects to address the following thinking skills:

- *Information-processing skills*
These enable pupils to locate and collect relevant information, to sort, classify, sequence, compare and contrast, and to analyse part/whole relationships.
- *Reasoning skills*
These enable pupils to give reasons for opinions and actions, to draw inferences and make deductions, to use precise language to explain what they think, and to make judgements and decisions informed by reasons or evidence.
- *Enquiry skills*
These enable pupils to ask relevant questions, to pose and define problems, to plan what to do and how to research, to predict outcomes and anticipate consequences, and to test conclusions and improve ideas.
- *Creative thinking skills*
These enable pupils to generate and extend ideas, to suggest hypotheses, to apply imagination, and to look for alternative innovative outcomes.
- *Evaluation skills*
These enable pupils to evaluate information, to judge the value of what they read, hear and do, to develop criteria for judging the value of their own and others' work or ideas, and to have confidence in their judgements.

From September 2001, TLF is in its national roll-out phase, requiring many more geography departments to engage with teaching thinking as a teaching style. In the pilot phase geography (and history) departments used TTG strategies to infuse thinking skills into their teaching and schemes of work, and took a lead in their schools in developing the teaching style. The roll-out provides further opportunities for go-ahead departments.

TLF will also offer training in managing curriculum innovation and coaching, which provide important building blocks in helping teachers move on to levels 3 and 4 in the use of these materials. Geographers should take the opportunities offered by TLF (which also include assessment for learning) to demonstrate the contribution they can make to developing pupils as intelligent, flexible and independent learners.

In the Table of exemplars on page iii the following key is used to indicate whether a particular strategy is likely to invoke one the skills described in the National Curriculum.

IP	Information Processing
R	Reasoning
En	Enquiry
CT	Creative Thinking
Ev	Evaluation

However it should be realised that there is a great deal more going on in pupils' minds and in the pupil groups when these strategies are used.

Using the Exemplars

Each strategy is demonstrated through three exemplars which were developed for and trialled with different age and ability classes. This demonstrates the inherent flexibility of each strategy, although the intentions and outcomes of using a particular strategy will vary with the age and ability of the class. For example using a mystery with a Y7 group is likely to contribute as much to intellectual development as it is learning content. Using a mystery with an A Level group, however, may focus more on developing skills that are important in decision making and data response papers. However you should not feel abashed if your intention is simply to make some lessons more challenging for the pupils and perhaps more interesting for you. This is really worth doing for its own sake.

The Style

We have had to make some difficult decisions in writing this book—**because it is very different**. Nine teachers have been involved in writing. All the strategy write-ups have been edited to achieve some conformity in coverage and style, but there has been a deliberate decision not to make them all the same. We hope that this will give the impression that there is room for individuality and your own professional skill in planning and delivery. Therefore some write-ups give greater attention to launching, some to managing, and others to debriefing, depending on the emphasis employed by the teacher. We have not tried to pretend that everything went smoothly with all the trials, partly in the hope that you will not be too dismayed if your first experiences are not a brilliant success. Over time, you will learn to make these strategies work effectively. However, we hope that there are enough descriptions of excitement, confusion, insight and real learning to convince you that this is **geography with a difference**. The write-ups of the trials are provided to give you some guidelines to avoid predictable pitfalls and to make you think seriously about the issues you will have to address with your classes. They cannot be exact templates to give you instant success. We hope that we are providing you with some materials and scaffolding, but you still have to build the house.

The use of the words ‘student’ and ‘pupil’ is not consistent throughout the book; the use in exemplars reflects the age group with which the teacher was working.

In some exemplars the teacher has stuck to describing what she/he did in the past tense. In others, the writer has adopted a future tense—‘you should’. The latter is a sign that the teacher has used this strategy in a variety of contexts on numerous occasions and feels more certain about generalising advice. The former suggests less experience with the strategy, and therefore less certainty.

Rationale

The rationale, written as a general introduction to each strategy, gives a broad view of the value of the strategy and/or the personal motivation of the teacher for using it. It is not written to persuade you of the correctness of one particular view but rather to help you think about the potential relevance and power of the strategy as you watch the students engage with it and talk about it afterwards.

The following headings are used for each exemplar:

Context

This gives the background to the class and the topic with which the strategy was used. It gives some idea of the content/teaching that had gone before and some of the characteristics of the class. However, in most cases, matching the preceding content is not vital. What has gone before can alter both the way the activity proceeds, and the outcomes. For example, a *Living Graph* can be used at the end

of a module to help pupils make connections between separate knowledge items and thus consolidate their understanding, but it could also be used at the beginning to stimulate a class and to raise questions which can form the core of an enquiry.

Precise behavioural objectives are not given because we feel that the activities do not fit a linear learning model and do not have simple behavioural outcomes that can be predetermined. It is very hard to say what pupils will learn; they are being provided with learning experiences and some of the purposes of the debriefing are to **find out what they have learned**, to help them identify it; to give it a name and to demonstrate its importance and relevance. Therefore we prefer to talk about **possible learning outcomes**. It does help preparation if you have some idea about what they might learn, but you always have to be on the lookout for the unexpected. However we do not imply that objectives cannot or should not be written for lessons using these materials, rather that their exact nature will depend upon the context.

Preparation

This section contains suggestions about what could/should be done before the lesson to make it run smoothly and to give you maximum chance of success. This does not excuse you from planning the lesson in some detail. These strategies and exemplars are not worksheets or simple textbooks that can be dished out and used with no thought. They are not teacher-proof. We would expect some teachers to rewrite some of the materials so that they will fit their particular context better. When you take up something new and different you need to go back to square one and not take too much for granted. More specifically you might need to:

- think about the *launching*;
- have a written note of what *instructions* you will give and perhaps refer to it during the lesson;
- think about the *managing* of the activity, so that you support and encourage but don't interfere too much;
- plan the *debriefing*, (so that you have some time for it at least), know some of the questions you will ask, and give some thought to how you will respond to anything pupils say;
- prepare some *follow-up* work.

Launching

The first time that you use a strategy with a class you may need to persuade them to accept the relevance and the different demands being made. This is especially the case if they are used to a diet of undemanding lessons with correct answers. These activities can make students feel threatened because they are unfamiliar. We have used the word **launching** to establish a particular analogy: a boat is stationary on a slipway; the chocks/brakes are removed; you give it a shove and it gathers momentum down the slipway. You are giving the students a shove, and they gather speed because **thinking** is something natural which we enjoy (unless we have learned to steer clear of it). It enters the water (a new medium) and with a bit of luck it floats freely and independently, ie, the students start to think for themselves as they do the task. The debriefing process can be likened to the boat being fitted out so that it is thoroughly seaworthy, with all its equipment and trained crew (thinking resources and strategies—students become independent learners!). As you will appreciate, this does not happen in one lesson and you have to launch the boat over and over again. You will notice in some write-ups that where classes had been exposed to either that strategy or others before, launching was less of an issue because the boat was already floating.

Instructions

This section outlines the instructions that will help you avoid a few of the pitfalls, but of course instructions are not all given to the pupils in one big slab. Some were committed to paper in the trials, in which case these sheets are included, but in other cases they were given verbally.

Managing the activity

Perhaps the single most useful piece of advice here is to think about your intentions for the particular activity. To some extent you will be concerned with the learning of content, because the activities are not content free: therefore you will have some regard to this. But overall your paramount concern should be with developing the students as learners. If you interfere too much or unnecessarily you will stunt their growth; if you leave them stranded they will not make any progress and they will get frustrated. This uneasy middle point has been termed **contingent teaching**, providing just enough support to encourage pupils to engage and learn but not too much so that they use you as a crutch and learn nothing (another term used in similar contexts is **scaffolding**). We all have to forgive ourselves for getting this wrong at times. Nonetheless, each strategy write-up contains useful, practical advice about making that strategy work well.

Debriefing

This is the very hardest part of teaching thinking to get right, but at the same time it is the most crucial. You need to determine whether the lesson was not only interesting and challenging (good in itself) but whether you have also gone further, and enabled the pupils to consolidate the learning and transfer it to other contexts. This is the **multiplier factor**.

Not all of the exemplars have details about debriefing: either the teacher felt that it was not appropriate or because circumstances, such as time, ruled it out. For our purposes here it is useful to talk about four possible strands to debriefing:

- get pupils to explain their answer/solution at length;
- ask pupils about their mental processes as they did a task or tackled a problem;
- ask pupils about the patterns in reasoning that they employed, or which emerged in discussion (these two constitute **thinking about thinking** or **metacognition**).
- draw the attention of pupils to other contexts where the same reasoning is valuable. These may be in other topics in geography, in other subjects or in their everyday lives. This is termed **bridging** and the intention is to get them to transfer their learning from the geography lesson to the other contexts.

All the contributors to this book find debriefing a difficult practice to establish for a variety of reasons. Some are logistical (ie, fitting it into a packed lesson) and some are intellectual (ie, hard for pupils to engage in). This book therefore limits its ambitions in relation to debriefing; we hope to be able to get you to do some, or to make a start at least.

Follow-up

Many, but not all, of the strategies have some suggestions for follow-up activities. Decisions on follow-up activities have to be taken in the context of the objectives of the lesson or unit in which the exemplars or strategies are used. There is an issue often about how to turn good thinking into writing. Good advice in this area can be found in Christine Counsell's Historical Association publication (1997) which is easily applied to geography.

Adapting the Strategy

After the three exemplars some general advice is given on how you might approach adapting the strategy to other geography teaching contexts, eg, suitable topics, finding source material, writing resources, variations on the tasks and instructions.

Afterthoughts

'Afterthoughts' gives some final reflections by the teacher(s) on what they have learned from using the strategy. Using these strategies with any degree of success is a form of professional development in itself. There are also some comments relating to getting other members of staff to use the strategy.

Teaching Thinking and the National Curriculum

The revised National Curriculum for Key Stage 3 published in 2000 introduced five embedded thinking skills to be taught in all subjects. Whilst there can always be debate about the detail of such lists, they clearly provide an important language for planning and teaching in the foreseeable future.

The Table of Exemplars on page iii can be used to help you plan when and how to use the materials in *Thinking Through Geography*.

Odd One Out

Rationale

Many games make an excellent framework for thinking strategies. After all, games are mostly enjoyable and they make you think a bit. It is worth reflecting on the number of important skills that are employed in playing Monopoly well, to say nothing of Bridge. **Odd One Out** draws on the heritage of good games, by getting students to think about the characteristics of things.

Unless one can identify the most important characteristics of a phenomenon then one cannot classify it and one will not describe it well or associate it with other important related information. The major concept being addressed therefore is **classification**.

The strategy uses a very simple format in asking students to pick the odd one out from a list of words, although as you will see there a number of variations on the basic theme. It can be used at the beginning of a topic as a starting point to see what students already know, or perhaps more effectively, as an end point to assess and revise a unit.

The advantages and strengths may be summarised as follows:

- students become more familiar with the meanings of key vocabulary, related to the characteristics that help pick the **Odd One Out** (eg, processes, landforms, erosion, deposition, features, causes and effects). This heightened awareness is very important during revision so that students understand examination questions;
- students are encouraged to see the similarities and differences between key terms, rather than seeing them as a collection of disconnected words. As a result they get a bigger picture of the topic;
- it is good fun and makes the teacher think as much as the pupils;
- it can be done quickly, in as little as 10–15 minutes, and in a variety of student groupings, which makes it very flexible (ie, it could be used as an extension task for fast finishers, a paired task as one activity in a lesson, or as a whole lesson activity);
- as it is fairly easy to make **Odd One Out** work, it is really interesting to go round and listen to students—you get a window into how they think;
- it is easy to explain to other members of staff.

Classification is a fundamental concept because the mastery of all other concepts rests upon it.

Having a secure vocabulary in the subject is both demanded by KS3 PoS (para 3g) and vital to good examination performance—thinking is not content free.

Being able to listen to students is vital to successful debriefing

Odd One Out

Exemplar 1:

River basins and flooding

Throughout the book, you are encouraged to use your professional judgement but this should not result in taking the challenge out of activities (see page 159).

This is a simple introduction to metacognition (see page 159)...thinking about learning

This may be seen as an example of bridging into the activity, which helps pupils see a more general value to the activity.

Context

This activity was used with a mixed ability Y7 group at the end of a unit of work on river basins and flooding. They were generally a noisy and lively group, demanding of teacher time, and the class included some pupils with considerable learning difficulties. Within the topic the pupils had studied features of river basins, the water cycle, movement of water and causes and effects of flooding (paras 8a and 8b in PoS). The activity was planned to be a basic test of terminology and the pupils' ability to relate the terms to each other. Actually it turned out to be much more.

Preparation

Very little physical preparation is required, apart from duplicating the worksheets. You need to give some thought to the tasks that you will use and to the word sets that you give to the pupils, so that you have decided which is your odd one out and why. (They may of course come up with a legitimate alternative.) You should work out your response to the tasks on the instruction sheet and, if you feel uneasy about the sets, change them.

We have developed five variants of the task beyond the standard form, and they can be considered when preparing the lesson:

1. **Brainstorming** the words at the start of the activity. Use the board and do a bit of judicious editing. This variant is probably best left till you are more expert.
2. **Quick fire** rounds. Ask the whole class to work quickly on one set.
3. **Adding on.** Once they have identified the **Odd One Out**, ask the pupils to add another word to the set which has something in common. So for example having been given waterfall, solution and meander, pupils will usually choose solution as the **Odd One Out** on the grounds that it is a process not a landform; now they have to add on another landform.
4. **Pupils create their own sets.**
5. **Classification** of the whole list.

Not all the tasks need to be used but they represent a progression in the use of the resource, helping the students to build their skills and understanding.

Launching

The activity was introduced by telling the pupils that they were going to be playing a game, using words from the topic that they had been studying. Of course (if you had used it) you could refer to the **Classification** activity (see page 114) and tell the pupils that they were going to be using their brilliant classifying skills. A high impact alternative which would require more effort would be to hold up an apple, a banana, some grapes, and a carrot and ask which is the **Odd One Out**. If you get the expected answer, carrot, you can make the point that all were edible, full of vitamins and minerals and colourful (shared characteristics), but the carrot is not a fruit, it is a vegetable. You can make all sorts of jokes about what a fool you would look if you put carrot in a fruit salad and so on. By seeing the links between things that make them a group, we show wisdom and understanding and we keep our jobs as chefs!

In this case the pupils were given 2–3 minutes to brainstorm as many words as they could associate with the topic they had just finished, resulting in a spider diagram on the board. (They weren't allowed to use their books!!) Having done this, we completed 3 or 4 examples in the form of a quick fire round to get them warmed up, eg, **1**, **23**, **26**—which is the Odd One Out? They got the idea very quickly.

Instructions

1. Distribute the pre-prepared word list—which of course varied slightly from the one on the board). Give the Instructions sheet to pairs. Ask the pupils to read through them quickly.
2. Read through Task 1. Explain that the numbers are used as a reference system for the words on the worksheet and that everyone must be able to see both the instructions and the worksheet.
3. Explain that each list of words (as indicated by the numbers) has an ‘*Odd One Out*’, and that they have to decide what it is. Stress the importance of being able to say **why** and that you are looking for straightforward ‘geography-type’ answers and not wacky ones (this may happen with some able pupils). Tell them to write down their answer including the reason.
4. Emphasise the importance of discussing and agreeing in the pair before writing anything down: either partner must be able to explain their answer.

Odd One Out
Exemplar 1:
River basins and
flooding

Managing the activity

From experience of using this strategy a number of times it has been found that pairs are the most suitable grouping. Pairs are supportive and this activity does not need the resources of a larger group. The first time pupils do this they tend to lack confidence about what is expected and they need considerable reassurance that they are doing the tasks correctly.

Timing of the activity is fairly flexible. Left to their own devices, pairs will work at very different rates, not because they are being idle but rather because some talk things through in greater detail and look for alternatives. You may prefer to let them work at their own speed or to tell them to move on to the next task every few minutes. It is a missed opportunity if you do not move the class on to Task 4 at some point as this is a higher order task which capitalises on the understanding generated in the earlier tasks.

Some pupils only did Task 3 or Task 4 and some did the whole lot, which did not detract from the overall value of the activity. We were not only looking for correct answers, but also for fundamental understanding. Some had the attitude that this was just a game, with little to do with geography, but as we discussed this they began to change their minds.

This is just one example of many of the roles of talk in aiding understanding (see page 160).

Debriefing

Debriefing was limited in this case. We went over their answers and cleared up some misconceptions (which was valuable in itself). Over the course of this phase we kept coming back to very important words (such as process and landform, hazards, flood defences, upland and lowland) which was a central purpose of the lesson.

This is one example of differentiation by outcome.

Follow-up

This is outlined on the instruction sheet.

Odd One Out
Exemplar 1:
River basins and
flooding

Worksheet—River basins and flooding

1. Evaporation	18. Drought
2. Tarmac	19. Stores
3. Grass	20. Tidal waves
4. Planting trees	21. Slope
5. Watershed	22. Lake
6. Heavy rain	23. Precipitation
7. Transfers	24. Sand
8. High tides	25. Deforestation
9. Monsoons	26. Typhoons
10. Vegetation	27. Mouth
11. Drainage basin	28. Channel
12. Condensation	29. Groundwater
13. Concrete	30. Surface water
14. Urbanisation	31. Snowmelt
15. Dam building	32. Raising river banks
16. Source	33. Throughflow
17. Tributary	

Instructions

You have been given a list of words which you might have come across during your work on *Rivers and Flooding*. You are going to use these words to complete the following tasks.

Odd One Out
Exemplar 1:
River basins and
flooding

Task 1

Working with a partner, look at the sets of numbers below, which match to a word from the list on the worksheet. Pick out the words and write them in your book. Then try to decide which word from each set is the *Odd One Out*. Underline this word in your book and explain why it is the *Odd One Out* and what the other two have in common.

<i>Set A</i>	2	13	3
<i>Set B</i>	4	15	6
<i>Set C</i>	8	27	31
<i>Set D</i>	22	10	25
<i>Set E</i>	1	12	14
<i>Set F</i>	30	11	29
<i>Set G</i>	14	20	32
<i>Set H</i>	31	20	8
<i>Set I</i>	23	28	17
<i>Set J</i>	5	16	19

Task 2

Now that you have started to see a pattern, add an extra word to each group, but keep the same *Odd One Out*.

Task 3

Now try to put together your own group of words with an *Odd One Out*, and you must have a good and obvious reason. Swap your group of words with your partner and see if they can work yours out and vice versa.

Task 4

Now try to sort out all the words from the list on the worksheet into 4 to 6 groups.

Odd One Out
Exemplar 2:
Traffic
management

Cause and effect are two of the big concepts elaborated in Appendix 1 (see page 167).

It should be remembered that, despite the instructions, these activities still need careful planning

Context

This was used with a Y10 GCSE class who had never done an *Odd One Out* before. They were following the NEAB syllabus 'C' and had got to the section on traffic and movement. Most recently, pupils had been studying traffic problems and commuting in Blyth and Tyneside, and this was used as a summary activity. The intention was both to revise the unit and to develop pupils' awareness of such terms as cause, effect and traffic management.

Preparation

Nothing physical is required beyond the most obvious step of duplicating the sheets. However, as with any *Odd One Out*, it really repays if you sit down and think through the important categories so that you can respond to the pupils more intelligently. We have been deliberate in not giving you our reasoning behind the selection of numbers; we want you to think them through and if necessary work out your own sets. However we should make it clear that some sets are designed around causal links rather than shared characteristics. The set of **10** (rush hour), **12** (pedestrian crossing), **26** (double yellow lines) and **29** (accident) is deliberately ambiguous. It can be argued that the rush hour leads to accidents, which has led to pedestrian crossings being installed. But another explanation is that pedestrian crossings and double yellow lines are intended to reduce accidents, which leaves rush hour as *Odd One Out*.

Launching

If you have a class which has not done an *Odd One Out* before, go through one set of words with them or use some of the activities for launching in Exemplar 1.

Instructions

They worked in pairs using the instructions on the sheet.

Managing the activity

This was easy. The pupils were totally absorbed and I had the chance to listen and answer questions. Not everyone knew what pedestrianisation was; photochemical smog needed some explanation; most did not associate dust particles with exhaust fumes and some took sleeping policemen literally! Some of these explanations might have been avoided if I had asked them to read through the words for 2 minutes at the beginning and asked for questions of clarification, but failing to do this did not detract from the lesson, which was a pleasure. The pupils were thoughtful and inventive, especially in Tasks 3 and 4. Only a few made deliberately daft suggestions.

Debriefing

In the debriefing I focused on Task 4, where the pupils were asked to devise 3–6 categories. They had been forced to think really hard and it proved to be a very effective way of making them consider traffic management. Some pupils had seriously looked at different ways that they could form groups.

There were several common headings:

- materials (concrete);
- movement (tidal flows, school runs);
- problems;
- solutions;
- effects;

In this instance, the level of challenge was appropriate.

- cars;
- parking;
- rush hour;
- causes.

The pupils could make little of the question about how they had formed the groups. They agreed that problems, causes and solutions were the most useful headings and that solutions could be usefully split into concrete and non-concrete. They thought the activity was useful on two grounds:

- firstly they had been forced to think about the meaning of all the words and not just accept them;
- secondly they had to work out the categories, they would remember them much better than if they had just copied from a book.

I made the point that many other issues and topics could be looked at in this way—problems, causes, effects, solutions—for instance, residential environments, which they had already studied.

Odd One Out
Exemplar 2:
Traffic
management

The pupils have constructed their own understanding rather than just being told (see page 157).

A limited example of bridging (see page 162).

Odd One Out
Exemplar 2:
Traffic
management

Worksheet—Traffic management

1. Cycle track	18. Speed cameras
2. Wheel clamp	19. Bus passes
3. Exhaust fumes	20. Bypass
4. Park and ride	21. Intersection/junction
5. Inner-urban motorway	22. Bus lanes
6. Vibration damage	23. Road rage
7. One-way street	24. Sleeping policemen
8. Journey to work	25. Multi-storey car parks
9. Tailbacks	26. Double yellow lines
10. Rush hour	27. Pedestrianised streets
11. Rapid transit system	28. Photochemical smog
12. Pedestrian crossing	29. Accidents
13. Tidal flow	30. Dust particles
14. Noise	31. School runs
15. Roundabouts	32. Taxis
16. Petrol consumption	33. Ring road
17. Shopping trips	34. Congestion

Instructions

Task 1

Each of the numbers in the sets of four below relates to a word to do with traffic in urban areas. Can you work out with your partner which one is the *Odd One Out* and what connects the other three?

Odd One Out

Exemplar 2:

Traffic
management

<i>Set A</i>	8	15	17	31
<i>Set B</i>	4	17	19	33
<i>Set C</i>	5	11	22	32
<i>Set D</i>	10	12	26	29
<i>Set E</i>	2	9	18	24
<i>Set F</i>	14	28	30	31
<i>Set G</i>	1	13	16	34

Task 2

Still with your partner, can you find *one more* from the worksheet to add to *each* of the sets above so that all *four* items have something in common, but the *Odd One Out* remains the same? Think about why you have chosen each one.

Task 3

Now it's your turn to design some sets to try out on your partner! Choose three numbers that you think have something in common with each other and one that you think has nothing to do with the other three. Get your partner to find the *Odd One Out*, then do one of theirs. Try a few each, but remember to be reasonable.

Task 4

Can you organise all the words into groups. You are allowed to create between 3 and 6 groups and each group must be given a descriptive heading that unites the words in the group. Try not to have any left over. Be prepared to rethink as you go along.

Odd One Out
Exemplar 3:
Population and
migration

Context

The lucky class who got to do this was a Y9 group, after 3 weeks studying demographic transition, population problems and policies in a variety of countries at different levels of economic development. Although mixed ability, the class contained a large number of low achieving pupils—few had reading ages beyond their chronological age. I was particularly concerned that they should make links between the concepts that we had been looking at. The module had a central driving question: how have family sizes changed through recent generations of our own families, and why have these changes happened?

Preparation

As in other examples of *Odd One Out*.

Launching

Homework can be excellent preparation because, if pupils are working from knowledge they have gathered, they are more likely to develop understanding

This was different. I reactivated the main enquiry question. Pupils had done some homework on the size of families and living conditions in previous generations. From previous years I knew what to expect so I asked some questions to tap into accounts about siblings of (great) grandparents who had died, living conditions and leaving school (eg. at 13 or 14 to go down the pit). This provided an important context so that the class would start to think about the reasons for variations in birth rate.

Scaffolding see page 160.

Having given out the worksheets, I asked individual students to explain the connection between some pairs of terms (such as nutrition and infant mortality), taking care to pose easier pairs for the less able. Frequently they needed nudging towards full explanations, but it was important to demonstrate to the class the quality of responses expected, as a check on understanding and to correct some misapprehensions. For example, ageing and death rate were thought to be positively correlated by the pupil questioned until another argued the opposite. It seemed possible/likely that there would be a danger of mutual reinforcement of such misunderstandings, so I engineered pairings that put weaker pupils with a stronger partner. This would be particularly important when they designed their own sets.

Instructions

These were contained in the sheet given to the pupils (ODD ONE OUT RESOURCE SHEET 5).

Managing the activity

This is a superb example of a teacher attempting to move pupils through their Zone of Proximal Development, ZPD (see page 159).

Some pupils were unsettled by the thought that there was not a correct answer, so they needed some reassurance. As this *Odd One Out* is as much about causal connections as it is about characteristics, it took the group much longer to get going. Each one took longer and some groups needed a jump-start on some sets—it felt almost like wiring up their brains. They could not make a connection by themselves but once I had put the bits together for them there would be a little crackle, a few sparks, and they would splutter into life! One of these episodes would go something like this (using Set C 2 10 15 26):

- Me:** *Stuck?*
- Group:** *Yes.*
- Me:** *OK... Age of marriage and birth rates. [They look blank]. If people get married young, say 18, they have got perhaps 25 years in which to have children...OK? [They nod]. If people get married at*

30, they have only got 15 years to have children... OK? [They nod]. So if they get married younger, are they likely to have more or less children?

Group: *More?*

Me: *So, more children... is that a higher or lower birth rate?*

Group: [Sparks and flashes] *Higher!*

Me: *Now careers...*

Group member: *Yeah, if girls have a career they don't get married so young... I get it. [Now they are going, they talk it through.]*

(It would have been valid for their particular community if they had made the point that you don't have to be married to have children.)

Some pairs did not need this, and I left them to it. The quality of discussion was excellent, and although there were some misapprehensions at large I heard some of these being sorted out in the groups. There was some comparing between groups; and because different connections had been made some pairs contested theirs against another. They were very clearly learning from each other.

In Task 3, when pupils had designed their own sets, they were allowed to be more specific (eg, *low* birthrate or *many* people per doctor) if their partner was struggling with a set. Several (more able) students felt constrained by the list of terms and were allowed to add new terms such as famine and divorce since they clearly understood some of the links to the rest. Both these examples are instances of effective differentiation. In fact, if you use its inherent flexibility, this activity is a brilliant approach to differentiation.

Debriefing

This was similar to Exemplar 2 (see page 14).

Follow-up

This is contained within the list of Tasks (see ODD ONE OUT RESOURCE SHEET 6).

**Odd One Out
Exemplar 3:
Population and
migration**

This is a potentially rich language environment likely to promote learning (see page 160).

Odd One Out
Exemplar 3:
Population and
migration

Worksheet—Population and migration

1. Overcrowding	17. Drinking water
2. Age of marriage	18. Farm work
3. Rural areas	19. Ageing
4. Death rate	20. Push factors
5. Education	21. Natural increase
6. Infant mortality	22. Primary health care
7. Male inheritance	23. Industry
8. Pull factor	24. Sterilisation
9. Disease	25. Religion
10. Birth rate	26. Careers
11. Urban areas	27. People per doctor
12. Life expectancy	28. Less developed countries
13. Nutrition	29. More developed countries
14. Youthful	30. Obesity
15. Cholera	31. Contraception
16. Migration	32. Heart disease

Instructions

Odd One Out
Exemplar 3:
Population and
migration

Task 1

Look at the sets of 4 words below and decide with your partner which is the *Odd One Out*. Make sure that you are clear about the reason and what connects the other three.

<i>Set A</i>	3	18	19	28
<i>Set B</i>	8	11	13	23
<i>Set C</i>	2	10	15	26
<i>Set D</i>	6	13	17	25
<i>Set E</i>	1	4	15	2

Task 2

Again with a partner, can you find one more from the list to add to each of the sets so that now four items have something in common, but the *Odd One Out* remains the same. Note down your reasons.

Task 3

Now it's your turn to design some sets to try out on your partner! Try to make them different from the ones that we have done already. When you are both ready, swap. Try a few each.

Task 4

Can you organise all the words into groups? You are allowed to create between 3 and 6 groups and each group must be given a descriptive heading or title. Try not to have any left over, so be prepared to change your mind.

Odd One Out: Adapting the strategy

This is perhaps the easiest strategy in the book to adapt to other contexts. The only hard part is generating the list of words. This is not quite as straightforward as it seems, because there has to be some thought behind your choice, in as much as you have to decide on the major categories of words or concepts that you wish to be 'discovered' by the students. If for example you were doing a list for coasts, it is advisable to decide which of the following categories to include, erosion processes, erosional landforms, depositional landforms, factors affecting coastal morphology, coastal management features, recreational uses of coastal areas, landforms associated with sea level changes, coastal management interest groups, etc.

The list of five variants of the game listed in preparation for the first exemplar also contains useful advice (page 10).

The words on the worksheet should be numbered (for ease of reference) and typed out in a random order so that the students cannot see any pattern in the list. You need to prepare your word sets so that you have a view on which is the odd one out, although you have to be prepared to accept alternative answers as long as they are justified.

Afterthoughts

In planning, implementing and writing up this activity we have been forced to think about what we are asking the pupils to do and how important it is. We knew that it 'worked' well but we now begin to see some of its importance. For example, we can presently identify four kinds of relationships in the sets:

- sets that share an important characteristic, such as noise, exhaust fumes and dust particles (all pollutants from traffic);
- sets that are part of a causal chain such as rush hour, tail backs and road rage;
- sets which have a centre word which has separate links to two others, such as dam building, linked to concrete and stores;
- sets which form a web, of which there are many examples in the Population Exemplar, such as education, birth rate and careers. Here every member can be linked separately to the other two.

It is tempting to speculate on the importance of this type of activity. An immediate outcome is a better grasp of vocabulary, especially where the sets are based on shared characteristics. However, where the sets are based on causal links or webs, are the pupils being supported in developing their understanding of relationships? We are struck by the coincidence of what seemed to be happening as students worked on the task (and talked) and the geography level descriptions. Level 4 for instance includes:

'They recognise and describe physical and human processes. They begin to show understanding of how these processes can change the features of places, and that these changes affect the lives and activities of people living there.'

Level 7 progresses to *'They describe the interactions within and between physical and human processes. They show how these interactions create geographical patterns and contribute to change in places and patterns.'*

This might suggest that **Odd One Out** would make an excellent assessment tool—an issue worth researching in the future.

Living Graphs

Rationale

This is one of the simpler activities to plan and manage, but its outcomes are profound. Students draw or are given a preprinted line graph. They are given a number of statements relating to events or things people might have said that relate to the context of the graph and they have to decide where on the graph (at what time point) it was most likely to have occurred.

Geography uses graphs as one of its stock-in-trade techniques, and when students are presented with them in lessons they are usually asked simple data response questions or to describe the graph, or maybe they are just asked to draw a graph from a set of data. These tasks have their place. They develop a familiarity with and basic understanding of the properties of line graphs and give students crucial practice in the simple type of examination question. However, use of graphs rarely excites or creates debate and argument. Graphs can be relied on generally for bread and butter, undemanding lessons, in which we get a respite and students can get some satisfaction from a neat page.

Living Graphs change all that. They give the figures and the lines real context and allow students to make connections between the abstraction of the graph on the page and the people and events that lie behind it. While line graphs show the relationship between just two variables, such as time and population, **Living Graphs** give a reminder that other variables, such as migration and public health are interacting with the ones depicted in the graph. Therefore they greatly assist students in constructing meaning from the graph.

Living Graphs make students think and talk and disagree with each other and you. They encourage them to ask more questions and even on occasions to stay behind after the bell. They make students look at graphs in a totally new light. They are extremely flexible and exactly the same resources can be used for a Y7 and a Y13 class, which says much about their potential for differentiation by outcome.

This process may result in cognitive conflict for some students (see page 159).

Living Graphs
Exemplar 1:
The demographic transition model

Here is another example that Thinking Skills activities do not jeopardise geographic content—they just use it better.

Context

This was used with a very mixed ability Y10 group in a unit on population. It had the complete spectrum of students: attention seekers, quiet but hard working students, lazy students, half a dozen very able students of varying dispositions and statemented students including a deaf pupil with ancillary support. They had covered birth, death and fertility rates and how these related to population change, and they had studied migration. They were a slightly unpredictable group who can respond well or prove difficult (for no obvious reason).

I was concerned that they should come to the living graph exercise already having a good grasp of how and why Britain's population had changed since 1820. Therefore I planned a long lead in (which took longer than expected) in which they had to plot birth rates (BR) and death rates (DR) for Britain from 1821 to 1981. Using descriptive data they then had to plot the population. Basically if BR and DR were close, population growth would be fairly gentle, but if BR greatly exceeded DR the steepness of the line would be much greater.

The living graph statements were printed on the RESOURCE SHEETS that students were working from, but are reproduced separately here. It should be noted that the statements relate particularly to a British context.

Preparation

You will need to prepare, or get the students to draw, a copy of the Demographic Transition Model graph or a graph of birth rates, death rates and population for Britain since c1800. Such graphs can be found in many textbooks. I felt that it would be very important to be able to point to the graph as they explained where they had put the statements so I prepared an OHP.

Launching

There was nothing special required to get the task done. It was just one task on a sheet amongst others and as students got to that point I just checked that they knew what to do. In fact, most got to the task near the end of the first of the two lessons that this activity spanned. Launching seems much less necessary for this activity than for many others because graphs are so familiar. In none of the three exemplars was launching a high priority. With some classes and contexts you might need to pay more attention to this, but for us it has never been a necessity.

Instructions

At the beginning of the second lesson I went over the task again. My main concern was to convey that a variety of positions on the graph was possible, so I went through one statement with them and gave two different justifications for placing that statement in two completely different places.

Managing the activity

There were two subtle aspects to this.

- There was a temptation among a few just to copy what a neighbour had done, because they thought it was too difficult or it must have a catch, so I had to stress that there were no right answers. I encouraged them to ask if they were not sure what a statement implied or meant, but otherwise they must think for themselves.
- On the other hand, a few gave it virtually no thought and just put down the first thing that came into their heads, not allowing for the possibility that this was ambiguous and that there was a variety of possible interpretations. Therefore I tried to press a few students to think a bit more about their answers.

Debriefing

This was the first time that the class had done a living graph. When we got to the whole class discussion (debriefing) they began to realise that the task had much more depth and was more complex than they first appreciated—they had seen it as just another task on a worksheet. From my experiences with other classes, the

This action both helps to scaffold and maintains the essential ambiguity.

return from using the strategy is cumulative, ie, they get more from doing them when they have done a few.

Actually, nearly all the tough management issues were loaded into the debriefing, which threw up several surprises.

The debriefing was allocated 20 minutes which, in the end, was not enough, because the students extended the discussion and used up much more time than I had expected. In fact we only discussed about half the statements. Is it practical to give up much more time? You could argue that learning needs to be talked about at length and it has been claimed that time should be evenly split between debriefing and teaching activities. For many groups this would not be practical. Perhaps the answer is that 20 minute spells of debriefing get built-in over the whole course and therefore it does not matter whether every last drop is squeezed out of an activity.

Returning to this activity we went through a number of statements in detail. I asked particular students to say where they had put the statement and why. Sometimes they were really stumped and there were awkward silences. Sometimes I got some very sensible but fairly short responses and sometimes I got very lengthy, provocative responses that I had to think carefully about and seek clarification on from the pupil. Sometimes the discussion went right out of my hands as a couple of students discussed a point between them. It was noticeable that the main volunteers were the brightest girl and two boys who usually spend most of their time causing trouble. I suspect that some of the boys' contributions were designed to wind me up, but actually they were generally making thoughtful contributions, either speculating in interesting ways or making tangential connections to other topics. For example, one boy asked when houses in Britain started to have heating, because children sleeping in one bed could be a response to the cold rather than high birth rates. In another instance, a girl mentioned that thinking about family planning must be related to education in a variety of ways, and a boy chipped in that farmers probably had many children to provide a cheap workforce. I have some doubts about what was going on in the minds of the students who said nothing, but this applies equally to class discussions in general.

Follow-up

Remember that in the sequence described so far the students had not been introduced to the term *Demographic Transition Model* (DTM). Therefore the follow-up was designed to embed an understanding of the model in the work on population change (and associated changes in BRs and DRs).

The students were shown an OHP with the DTM on it. They were asked as a whole class what were the differences between it and the graph of British population (LIVING GRAPHS RESOURCE SHEET 2). This led to an explanation that it could be used to describe or predict the probable changes in the population growth in a country over time as it went through the process of economic development. It could also be used as a framework to compare countries at a particular date, showing that they were at different stages.

The point was made that there are factors operating in every country that meant that they would not exactly fit the model. Reference was made to the migration from Britain to the colonies in the 1800s which reduced the population increase. Similarly good medical care introduced into developing economies can speed up progress through the stages. The living graph activity was crucial here, because it had made them think about how various factors related to population change.

The students were then provided with statements based on an Action Aid pack *How Many Children?* (an excellent resource), taken from interviews with people in developing economies. Although focused on the issue of birth rate it provided some insight into the nature of the factors affecting population growth in those countries. They were asked to decide at what stage of the DTM these statements might occur—a second living graph exercise.

Living Graphs

Exemplar 1:

The demographic transition model

Teachers are faced with tough logistical problems in Thinking Skills, but if you always take the easy option, the potential benefits are reduced (see graph on page 166.)

This must be taken as a sign of success.

Speculating is a good quality talk marker (see page 160).

Living Graphs

Exemplar 1:

The demographic transition model

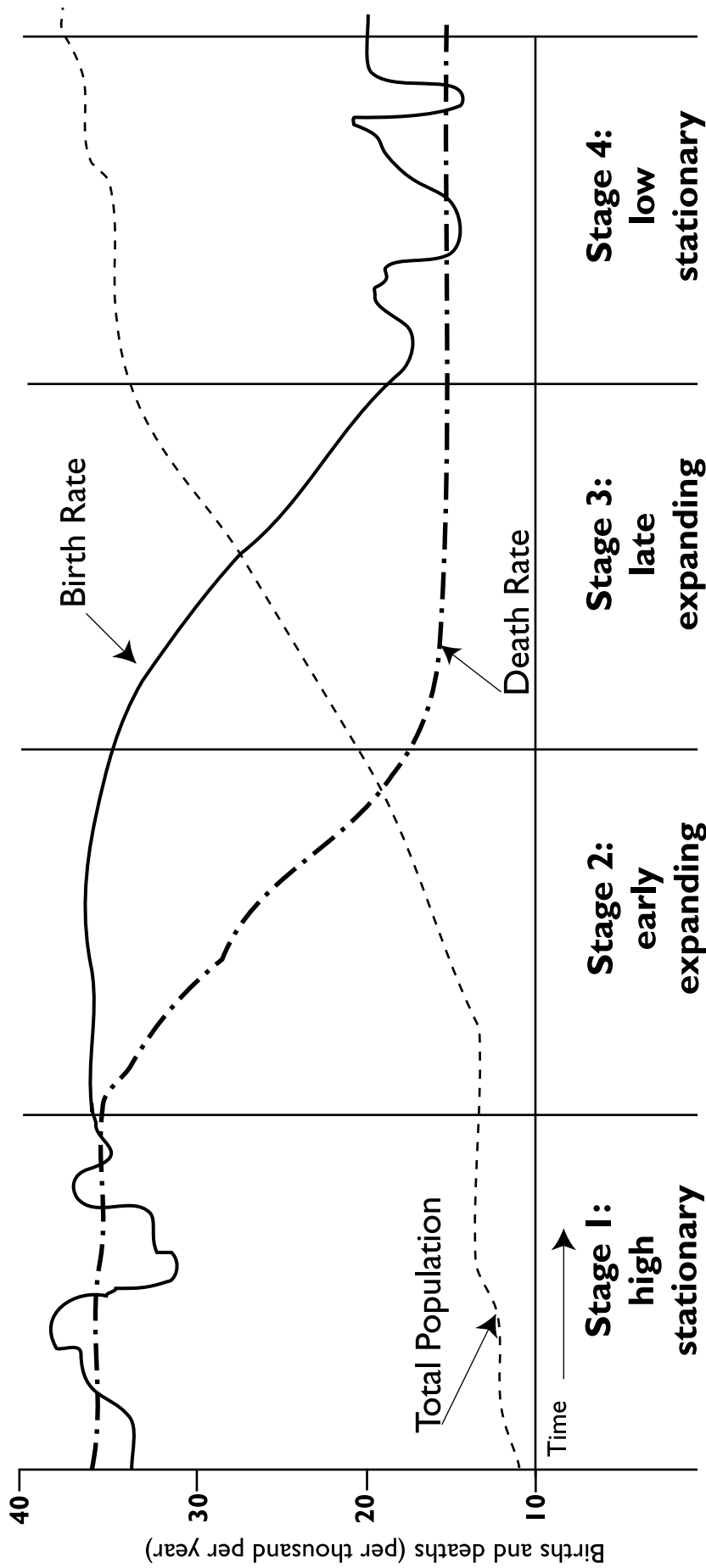
Statements—The demographic transition model

Task

Place these statements in the most appropriate place on the graph:

1. Billy White loses his job as a gravedigger.
2. Parents start to think more about family planning.
3. Children are warmer in bed at night because they have more brothers and sisters.
4. There are more Golden Weddings.
5. A mother sobs over the grave of the last of her six children who died in a typhoid epidemic.
6. A lot more houses are being built.
7. The public health inspector smiles as the building of the new sewers is finished.
8. Fewer children share a bedroom.
9. Grandparents are rare.
10. People are encouraged to emigrate to the colonies.

The demographic transition model



Living Graphs
Exemplar 1:
The demographic transition model

Source: Population—A Comprehensive Study, Population Concern

Living Graphs
Exemplar 2:
Daily energy
consumption

Context

This activity was done with a Y7 mixed ability class, who were 'nice' and prepared to try new things. As it was their first experience of a *Living Graph* it was appropriate that it was a simple task with few statements to place. The unit of work was on energy, derived from para 15e of the NC Orders. This module was based on a number of questions, such as 'Why do people need energy? When do they use it? What forms does it take? Where does it come from?' This activity came early in the teaching sequence and related particularly to the first two questions.

Preparation

The task was devised by a PGCE student (Chris Reid) from Newcastle University and was used by most of the departmental staff. I had to do four things.

1. Trace an outline graph from the original and duplicate it so that each pupil had one on which to locate the statements (LIVING GRAPHS RESOURCE SHEETS 3 and 4).
2. Duplicate a sheet with the statements (LIVING GRAPHS RESOURCE SHEET 5);
3. Prepare a sheet with only the axes so that pupils could do the homework on weekend electricity demand—see Follow-up (LIVING GRAPHS RESOURCE SHEET 6).
4. Prepare an OHP of the original graph (LIVING GRAPHS RESOURCE SHEET 3).

As it was the first time that this class had done a *Living Graph* I gave some thought to the clear instructions that they would need.

Launching

Although it was not crucial to the success of the activity, I started the lesson somewhat differently from usual. When the class arrived, I had the lights off and the blackout curtains drawn. As they came in one pupil put the light on. Once they were seated I asked him why he had done it. He replied that it was dark. I made the point to the class that Richard had had a reason for putting the light on and during the lesson we would be looking at the reasons why people use electricity when they do. This took no more than a minute.

Instructions

1. I gave out the original graph, the simplified version, and the statements (LIVING GRAPHS RESOURCE SHEETS 3, 4 and 5). I thought about keeping back the statements, but decided against this.
2. I explained what the graph showed. I reminded them that the horizontal axis was time using the 24 hour clock. I asked a couple of questions around this, eg, 'What time is 14.30 and 20.30?' I was not convinced that every pupil could handle this, but I relied upon the more able to support the weaker ones. I told them not to worry about what GW meant on the vertical axis, it was just the amount of electricity being used.
3. I then asked a series of questions to improve their comprehension of the graph, eg, 'What is domestic? What is Economy 7? Why was the amount used greater in December than in November? What do the lines show?' This was valuable because it emerged that some thought electricity demand would be greater at night because the lights were on.
4. Turning to the statements and the blank graph I explained that they had to decide where on the graph each statement should be put. I stressed that for some there was a right answer because there was a time stated, but for others there could be several different possibilities. The

Differentiation by group work.

The whole of this phase of the lesson helps to invoke their knowledge ready to be used in activity (see page 157).

important thing was to have a reason. They also needed to think about why the activity in the statement used electricity.

5. We did the first one together. As none of them raised the point, I asked why it was Mrs Jones and not Mr Jones. We had a little chat about whose dad did any cooking—fortunately there were some good role models. Then I told them to get on. I allowed them to work in the natural groups around the tables that they were working at—the group size varied from 2 to 4 pupils.

Managing the activity

Much of the detail from the first exemplar applies here too, but they were very enthusiastic and I did not have a problem in keeping them on task. They asked a lot of questions as I went round. I tried not to influence them but when I saw a statement put in an inappropriate place I said something like *'Explain that one to me'*.

Those who finished ahead of the rest were asked to make up 3 or 4 statements of their own, which they really enjoyed doing.

Debriefing

This took the form of asking what they had put and why. Statement number 4 caused the most difficulty, but it led to a good discussion about the electricity companies trying to persuade people to use electricity at night in storage heaters, etc (which a few had). One boy asked what happened to electricity that was not used, which totally stumped me. The activity showed that they had a good understanding of what the graph showed and they really liked the statement about the teacher marking books.

I wound this part up by asking what problem might arise during very cold weather in the middle of winter.

Follow-up

The follow-up was homework, which I spent at least 5 minutes explaining. Pupils were given the outline graph (Demand for electricity on a winter Sunday) with just the axes on (LIVING GRAPHS RESOURCE SHEET, 6). They had to draw in the line for electricity use on a winter Sunday and make up 4 statements to go on their graph. I talked through with them what was different about Sundays compared to a weekday. They loved the idea of making up their own line and statements. I think that it was the most popular homework of the year. This resulted in some excellent work (getting up late, Sunday roasts, etc) although a few of the weaker pupils were 'off-beam'.

Living Graphs

Exemplar 2:

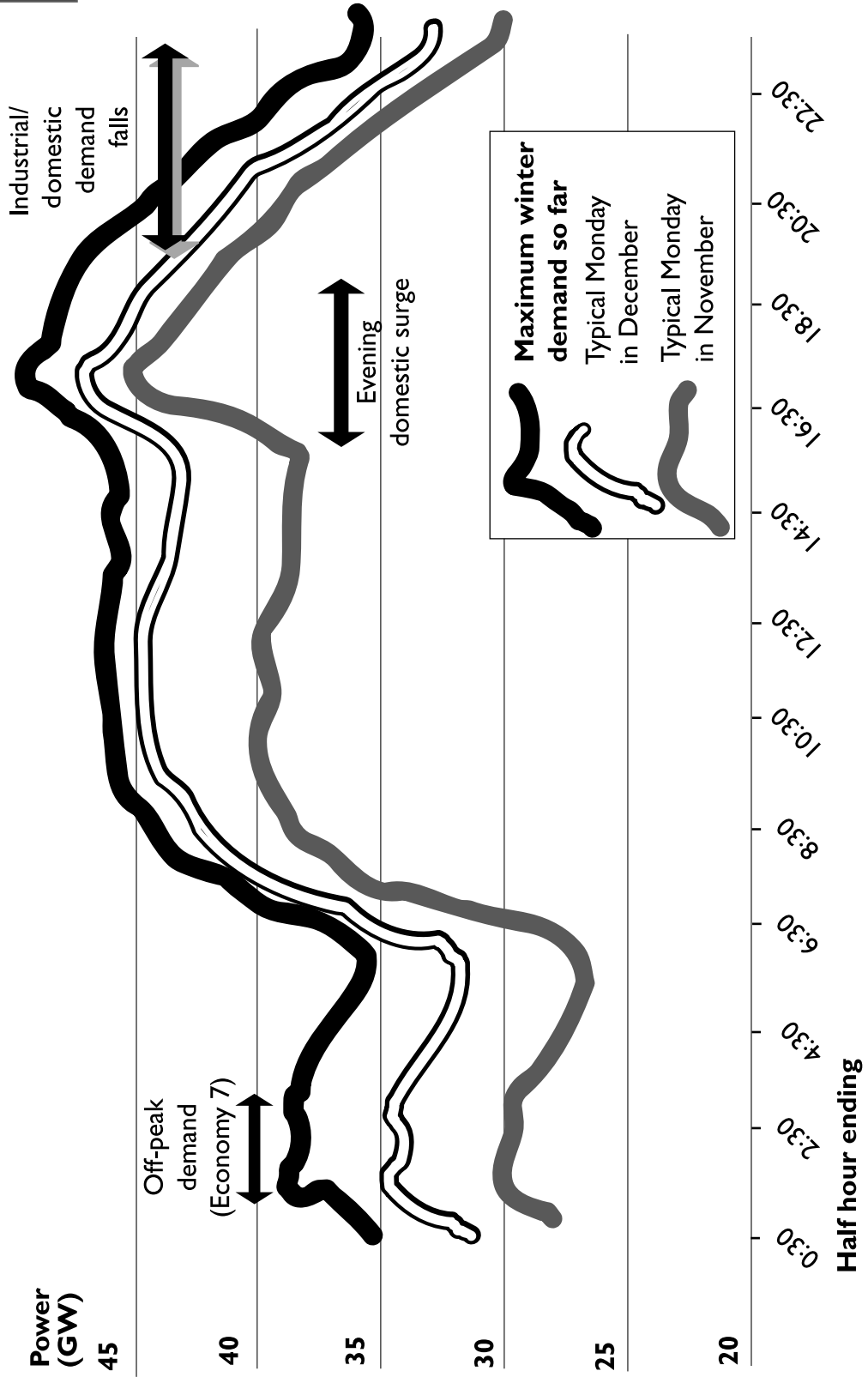
Daily energy consumption

Pupils asking questions is a very healthy sign—when they are beyond 'How do I do this?'

This is an example of near transfer (see page 162).

Living Graphs
 Exemplar 2:
 Daily energy consumption

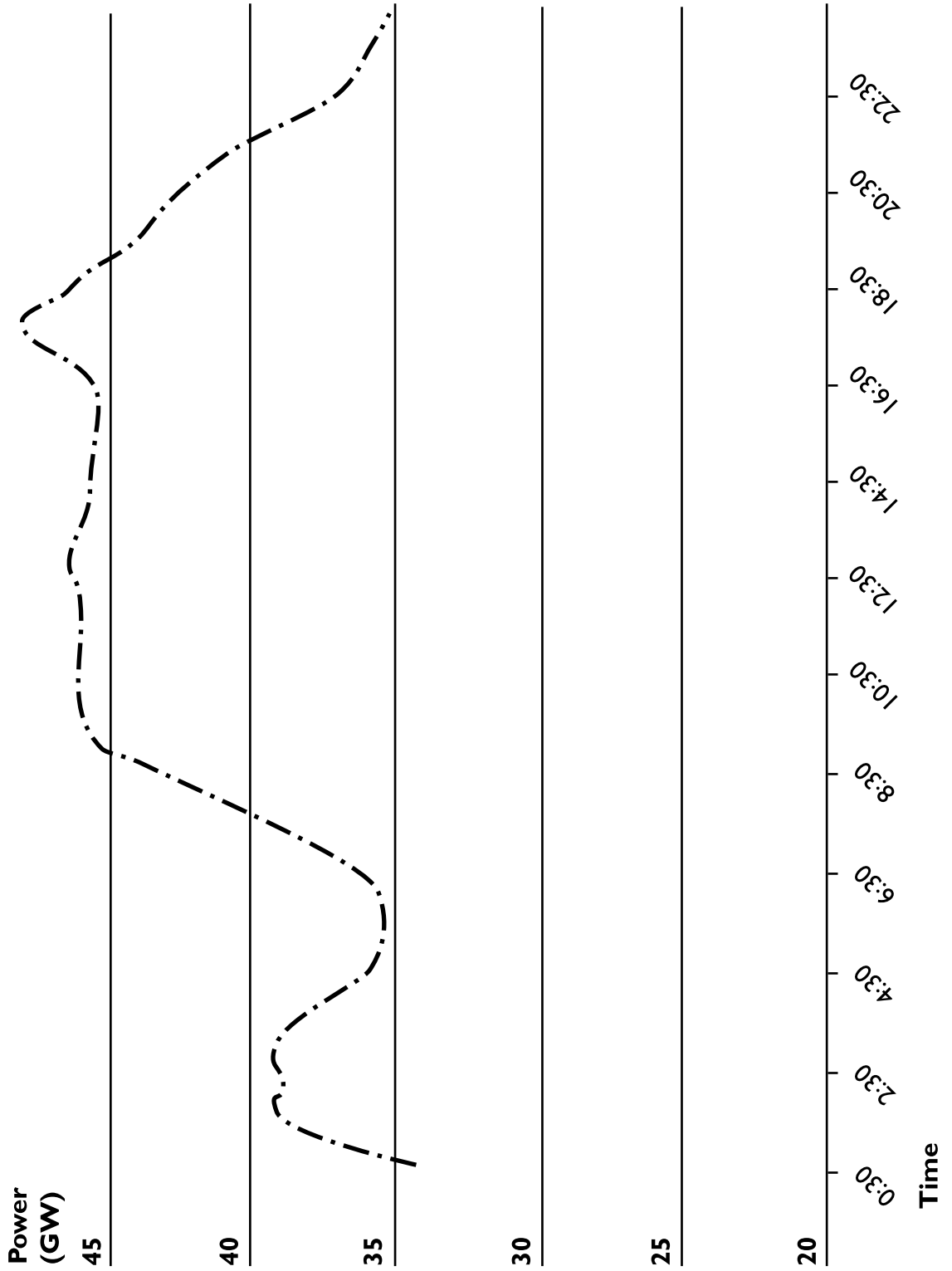
Typical winter weekday demands on the National Grid



Source: NGC demand forecasting

Living Graphs
Exemplar 2:
Daily energy consumption

Demand for electricity over a winter weekday



Living Graphs
Exemplar 2:
Daily energy
consumption

Statements—Demand for electricity over a day

Task

Put the following statements on the graph:

1. Mrs Sheila Jones arrives home from work and starts to cook the evening meal.
2. Miss Terri Frain gets up after a hard night marking history books and has her first cup of coffee.
3. Mr Allan Smith, an office clerk, takes the Metro (a train) from Newcastle city centre to South Shields during his lunchtime to deliver some important documents.
4. The Robinson's washing machine switches on automatically on the timer.
5. Patsy McBride, age 11, switches off the TV and bedside light in her room.
6. Jane Thompson arrives at work at an insurance office.
7. In the power station control room they reduce the output.

Living Graphs
Exemplar 2:
Daily energy
consumption

Demand for electricity on a winter Sunday

Power
(GW)

45

40

35

30

25

20

Time

0:30
2:30
4:30
6:30
8:30
10:30
12:30
14:30
16:30
18:30
20:30
22:30

Living Graphs
Exemplar 3:
The stage model
of tourism

Context

The trial group for this activity was a middle band Y8, with an inclination to be noisy and difficult to keep on task because of a short attention span. The work occurred in a unit on tourism which touched on several paragraphs of the NC Orders. The unit had started with an analysis of the factors which influence holiday destinations, drawing on their own holidays or desired holidays. They had watched a *Geographical Eye* programme on Torremolinos, and I had focused their attention onto why people want to go there and what they do when they get there. I had made the point that tourism is a major industry in Spain: it is vital to the economy and the government does much to encourage and protect the industry.

Preparation

The only preparation required is to duplicate the resource sheets with the statements and the blank graph (LIVING GRAPHS RESOURCE SHEETS 7 and 8). A textbook that covers tourism and has photographs can be a useful addition, especially if you have not done preliminary work as described in the context section. You could replace the stage model with a graph of the number of beds or hotels or tourist visitors to a resort.

Launching

No special effort was made but (if you are inclined) personal stories or photographs that contrast unspoilt holiday locations with those that are frayed round the edges could be a good starting point.

We looked at the Stage Model of Tourism in Waugh's *The World* and talked through what the stages implied.

Instructions

This group had done a living graph before, so instructions did not need to be elaborate. I reminded them of the one that they had done before. I also reminded them that there could be a variety of acceptable answers, so the important thing was to have good reasons for the position of any of the statements. Because the horizontal axis has only four stages, I encouraged them to consider whether the statement should be at the start, in the middle or at the end of a stage. I encouraged them to work as groups, but I did not organise this myself.

Managing the activity

Some groups worked faster than others (which need not cause a problem) and was not directly related to ability but more to the depth of thought and discussion applied. I was impressed by the level of thinking of some of the less successful writers, for instance. They clearly enjoyed the task and I did not have to worry at all about pupils being off task. Some groups asked what certain words (such as ornithologist) meant and I made sure that I broadcast my answer so that everyone could hear. I gave the class 5 minutes after the first group had finished, and in the meantime I asked the fastest group to compose and locate 4 statements of their own.

Follow-up

As a follow-up task they had to pick 4 statements, one from each stage, and explain why they had put it in that stage. They were encouraged to write at length and I stressed that it was to show whether they understood the graph. The work was very good. The answers were longer than I would normally expect, which reflected the thought that had been generated by the activity.

Differentiation by outcome.

Differentiation by extension task.

Less able groups might be helped by using writing frames (see page 81).

Debriefing

I asked what they had had to do to locate the statements on the graph. There was a general *'think about it'* response, but I pressed further by asking *'How?'* One girl said that she imagined it, which she explained involved having pictures in her mind stimulated by the statement. This started the class off and they chipped in with what their pictures had been and where they had come from—the video we had watched, their holidays, tour operator brochures, stories from books and the film *Shirley Valentine*. I made the point that we have to work at interpreting graphs, and that relating a graph to our own knowledge and experience is important and valuable.

In using a similar graph with a GCSE class, I asked them to identify which statements had more to do with *causes* of the change in the character of resorts and which had more to do with the *effects*. They also identified positive and negative effects. Point out that one statement can represent both cause and effect of change (cumulative causation)—as in Carlos's litter picking job.

Living Graphs
Exemplar 3:
The stage model
of tourism

This is metacognition (see page 159).

Cause and effect are vital big concepts in geography (see page 167).

Living Graphs

Exemplar 3:

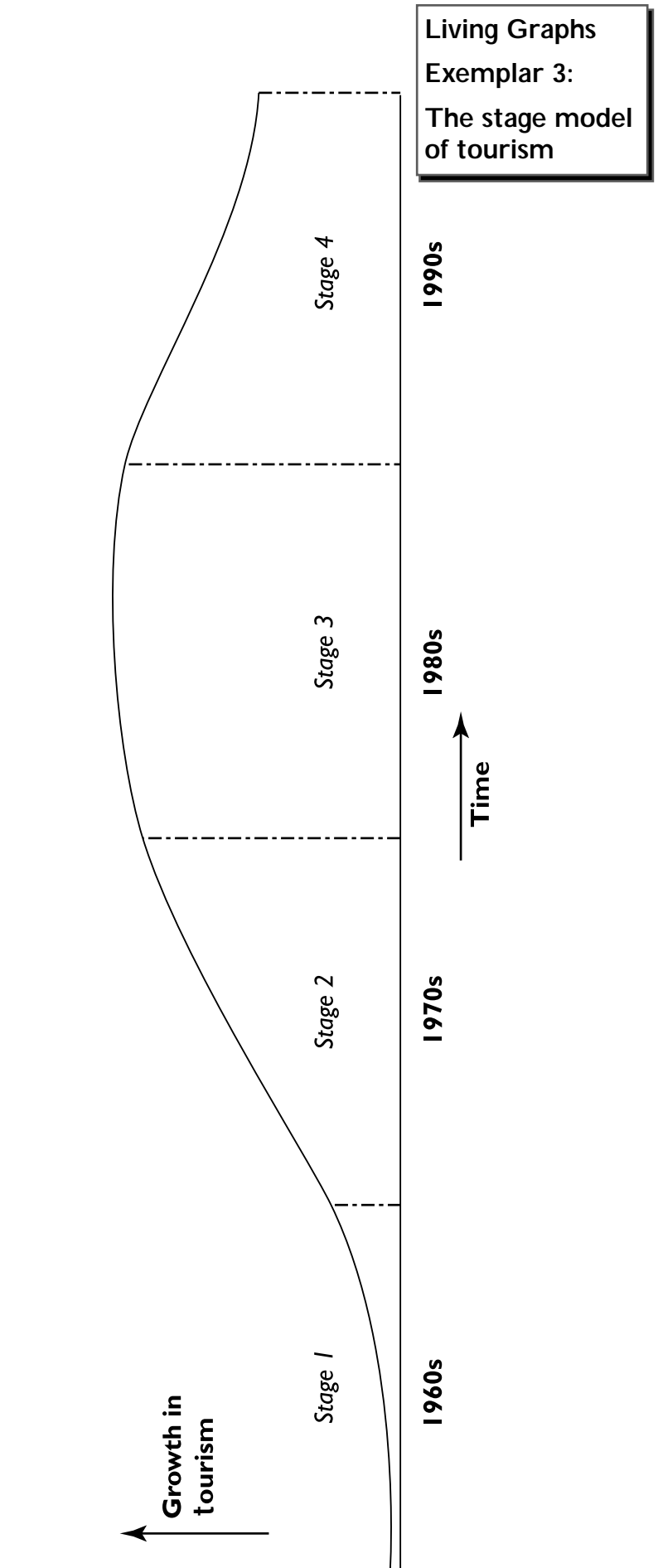
The stage model
of tourism

Statements—Changes in tourism**Task**

Put the following statements on the graph:

- | | |
|------------|---|
| 1. | Carlos, a fisherman, gets up early in order to take his boat out. |
| 2. | Neil gets drunk one night and on the way back is mugged, losing all his money, credit card and his passport. |
| 3. | Durta, a German tourist will not let her son go to get an ice cream because of the extremely busy roads. |
| 4. | Miguel goes out to look for work. Only two years ago he had regular employment for the summer period that allowed him the luxury of not working for the rest of the year. |
| 5. | Mercedes relaxes on an empty beach, after doing her chores, enjoying the afternoon summer sun. |
| 6. | José is an ornithologist who now has to travel miles down the coast to see the birds that used to nest here. |
| 7. | Linda and Andy decide not to go back to Torremolinos next year. Linda thought it was 'naff'. |
| 8. | Juan gets a well paid job in the construction industry. Many of his friends also get jobs. |
| 9. | Angela has difficulty finding somewhere to get her travellers' cheques changed into pesetas. |
| 10. | Carlos gets a job picking up litter off the beach every evening. |
| 11. | The local farmers get better prices for their vegetables. |
| 12. | The local council decides to build a new and bigger sewage treatment plant. |

Changes in tourism



Living Graphs: Adapting the strategy

It was pointed out in the rationale that this is one of the easiest strategies to adapt to other contexts. Almost any line graph can be subjected to the treatment. Putting people in the statements (saying or doing things) helps the lower achieving pupils to get started. However, including some more generalised statements such as 'There are more Golden Weddings' helps to differentiate for the more able pupils. Another angle that helps to generate statements is to use headings such as cause, effect, problem and solution.

Notice how important these headings were in the Traffic Management Odd One Out exemplar (see page 14).

Within the *Thinking Through Geography* group other examples have been generated for:

- the change in North Sea fish stocks;
- climate graphs for a variety of locations;
- changes in the number of tractors on British farms;
- flood hydrographs;
- daily traffic flow on a busy urban road.

Afterthoughts

This strategy is a steady runner. It is easy to prepare, introduce, manage and follow-up. Pupils tend to like it and colleagues can take it up without much trouble or resistance. It makes pupils think and get behind the abstract lines on graphs thus connecting with reality. It can lead to some interesting insights into interpreting graphs and cause and effect. It is not the most spectacular strategy in terms of developing metacognition or transfer of learning, but the lack of risk involved recommends it as an excellent strategy to start curriculum development.

Mind Movies

Rationale

One of the basic tenets of teaching is that you should *start where children are at*. Actually this is really hard to do, because the pupils probably don't know where they are at, so how are you going to discover it! However, if you can get them to use their existing knowledge of topics, then it is far more likely that they will develop a personal understanding that will be remembered.

Mind movies are a brilliant way of accessing children's knowledge. It has to be said from the start that ***Mind Movies*** represent the most risky strategy in this book, because you have to persuade pupils to take their own knowledge seriously and to take themselves seriously. Your relationship therefore is crucial and mutual respect is required. To some extent it is a good test of pupils' attitudes to learning. Some low achieving pupils will smirk and giggle, perhaps because they do not consider that they might know something worth using. They can be worried about what they look like because 'image' is very important to them. Some high achieving pupils will not take it seriously and perhaps see it as beneath them. 'Learning is being told things and reading things' might summarise their approach to learning. In contrast, ***Mind Movies*** are quick, very motivating, fascinating to the teacher, highly flexible and if they don't work you can just move on with no damage done.

Geography teaching proceeds as if memory of the written page is the most important source of remembering, but visual memory is very powerful, and especially valuable for low achieving pupils. It should be exploited. A grade F candidate sitting a GCSE paper may not be able to remember what was written on the case study pages of their text book or exercise book, but they may be able to remember powerful visual images that they used as a resource to answer questions. ***Mind Movies*** start the process of developing visual memory skills.

*This paragraph relates very strongly to **constructivism** (see page 157).*

*The bigger the contrast between a new activity like **Mind Movies** and 'normal' lessons, the greater the potential risk.*

This is an example of trying to appeal to a wider selection of the senses (see page 162).

Mind Movies

Exemplar 1:

The Kobe earthquake

Context

This example is suitable for use at both KS3 and 4, but it was trialled with several, setted Y9 classes. The top set class gave me most cause for concern, as they are lively and inclined to shout each other down, rather than listen and then respond! They are enthusiastic and competitive, but my relationship is very good with them. The bottom set are more passive.

The activity was used three-quarters of the way through a unit of work on Japan. Previous lessons had included a study of housing conditions in large cities such as Tokyo, as well as transport, industrial location and the physical geography of Japan (PoS paragraph 5a). Pupils had previous knowledge of plate tectonics and the causes of volcanoes and earthquakes from a module on natural hazards in Y8. Inevitably, as will be seen, they also had previous knowledge from the media.

Preparation

Very little physical preparation is needed.

More than any other strategy in this book *Mind Movies* depend on getting pupils to suspend disbelief and engage their imaginations, so it is extremely important to make up a story (the more dramatic the better) with lots of descriptive adjectives and planned dramatic pauses. You must avoid being too dead pan, but don't be over the top. Practice reading out the script, so that you are familiar with it and do not stumble over the words in class, as this can badly affect the atmosphere. I took the script in with me, written out with double spacing to make it easier to refer to (MIND MOVIES RESOURCE SHEET 1).

As a final point, avoid days when there are obvious distractions, like window cleaners, snow, or very strong winds.

Launching

Pupils need to be relatively *calm* for this exercise to work. You can tell them a bit about dreams to help persuade them, eg, *'Psychologists see dreams as very important because they tell us a great deal about what we know and feel about events and people. There is so much more in our minds than we are aware of: things that we have learned and remembered—otherwise it would not be in there. Our minds are a store of knowledge. In this lesson we are going to unlock and use some of the stored knowledge that you have. You have knowledge about earthquakes and I want to use it and I am going to use a tool called a mind movie to get it out. OK? Are you with me on this? I'm a psychologist right?'*

If you feel brave, try telling them about one of your dreams.

With this introduction you have a good chance when you ask them to close their eyes. Consider also switching off lights and closing curtains/blinds to reduce distractions.

Instructions

1. Ask pupils to close their eyes. If you get some people looking around tell them to cross their arms and put their heads down. It can help to play some soothing music to give them something to listen to, as some pupils are not used to silence.
2. When you have basic silence tell them that you are going to read them a real life account of someone caught in an earthquake and you want them to imagine this (ie, create a picture in their heads).
3. Start reading. This creates a scenario or starting point for their imagination.
4. After you finish, don't hesitate, but tell them immediately to keep their eyes shut and keep the movie running in their heads for a minute. *What happens next?*

[This is another example of bridging in—using other contexts to provide tolerance and a rationale. It also invites metacognitive awareness (see pages 159 and 162).

This whole process is an excellent test of one's management skills—but inexperienced teachers should not feel disqualified as this teacher was an NQT.

Managing the activity

Although the activity lasts only a few minutes, it requires considerable professional skill. It is vital to have pupils' cooperation and trust, and the bit about psychologists and dreams may be very important in encouraging them to engage.

If you get total refusal from many pupils, cut your losses and move on. More likely you will have a few who are embarrassed or silly and inclined to titter. Quell them quietly, eg, 'Sssh Mark', while putting your head down or a finger pointing downwards; a shouting match will break the spell. Once you have read your scene-setting story and you have asked them to run the mind movie, then you should stay as quiet as possible: don't interrupt and maybe just walk quietly around (the quiet rhythm of footsteps can be helpful).

The top set were quiet for much longer than a minute and the bottom set managed the minute—just!

Follow-up

Any pupil who has done what was asked now has something to say—they cannot be wrong, only misguided! It is a shame if they cannot tell someone, so start by assigning them to pairs and giving the first person 2 minutes to describe what they 'saw'. The second person has to take notes—this helps them focus. After 2 minutes, they swap. Following this they have to write down one thing that:

1. was similar between the two accounts;
2. was different between the two accounts;
3. they found surprising about the other account.

The bottom set found this much more difficult.

Ask for some feedback specifically on 1, 2 and 3. (This avoids pupils rambling and retelling the whole movie.) Encourage pupils to comment on or question the input of others, but try to avoid criticism of each other. On the board gradually accumulate generally agreed statements about what would happen and put them in time sequence.

Pupils now had to write, in their exercise books, their own account of what would happen. They wrote at much greater length than they would have done in other circumstances, especially the bottom set. The quality of writing was pleasing, although one disappointing feature was that some descriptions clearly related to their English homes in an earthquake (some others did set the scene in a Japanese home). I felt that I had missed a drafting stage in the writing, where a bit of collaboration and checking could have greatly reduced this problem. All groups thoroughly enjoyed the lesson and asked to do mind movies again. Strangely they felt that they had not done any work, despite my protestations. This is a bit worrying and needs some thought.

Debriefing

Despite not seeing it as work, the pupils had achieved something very fundamental. They had used their existing knowledge as a starting point for an activity.

I asked them whether they could use *Mind Movies* in other subjects and they immediately saw the possibilities in history, where they were aware of the need to empathise and to put themselves in other people's shoes. They thought it was a useful technique, which did indeed bring out their existing thoughts and images. They made many suggestions about where their ideas had come from... films, magazines, videos in geography lessons and pictures in books. One girl had a father who had worked in Japan for a while. Pupils did not think however that they would be able to use the strategy for actively remembering for exams. There is some work to do here, *but I think that they are wrong.*

Mind Movies

Exemplar 1:

The Kobe earthquake

This is a simple form of writing frame (see page 81).

The social context is a factor here—one is trying to build a co-operative learning environment (see page 160).

This demonstrates the power of socialisation.

Another example of transfer (see page 162).

Mind Movies

Exemplar 1:

The Kobe
earthquake

The earthquake script

You are in bed on your futon... fast asleep. Suddenly the floor turns to jelly, but this is no gentle liquid motion, but a jarring, wrenching, shuddering feeling of awesome proportions. Without warning the room has turned into a sickening roller coaster ride and it is terrifying.

The most frightening part is the sound. This is not a dull rumble like thunder. This is a deafening, roaring sound coming from everywhere... it sounds like the end of the world. Other sounds break in: books toppling off shelves, glasses, plates and windows shattering, and the television thumping to the ground and the screen shattering.

You realise that the horrendous creaking all around you is the building you live in. Walls, ceilings and floors look as if they are breathing in and out. Everything is rattling and shaking. You realise that there are 6 storeys of other apartments right above your head. The lights go off and it is pitch dark.

What happens next...?

Context

This was used with a high ability Y9 class during a unit on man made natural disasters (PoS paras 15c and 15e). The previous lesson had been spent looking at the case study of Chernobyl and the effects of high level radiation on land and humans.

Most other headings are adequately covered by the first exemplar, except for the following:

Instructions

The class had done a *Mind Movie* before, so the instructions were easier to give. Exemplar 1 gives general instructions.

After the reading of the script, the specific instruction for this *Mind Movie* was:

'Keep your eyes shut. What are your first thoughts? Then start to think about what you will take in your bag and what your parent(s) should take.'

Follow-up

With this exemplar there is not quite the same excitement as the earthquake one, which could be a good thing. I allowed them 5 minutes to discuss in pairs their reactions and what might go in the bags. Following this they had to write down one thing that:

1. was similar between the two bags;
2. was different between the two bags;
3. they found surprising about the other bag;
4. would be different in the adults' bags.

I gave them only about 3 minutes to do this, after which we listened to a sample of answers.

I then asked them to produce written answers to the following two questions:

1. Remembering that you might not be able to return, make a list of just six things you have to take—give a reason for each.
2. Think about your life and that of your family and neighbours. What will the authorities need to do to take care of you?

Debriefing

This was not fully developed because of time. I concentrated on question 2. There was an excellent range of issues such as schools, housing, jobs, clothes, social activities, money and pets! We listed these on the board. I then asked them to consider how these things could be dealt with (a) in the short term and (b) in the long term. This needed more time, but it was a good start to considering a framework for understanding effects. For example, they thought that they could be taught in temporary classrooms at first, but in time new schools would be needed. Also they could be given money for a few weeks, but new jobs would need to be created in the longer term.

Mind Movies

Exemplar 2:

A local nuclear power station disaster

A writing frame.

Effects is one of the big concepts elaborated through Thinking Through Geography (see page 168). Linkage could be made to the earthquakes exemplar as another example of bridging

Mind Movies

Exemplar 2:

A local nuclear power station disaster

The nuclear disaster script

Imagine that you are sitting on your bed at home, listening to the local radio station. Look around the room and see what's there. Relax.

An urgent voice on the radio says:

This programme is interrupted for an important news bulletin.... At 4:00 p.m. a sequence of events at Hartlepool Power Station [insert the name of your nearest nuclear station] led to the meltdown and explosion of the main reactor. Dangerous levels of radiation have been released into the atmosphere.

The Department of the Environment and the Department of Health have declared a 30-kilometre evacuation zone. This includes the towns of Hartlepool, Middlesbrough and Sunderland. Gateshead and South Shields will also be evacuated. Coaches will be at the end of each street starting in one hour. The police will begin clearing houses in 45 minutes. Please be ready to leave your homes. Each person will be allowed one small bag— and no more.

I repeat: a nuclear alert at Hartlepool means that your homes will have to be evacuated. Coaches will have to leave in one hour. This ends the news bulletin, programmes have been suspended until further notice.

Context

The class who trialled this were an able Y10 GCSE group, but that still includes students who will probably get Grade E. The unit of work was on residential environments. They are used to doing 'different' things and had done *Mind Movies* before, although this was a variation.

Preparation

There are two important points to the preparation: firstly, you must be familiar with the text and be able to read it fluently and with meaning; secondly (and more importantly), you must believe that this approach is valuable, through motivating students, assisting their understanding, or helping them to learn to remember. You may wish to duplicate the text for the class, but I prefer not to because it could undermine the message that they must actively use their own mental images.

Launching

I told the students that they had to listen very carefully to something that I was going to read them. (In terms of the floating analogy (on page 4) this class was highly receptive to doing challenging activities and thinking about their work, as a result of a lot of groundwork achieved by doing many of the activities in this book.)

Instructions

I told the class that the piece was quite long and therefore needed concentration. As I read it they should jot down any passages that would make good movie shots—the passages that are very visual and can create a picture. I gave them warning that eventually they would have to narrow it down to about 10 shots and suggest sound effects or music. They were very eager for me to start.

In order to make sure that this was clear I said that I would start reading and that they should stop me as soon as there was a suitable shot. I only got as far as '... along the concrete walkway and I pick my way...', and the hands shot up and they squealed 'Miss'.

Managing the activity

The obvious point to emphasise is that they should listen like never before. But further bear in mind the following points:

- Be prepared to stop reading for a few seconds to allow them to make some notes, but don't pause for too long;
- As they are bound to talk to each other because they are stimulated (and it helps them to process the words) be prepared to read over a little talk.

Debriefing

It was nice to go straight into some debriefing rather than written work. I asked first of all for their suggestions for good shots. (In MIND MOVIES RESOURCE SHEET 3, the underlined passages are generally those identified by the students.) There was a high level of agreement. They felt that all the movie shots were a bit grim and one boy suggested that they should be in black and white. Their suggestions for music centred around words like spooky, scary, slow. Most of the bands that they mentioned did not register with me.

I asked what they thought made some passages good for creating mental pictures. They suggested 'descriptive', 'lots of adjectives' and 'places'. I suggested to them that these were the images that the author was trying to convey, communicate or portray to the reader. I also asked them whether they had remembered as much

Mind Movies

Exemplar 3:

Down and out in Sunderland?

You might like to consider the similarity between this and the launching for the Industrial Change in South Wales exemplar (next section). This is after all partly a clarifying activity.

Mind Movies
Exemplar 3:
Down and out in
Sunderland?

This is another insight for them into metacognition (see page 159).

about what people had said in the piece. They said 'No'—they were listening out for scenes and paid less attention to the 'talking parts'. I rounded this off by saying that if you decide to listen or read for a certain aspect in a text or spoken message it can help what you can pick out.

We spent some time talking about the view expressed by the people from Sunderland that it was a great place and they did not want to leave. The students' opinion was split—some felt that community was important while others felt that getting a job was paramount and that it was daft to stay in a rundown bit of Sunderland.

My last point was that the images and stories were a good way to remember facts for exams, as long as you were careful to read and answer the questions set. I had a fear that students might just relate the stories.

Follow-up

I asked them to choose 3 'shots', one to represent the causes of the poverty, one for the effects and the last for the action being taken to reduce the problems in high rise estates. I asked them to describe these shots in no more than 50 words with an appropriate label. A number of students asked if they could draw the shots and as I could see no objection I said 'Yes'.

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Mind Movies: Adapting the strategy

Mind Movies should not be overused. Once or twice a term would be plenty. There is on-going pre-preparation that consists of finding good stories in the newspapers, magazines or novels, or bits of video of TV programmes, ready for the day when you need them.

We are considering trying to get students to revise some of their work for the GCSE exams by using visual memory, although it will be important to emphasise that the image has to be used carefully—as an aid to memory and understanding that needs to be consulted, and not an image to be described regardless of the question.

Afterthoughts

Mind Movies are something of a touchstone in relation to students' learning. Most students enjoy them, but it takes a lot of time and effort for them to accept that they are 'work' or learning. This could be the case with some fellow teachers—to say nothing of politicians.

The urban deprivation script

Nicci Gerrard visits Sunderland, home to single mums, pale pink sausages... and the Venerable Bede (from the Observer Review, 15 September 1996).

Mind Movies

Exemplar 3:

Down and out in
Sunderland?

'Poor? You're talking about poor? Come in lass, you canna get more poor than this.' Ronald beckons me along the concrete walkway, and I pick my way over drifting piles of sodden newspapers that give off the dense ammonia tang of urine, half-empty tins of dog food, bits of charred wood, screwed up plastic bags, vast and sinister lumps of hair, shards of broken glass, cigarette packs, empty bottles, excrement that may be animal or human, heaps of rotting rubbish, into his flat. 'Poor, eh?' he says, as I stare around me trying to keep my face bland. 'Poor,' I agree.

Sunderland SR1/2 (postcode) stands alongside the docks, once thriving, now deserted: giant yellow and green cranes hang their motionless cables over a rubble of disused machinery. Assessed as the poorest district of Britain, it is an odd amalgam of trim new houses, low and net-curtained, that have been landscaped into neat estates with a fine view of the sea, and large bleak estates that stand in their own wasteland. These 'garths' (from the Old Norse *garðr* and the German *Garten*) are symbols of Sunderland's acute poverty; one by one they are being pulled down but in some flats curtains are still hanging where a window no longer exists. Ronald is the last resident of his garth: all the rest have been moved, but because he is behind with his rent, and because he is disgusted with the place they are offering him, he has stayed put with his 18 year-old daughter, Ann.

With every window and door in the large, red-bricked estate boarded up: some of the flats have been set fire to; in the courtyard where a cold wind slices in from the sea, bits of litter fly about like frantic seabirds and lumps of wood and masonry are scattered everywhere, as if the condemned building is shedding its dirty skin. Inside the dark flat, there are heaps of dirty sheets and clothes, teetering piles of encrusted dishes.

'That needs throwing away,' says Ronald fastidiously, picking up a tin of dogfood (though he has no dog) and putting it on the floor, among the bottles full of water:

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Mind Movies
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they've turned his gas off, and he's worried they will turn his water off next. The windows in the front are all smashed. He and Ann sleep in the same room, now, and listen in the dark to gangs of vandals roaming round the estate.

Ronald is a small man with a large belly. He used to be a shipyard worker, and then a parcel porter on the railways; now he's unemployed. 'What do I do with my days? Basically I sit here'—he points at a low stool on the kitchen floor—'and either face this way and watch the telly'—he points at the TV on one kitchen unit—'or I face that way and listen to the wireless. Or I go to the pub.' He smiles in a blank kind of way. 'I'm definitely fed up.'

Ann is standing on the walkway with a group of friends. All are unemployed; some have been on unemployment schemes. They are courteous, articulate. 'I'm not really bothered about working,' says Ann. 'It's not worth it. I've been on schemes, but they just pay £10 more than the dole. And the wages round here are so low you're better off with the dole.'

'Right,' says John. 'I was working 72 hours a week, for £2 an hour. I mean, that's not right. Living to work.'

'All you're doing is living to work,' says David. 'I get more from the Social.'

'I'd like to work,' says John. 'I want a decent life. I used to shoplift, and I'm trying to get away from all of that. Half the people are doing crime round here—give them a chance and they'd take it.'

'But I like Sunderland,' says Ann. 'I wouldn't go anywhere else. London? Nah.' She stands nonchalantly on her foul walkway, in the dirty wind. 'I prefer it here. Sunderland's great, a great place to be. The people are great: they really care.'

I go back to Ronald's garth in the evening. It's dark and wind whistles up the stairways. I can make out some figures high up, cigarettes glowing. I can't believe anyone lives up there, alone, in the jagged malodorous ruin.

Most people who live in Sunderland love it with a fierce and patriotic ardour, and almost all insisted that they would never want to leave. Sharon, a single mother with two daughters and £23 a week after bills, says life might be a

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struggle, and her flat—three floors up, higgledy-piggledy with toys that she saves up for through the year and buys each Christmas, stuffy with cigarette smoke (everyone seems to smoke: these are the people Edwina Currie told to give up smoking and improve their diet) and heat from the bar fire—might be rather small. ‘But I like it here. I know everybody. My sister lives across the way. And my mum.’ She stares at the television flickering in the corner. ‘What would I like to do in the future?’ She shrugs her skinny shoulders and smiles quite cheerfully. ‘Dunno. I don’t really want to work, unless they pay more than the dole. I’ve never really been interested in a job. I never thought I’d get one. We’re all unemployed round here. But we look out for each other. And I’ve got my bairns.’

‘I would never leave here’, says blue-eyed and beautiful Alison, another unemployed single mother who lives in a poky flat in a condemned building—a huge red-brick structure, round a huge ungreen courtyard where children play loudly. ‘I don’t have a job. It’s hard, but we help each other out. The bairns love it here. Most of us have our families here too. I’ve always lived round here. Except on holidays—then we go to a caravan site 30 minutes away. I’d not change with the rich people in London, not for one day, not for one hour. They don’t know the meaning of life.’

‘The people round here’ says the Salvation Army’s bristle-headed Captain Malcolm Doyle ‘are really kind. They are a loving community.’ Doyle runs a hostel in the heart of the poorest area and sees signs of hope.

‘Sunderland’s future should be bright because its people are willing workers. But all this rebuilding doesn’t solve the long-term unemployment—and we’re in a generation now that’s never known work.’

Along narrow roads, past the Prospect Row Mission House, all boarded up, past the empty warehouses, past isolated shops selling pale pink sausages and dusty cans of beans, past the working men’s club called ‘Cheers’, sad and shut, past the city’s motto mosaic—*nil desperandum*. Into the pub, the East Enders, where eight people in duffle coats sit staring into their drinks and the jukebox plays something jaunty. ‘Yes, I’ve always lived here,’ says a woman with silver hair and a puckered chin. ‘No, it’s very nice, thank you. Is it so very poor, dear? I didn’t know. Everywhere’s poor now, isn’t it? Things are changing.’

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Mind Movies
Exemplar 3:
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Into another pub. It is rumoured to be the East End's drug centre, and is full of younger people playing snooker, smoking and drinking their slow time away. At one table a group of men play dominoes and they ask if I want to join in. So I sit on a broken sofa, click a few spotted pieces into line. They used to work in the shipyards but haven't had a job for a decade. A man with small ears and a sweet smile tells me that it's hard not to be a breadwinner, but that's how life is. You can't get angry, can you? It's nobody's fault, is it? Click, click through the evening, and the beer sinks in the tankard and the cigarettes are sucked to the filter: a way of truly killing time. 'Why should we look for work? There isn't any, except for work that pays so little it's not worth it. Who wants to earn £1.70 an hour? We'll never work again will we?'

The Venerable Bede lived in Sunderland and great industrialists (Isambard Kingdom Brunel, Joseph Swann, William Hudson) came here. Industry flourished in the town, and the town nearly died when that industry left. But now Sunderland is home to the Nissan factory; it has been made into a city; its football team has made it into the Premier League. Some think that the future looks good. The people I met in the East End were neither obsessed with their past, nor much concerned with their future. They were living implacably in the present, one foot in front of the other, one cigarette, one pint of beer, one conversation, one more day gone by. And it seemed a kind of way to be happy.

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