
Geography in the Early Years

2nd Edition

Joy A. Palmer
and
Joanna C. Birch

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Geography in the Early Years

2nd Edition

This completely revised and updated 2nd Edition of *Geography in the Early Years* presents a lively and comprehensive overview of teaching and learning in geography. Theoretical aspects of early years teaching in geography are complemented by up-to-date research findings and illustrated with discussion, a wealth of case studies, and suggestions for the development and implementation of sound geographical work in practice.

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- examples of initial teacher training and continuing professional developments.

This highly accessible, illuminating book will be immensely helpful to teachers, student teachers, policy-makers and all other providers of education for children aged 3 to 7 years.

Joy Palmer is Pro-Vice-Chancellor of the University of Durham.

Joanna Birch is Senior Research Associate at the University of Durham.

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Geography in the Early Years

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Editor's preface

Each book in this series focuses on a specific curriculum area or theme. The series relates relevant learning theory and a rationale for early years learning to the practical development and implementation of subject-based schemes of work, topics and classroom activities at the appropriate level. Volumes address teaching and learning related to the age range 3 and 4 to 7 years; that is, the Foundation Stage and Key Stage 1 of the National Curriculum for Schools in England.

Each volume is intended to be an up-to-date, judicious mix of theory and practical classroom application, offering a wealth of background information, ideas and advice to all concerned with planning, implementing, monitoring and evaluating teaching and learning in the first three years in school. Theoretical perspectives are presented in a lively and interesting way, drawing upon recent classroom research findings wherever possible. Case studies and activities from a range of classrooms and schools illuminate many of the substantial issues related to the subject area in question.

Readers will find a similar pattern of contents in all the books in the series. Each discusses the early learning environment, transition from home- to school-based learning, and addresses the key questions of what this means for the early years teacher and the curriculum. Such discussion inevitably incorporates ideas on the knowledge which young children may have of subjects and an overview of the subject matter itself which is under scrutiny. As the thrust of the series is towards young children learning subjects, albeit in a holistic way, no doubt readers will wish to consider what is an appropriate content or rationale for the subject in the early years. Having considered young children as learners, what they are bringing into school in terms of prior knowledge, the teacher's task and the subject matter itself, each book then turns its attention to appropriate methods of planning, organising, implementing and evaluating teaching and learning activities. Crucial matters such as assessment, evaluation and record-keeping are dealt with in their own right, and are also referred to and discussed in ongoing examples of good practice. Each book concludes with useful suggestions for further staffroom discussion/INSET activities and advice on resources.

While following this general format and indeed the format of the series' original book on *Geography in the Early Years* (Palmer 1994), this completely re-worked and revised edition takes into account changes required by the revised National Curriculum and introduction of the Foundation Stage and new literature and research related to early years geography teaching and learning. It also reflects recent changes in training for teachers and professional development courses, and the importance of cross-curricular links with education for sustainable development and environmental education in particular; also with the national literacy strategy, information and communication technology, personal, social and health education, and values education. It recognises the importance of special educational needs, inclusion, community and parental involvement, links with other education providers and schools' partners in training and professional development. It concludes with an extensive and updated list of resources.

As a whole, the series aims to be inspirational and forward-looking. As all readers know so well, the National Curriculum is not 'written in concrete'. Education is a dynamic process. While taking due account of the essential National Curriculum framework, authors go far beyond the level of description of rigid content guidelines to highlight *principles* for teaching and learning. Furthermore, they incorporate two key messages which surely underpin successful, reflective education, namely 'vision' and 'enthusiasm'. It is hoped that students and teachers will be inspired and assisted in their task of implementing successful and progressive plans which help young learners to make sense of their world and the key areas of knowledge within it.

Joy A. Palmer

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xii Acknowledgements

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The young child in the geographical world

INTRODUCTION

While the content of the National Curriculum for Schools in England underpins and guides the structure of the forthcoming text, this volume also discusses general principles of teaching and learning in geographical education that are transferable and applicable to all ‘early years’ children of nursery and school age. It is relevant to teachers, student teachers, policy-makers and all other providers of education for children aged 3 and 4 to 7 years; that is, the Foundation Stage and Key Stage 1 in the language of the National Curriculum.

We consider it to be both a difficult and inappropriate task to pursue any discussion of learning experiences relating to the subject matter of geography in the early years of schooling without making reference to the cross-curricular theme of education for sustainable development, closely allied to the area of learning which many know as environmental education. These two curriculum components are to a large extent inextricably linked in the work of nursery, reception and early primary classes; therefore, their inter-relationships are considered, and practical examples throughout the book take account of teaching and learning across the whole spectrum of geography and what might be termed ‘environmental geography’.

The chief aim of this volume is to provide a text which is interesting, illuminative and, above all, helpful to teachers who are going about the complex task of developing worthwhile geographical education for children in nursery, reception, and Years 1 and 2 in primary school.

Essentially it sets about providing an overview of some of the more theoretical aspects of early years learning in geography, illuminated by up-to-date research findings; and illustrates these with discussion, case studies and suggestions for the development and implementation of sound geographical work in practice. It is intended, therefore, to be a judicious mix of theory and practice, enlivened throughout by practical examples deriving from a wide range of schools, classrooms and other educational settings.

2 Geography in the Early Years

Beyond a consideration of theoretical perspectives on learning and links between the subject matter of geography and education for sustainable development/environmental education, the text considers the critical topics of policy-making, organisation and planning, assessment and record-keeping, resources and activities for training and continuing professional development.

While geography in the early years of schooling is inevitably planned at the level of whole-school policy and approach, and implemented with class or year groups, the individual child is also inevitably at the heart of the learning process. Each child has a unique relationship with the world in which he or she is growing up: a relationship based on feelings, experiences and interactions with people, places, objects and events. It is hoped that this focus on 'the young child in the geographical world' extends beyond the heading for the book's opening chapter, and permeates readers' reflections on the text in its entirety.

It seems, therefore, only appropriate that the opening words of text set the scene by focusing on what young learners actually do think about aspects of our geographical world.

VIEWS OF THE WORLD

Stanley, from the north-east of England, aged 4

- Researcher** We're going to look at pictures of a special place – what can we see?
- Stanley** Trees and water.
- Researcher** Good boy. What do we call a place where there's lots and lots of trees?
- Stanley** A rain forest.
- Researcher** How do you know that?
- Stanley** Because my mummy tells me.
- Researcher** Your mummy tells you. Good. Yes, that's a rain forest. A tropical rain forest in a country a long way away. So, Stanley, what do you know about rain forests?
- Stanley** It's got snakes and jaguars and . . . I've been to a rain forest.
- Researcher** You've been to a rain forest?
- Stanley** Yes. I've seen snakes and rattlesnakes and nice green trees.
- Researcher** Where did you go to a rain forest?
- Stanley** In Spain.
- Researcher** In Spain. Your mummy's told you about them. So you know about some of the animals in the forest?
- Stanley** Yes.
- Researcher** Have you seen rain forests in books?
- Stanley** Yes. I've got a rain forest book.

- Researcher** Let's look at some of the animals who live in a rain forest. Let's see if you know these rain forest animals. What do we have here?
- Stanley** Gorilla, and jaguar. Don't know.
- Researcher** Very good. This one's called a cheetah.
- Stanley** Cheetah.
- Researcher** And that one's called an orang-utan. And that one's called a chimpanzee. Do you think people live in rain forests?
- Stanley** Some people live in rain forests who's in charge of it.
- Researcher** Sometimes people come and cut down the trees. Is that a good idea or a bad idea?
- Stanley** A bad idea.
- Researcher** Right, Stanley, it's a bad idea. Why shouldn't we cut rain forests down?
- Stanley** Because we won't be able to see the flowers, because the trees will fall on top of the flowers.
- Researcher** Why else is it wrong to cut down all the trees in the forest?
- Stanley** Because we won't see the flowers any more. The flowers get pulled off the branches, and then they go a different colour if you leave them on the park, on the grass.
- Researcher** So we should look after rain forests, shouldn't we?
- Stanley** Yes.
- Researcher** Forests are important in the world. Do you know why forests are so important?
- Stanley** Because there's nice things in there and good things. . . .
- Researcher** Let's look at one more place. This isn't a rain forest – what do we have here?
- Stanley** North Pole, that is.
- Researcher** North Pole! Very good. What's this?
- Stanley** Ice.
- Researcher** Ice and snow. If the weather at the North Pole got hot, what would happen to all the snow at the North Pole?
- Stanley** It would just melt.
- Researcher** Well done. Do you know where the snow would go to? What would happen to it?
- Stanley** It would just go and be gone for ever.
- Researcher** Do you know where it would go? Would it just disappear?
- Stanley** Yes. . . .
- Researcher** Good boy. So we've got some beautiful places in our world, rain forests and the North Pole, and beautiful places with flowers. And we have to take care of them, don't we?
- Stanley** Yes.
- Researcher** Sometimes people spoil the world by throwing rubbish all over it.
- Stanley** Yes, throwing rubbish all over the flowers and all on the floor to make it dirty.

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- Researcher** Is that wrong?
- Stanley** Uh-huh.
- Researcher** What should we do with the rubbish?
- Stanley** Just throw it in the bin.
- Researcher** Do you know where rubbish goes when it's in the bin?
- Stanley** The bin men put it in their big truck.
- Researcher** They do, and the truck takes it away. Do you know where the truck takes it?
- Stanley** To their place.
- Researcher** And do you know what happens to it? Can you guess?
- Stanley** They put it into a black bin, and then give it to another bin man.
- Researcher** Can you think of any other ways we can take care of our beautiful world?
- Stanley** From not cutting down the trees.
- Researcher** Not cutting down the trees, that's right.
- Stanley** Not spoiling the flowers, not treading on the flowers, not going on to the grass and treading all on the flowers.
- Researcher** That's right. Why should we look after our world?
- Stanley** Yes, it's a very beautiful world.
- Researcher** Do you take care of our world?
- Stanley** Yes, I do.
- Researcher** How could we help other people to know that they must take care of the world?
- Stanley** But bad people kill elephants because of their tusks.
- Researcher** So . . . do you think we should ever kill animals?
- Stanley** No, we should look after them.
- Researcher** Because they're part of our world, aren't they?
- Stanley** But bull fights aren't very nice, are they?
- Researcher** No.
- Stanley** Yes, because they try and kill all the bulls, don't they?
- Researcher** That's right.
- Stanley** They tease them.
- Researcher** That's right. And we shouldn't tease animals, should we?
- Stanley** No, because that's naughty, isn't it?
- Researcher** Do you think that when you grow up you will always want to take care of the world?
- Stanley** Yes. When I grow up, I'm going to be an animal doctor.
- Researcher** Right. That's a very good thing to want to be. So you're going to work very hard at school?
- Stanley** Yes. I have to go to London to learn about it.
- Researcher** Do you?
- Stanley** Uh-huh.
- Researcher** Right. So when you grow up, you're going to go to London. . . .
- Stanley** Uh-huh.

Researcher ... and learn more about animals, because you want to learn how to look after them.

Stanley Yes.

Daniel, from the USA, aged 4

Researcher So ... do you have any idea where those places may be?

Daniel I think that's Hawaii.

Researcher It's like Hawaii, isn't it? Good boy, Daniel. What can you see on the picture?

Daniel Trees and bushes ...

Researcher Well done.

Daniel And a river.

Researcher Lots of trees. This is a place called a forest. It's called a tropical rain forest.

Daniel That's ... is that a tropical rain forest?

Researcher Yes – do you know about them?

Daniel 'Cos I've seen Ronald McDonald, and he's in a tropical rain forest.

Researcher Who's been in a tropical rain forest?

Daniel Ronald McDonald.

Researcher Who's that?

Daniel He's a guy ... and it's a place where you can go and get happy meals ...

Researcher Right. So you've seen pictures of a tropical rain forest there. In McDonald's?

Daniel Yes.

Researcher Good boy. So ... do you know what it's like in the forest, Daniel?

Daniel Uh-huh. Sometimes you can see tigers.

Researcher Good boy. What else might you see there?

Daniel And lions ... and, and ... and frogs that are coloured. And ... toucan.

Researcher Great.

Daniel Tree frogs.

Researcher You're an expert.

Daniel Fox.

Researcher Have you seen all these things in pictures in McDonald's?

Daniel Yes.

Researcher That's wonderful. Well, I have one or two pictures of things which live in the forest.

Daniel That's, um ... that's an orang-utan.

Researcher Well done!

Daniel That ... those are chimpanzees.

Researcher Daniel, you're an expert.

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- Daniel** That is um . . . a . . . called a cheetah.
Researcher OK. And one of the big problems in rain forests is that people sometimes cut the trees down.
- Daniel** Yeah – they shouldn't do that.
Researcher Good boy. Do you know why they do it?
Daniel Because they need wood to build their houses.
Researcher Excellent, Daniel.
Daniel And firewood for them.
Researcher And do you know what else they do with the wood they cut down?
Daniel They make stuff out of it.
Researcher Right. Why is it a real bad idea to cut the trees down?
Daniel Because then the rain forest just becomes a whole all dead place.
Researcher Well done, Daniel. That is right. So what would happen to the animals?
Daniel They'd die.
Researcher And the people who live there?
Daniel They'd die too. . . .
- Researcher** And my other place we have . . .
Daniel Ugh!
Researcher This place. Now that's not like a rain forest, is it?
Daniel That is . . . um . . . er . . . that looks like . . . um . . . that looks like . . . um . . . Iceland.
- Researcher** Well done. It's a very very snowy land, so that isn't like a rain forest. A rain forest is hot hot, and this is cold cold.
Daniel I like cool air.
Researcher Do you? Yes, I do too. If this place got hot like a forest, what would happen to the snow?
Daniel All of it would melt.
Researcher What happens to snow when it melts?
Daniel It becomes . . . everything becomes clean.
Researcher Right. And where would the snow go?
Daniel It just evaporates . . .
Researcher I can see that you like looking at pictures and reading a lot of books.
Daniel I read . . . I read stories. And I even have . . . been reading a story about a man named Stuart Liddell. What's the next picture?
Researcher That's another snowy place.
Daniel Hey, it has some flowers.
Researcher Right. So this is such a beautiful world that we live in, and some people don't take care of it. Do you know how people can spoil the world?
Daniel Like chopping down all the trees and stepping on all the flowers.

- Researcher** That's right. Any other ways?
- Daniel** Yes. Killing animals . . . killing people.
- Researcher** That's good, Daniel. Those are wrong things to do. Another way people can spoil the world is by throwing trash and garbage around the place. That's not a good idea, is it?
- Daniel** They should either throw it away or recycle it.
- Researcher** Excellent! And do you recycle yours?
- Daniel** Sometimes. And we . . . and we throw it away, and give it to the garbage van.
- Researcher** Right. So . . . could you just tell me about recycling, 'cos you're an expert on all these things. What does recycling mean?
- Daniel** Recycling means saving the trash, and make old things into new things.
- Researcher** That's wonderful. What sort of things can we make into new things?
- Daniel** Cans.
- Researcher** Right.
- Daniel** . . . bottles . . . newspaper . . . comics.
- Researcher** Right, right. And do you know why we need to make new things out of . . .
- Daniel** Old things.
- Researcher** . . . waste things.
- Daniel** 'Cos that helps the world be healthy.
- Researcher** That's a wonderful answer, Daniel. It does help the world be healthy. Could you just say a little bit more about that? How does recycling help the world be healthy?
- Daniel** By keeping all the trackways in the world clean. And by saving trees and animals.

Stanley and Daniel know a great deal about the world in which they are growing up. They know that forests contain trees, animals and birds. They can identify a number of species. They appreciate that places can be hot or cold, and that if snow gets warmer it melts away or evaporates. They also appreciate that the correct place for waste materials is in rubbish bins. Daniel is even capable of explaining the concept of recycling.

There are, of course, obvious gaps and errors in the knowledge of Stanley and Daniel. This subject will be returned to later in the chapter.

But before pursuing this intriguing topic of knowledge expressed by 4 year olds themselves, attention first focuses on rather more theoretical perspectives on the young child in the geographical world.

As attention turns to this context, perhaps it should be emphasised that the 'essence' of geography in the early years is concerned with children's developing understanding and appreciation of the human and physical dimensions of the world in which they are growing up. Early years

geographical education must therefore take account of wide-ranging theoretical perspectives relating to developing conceptions of the physical environment and understanding of the world, which combine to influence children's thinking and learning in this curriculum area. In short, early years geography is fundamentally about the development of the concepts of 'space' and 'place' and, as we shall see later in this book, a wide range of classroom tasks and related learning activities can contribute to effective learning of these concepts. Practical tasks with which children may engage to promote meaningful learning in geography draw upon a complex theoretical framework. Present space clearly does not allow for a comprehensive overview and analysis of this. Thus it is intended to highlight a number of key elements of the framework and to illuminate these with recent and relevant research evidence.

CONCEPTION OF THE PHYSICAL ENVIRONMENT

Surprisingly little has been written for early years teachers about the origins of children's subject knowledge and conceptual development in the areas of geography and environmental education; that is, areas concerned with cognition of physical systems, spatial relationships, processes and environmental issues. Existing research literature defines and describes the term 'environmental cognition', or the ability to imagine and think about the spatial world, encompassing general ways of thinking about, recognising and organising the physical layout of an environment.

The most substantial body of research on children's conception of the physical environment has been undertaken by Jean Piaget (1960a, 1960b, 1954). His general findings were replicated with much larger samples by Laurendeau and Pinard (1962). Piaget's initial research consideration relating to a child's conception of the world is 'realism', that is, whether external reality is as external and objective for a child as it is for adults. In other words, can a child distinguish the self from the external world? Realism equates to ignoring the existence of self; to drawing boundaries between one's internal world and the physical world. Piaget (1954) describes three processes involved in the evolution of the construction of reality between the ages of 3 and 11. The first of these is the progressive differentiation of the self from physical surroundings, so that an individual can distinguish what comes from within oneself and what is part of the external world.

The second process involved in the evolution of the construction of reality is 'greater reciprocity' or recognising other points of view. In the early years, children take their immediate perceptions to be true instead of recognising the uniqueness of their own perspective. Piaget uses the example of the young child who thinks that the sun and moon are small globes following us as we walk along; the question does not arise as to whether these globes also follow other people.

Piaget's third process is 'from realism to relativity'. Young children think of everything as absolute substance and quality. Gradually, they come to see objects and phenomena as dependent on each other and relative to us. The clouds provide an example: at first, these are thought to move by themselves. Gradually, children become aware that they move with the wind, but still believe that they have their own energy and direct themselves. Later, they come to realise that there are other forces which determine the motion of natural objects (e.g. the wind) and that in turn these are dependent upon other external forces. Ultimately, the idea of the existence of a universe of relationships is established. Parallel to this growing relativity of children's understanding of physical properties, objects and qualities is the developing conception that their own ideas are relative to themselves and to their own evaluations of things.

Piaget's account of children's developing understanding of physical causality (Piaget 1960b) follows a similar pattern to his account of developing conception of reality. In both these processes, the young begin by recognising only their personal point of view, thus confusing themselves and the external environment. Gradually, they move towards greater objectivity, reciprocity and relativity.

The essence of Piaget's developmental theory has been challenged and criticised in more recent years, notably by the development psychologist Vygotsky, who claims that the developmental uniformities found by Piaget are not laws of nature but are 'historically and socially determined' (Vygotsky 1979). His extensive work reveals that cognitive development is influenced by the materials which children experience and the cultural situations in which they are interpreted (see also Donaldson 1978 and 1992). While recent research calls Piaget's stages of development into question, the misinterpretations of reality first described by Piaget have been repeatedly found, a fact relevant to the development of programmes of work for teaching and learning experiences in geography and environmental education. Children have a definite tendency to accept the world around them as it is perceived or 'given' through observation. Their own feelings and abilities are also projected into an interpretation of physical entities and space. Thus confusions are created which may lead to erroneous understandings about objects and places. A teacher's role clearly involves having some understanding of such confusions and misinterpretations, and the ability to design learning tasks which take account of them.

UNDERSTANDING THE WORLD

Planning a curriculum and learning experiences about the geographical world need to take account of the learners' understanding of their environment, their interactions with it and sources of information about it. The chief source

of environmental knowledge is a child's own direct experience of people, objects and places, supplemented by indirect information such as that from photographs, maps, other people's descriptions and media images (see, for example, Vosniadou and Brewer, 1992; Wiegand, 1992). From this combination of sources the child can build up a knowledge of where places and objects are in the world, and a set of ideas and attitudes about such places. In general, the ability to imagine and think about the world around us is referred to as environmental cognition. Environmental knowledge that an individual has already acquired is often described as a 'cognitive map', or mental model of the environment (see, for example, Stea *et al.* 1996). Such maps or models are personal representations of the world, and their form is complex and controversial. Perhaps the word 'map' is misleading – cognitive maps are not the same as cartographic maps either in physical form or in content. They are sketchy, incomplete, distorted, simplified and idiosyncratic (Devlin 1976; Evans 1980). It is possible to think of them as composed of three elements: places, the spatial relations between places and travel plans (Garling *et al.* 1984). Places refer to the basic spatial units that we attach information to, such as name, function and perceptual characteristics. A place may be a room, building, neighbourhood, town, nation or the whole world. Spatial characteristics of cognitive maps include the distance and direction between places and the inclusion of one place within another (a room is inside a particular building, in a town, in a nation and so on). The concept of travel plans refers to the crucial bridge between the mental world of cognitive maps and practical behaviours (such as finding our way from one place to another) which they support. As would be anticipated, research studies have shown that the more familiar an individual is with an environment, the more accurate and detailed his or her cognitive map will be (Appleyard 1970; Garling *et al.* 1982). The quantity of information stored in memory about a place increases with experience of that place. Inevitably, children have far less direct contact with places than adults, and many environments of the world will be outside their personal experience. Furthermore, differences between children's and adults' cognitive maps reflect not merely differing levels of experience but also different approaches to problem-solving. Again, the research findings of Piaget and his associates are highly relevant to any discussion on the acquisition of cognitive maps. The research of Piaget and Inhelder (1967) probably provides the most influential theory of cognitive development as applied to spatial cognition. This incorporates a study wherein children were asked to sit on a chair and look at a table on which were placed three model mountains. Three other chairs were placed around the table, and a doll was seated on one of them. From a set of drawings each child was asked to select a view of the scene as the doll would see it. Children below the ages of 7 or 8 typically described the scene as they saw it rather than from the perspective of the doll. Piaget termed this phenomenon egocentrism. During this developmental phase of egocentricity, the child's frame of