

# The Challenge of Geography for Primary Children<sup>1</sup>

Geographische Herausforderungen für Grundschul Kinder

Desafíos de la Geografía para estudiantes de primaria

Simon Catling 

**Zusammenfassung** Dieser Beitrag geht den verschiedenen Herausforderungen nach, die mit der Aufnahme der Geographie in den Fächerkanon der Grundschule einhergehen. Diese speisen sich nicht zuletzt aus der Notwendigkeit, dass die Kinder im Rahmen des Faches Geographie sich breit informieren müssen. Mit ihrem Wissen sind sie aufgefordert, nach gründlicher Abwägung Kritik zu üben, zu reflektieren und Entscheidungen zu treffen. Voraussetzung für solche Prozesse ist, ihr Interesse und ihre aktive Teilnahme am Geographieunterricht vom jungen Alter an zu wecken, um ihr Wissen zu erweitern und die Welt verstehen zu können. Dieser Beitrag widmet sich verschiedenen Facetten der Geographie in der Grundschule, wie etwa Geographien von jungen Menschen, der Notwendigkeit der frühen geographischen Bildung, der Bedeutung der Progression, der Natur und den Aufgaben des Schulfaches Geographie und der Relevanz guten Unterrichts. Zum Schluss formuliert der Beitrag zehn Herausforderungen der Geographie in der Grundschule

**Schlüsselwörter** Children's Geographies, Ziele und Progression, Basiskonzepte, guter Unterricht, Herausforderung der Grundschulgeographie

**Abstract** This article examines several challenges of including Geography in the primary grades curriculum. Challenge requires that younger children must become informed, consider, critique, reflect on and much more in studying Geography, not least to excite their interest and engagement, from their earliest school years. It involves developing their knowledge and understanding of the world today. This article explores aspects of children's Geographies, that understanding Geography is essential for children, the significance of progression, the subject's nature and purpose for primary children, and the importance of its high quality teaching. It concludes by articulating ten challenges for primary Geography.

**Keywords** Children's Geographies, purpose and progression, key concepts, high quality teaching, Primary Geography's challenges

**Resumen** Este artículo examina varios desafíos de la Geografía como asignatura en la educación primaria. La Geografía como asignatura requiere del alumnado que se informa, considere, critique y reflexione sobre procesos geográficos. La finalidad es sobre todo despertar su interés por la Geografía desde los primeros años para desarrollar su conocimiento y comprensión del mundo de hoy. Por tanto, el presente artículo se dedica a varias dimensiones de la Geografía en la primaria, entre otros a las Geografías de los niños, la centralidad del conocimiento geográfico para el alumnado, la importancia de la progresión, la forma y los objetivos del conocimiento geográfico y la importancia de la calidad de su enseñanza. El artículo cierra formulando diez grandes desafíos de la Geografía en la primaria.

**Palabras clave** Children's Geographies, objetivos y progresión, conceptos básicos, enseñanza de calidad, desafíos de la Geografía en primaria

## 1. Introduction: Challenges for Primary Geography

Geography is a complex and challenging discipline. Its subject matter—our world—requires considerable knowledge and understanding to make sense of it. Geography is evidence-based: inquisitive, never really satisfied, always seeking to dig deeper, whether this concerns particular river catchments and changes or the functioning of shopping centres and people's consistent and shifting purchase habits or matters of national and international migration and the local and global changing climate. Both implicitly and explicitly we query what is happening as places, sites and areas evolve; we have views about this, and reactively or thoughtfully we respond to change. Geography is a core element in our lives, from the place in which we live to what for and where we shop daily and infrequently for products made nationally or elsewhere, to the impact of national and international events and decisions that affect us, directly and indirectly. All of these matters, and much more, affect the lives and futures of children, and they present challenges.

Geography is a demanding subject to include in the school curriculum. It would seem to require some maturity for young people to begin to grasp. So why should we think it is important to be an element in the experience and curriculum of our youngest children, from their pre-school and kindergarten during their pre-teenage years? Geography seems challenging to impose on young children, when many adults appear challenged by it, indicated by reticence, even hostility, to change.

There are, indeed, challenges in providing Geography in the primary school curriculum for 5/6 to 11/12 year olds. Challenge is a positive word; a challenge is a good thing. One challenge is engaging younger children's curiosity, exciting their interest and engagement and developing their understanding of the world from their local scale to the global scene. Another challenge is to get children considering, reflecting on and developing their values through exploring, investigating, and studying Geography.

From the start of their lives every child faces the challenge to make sense of the world around them, of their experience in it as

their horizons expand, and of what it means for them and for others. To enable younger children to develop and enhance their awareness and understanding of the world requires them having access to the insights which Geography, as a discipline and school subject, offers and applies so that primary children increase and improve their sense-making of the world.

Children are inquisitive and desire to know more, not simply in the limited use of *know* as gaining more information (though often they like facts) but much more effectively and deeply in the sense of understanding, appreciating, and applying their developing and deepening awareness of the world. Young children can be introduced to Geography at any and every age, by taking account of their experience and development and expressing the subject in ways they appreciate (BRUNER 1960). It concerns children consistently revisiting Geography's key ideas and meanings to make more and better sense of the world. During their Geography curriculum, children should revisit its key ideas in different contexts and with increasing demands, but for primary children these should be in ways which connect to the children, not be abstract to and unconnected with them (KLAFKI 2010). Younger children may appear informed about the familiar but can see it anew through new lenses, as much as be fascinated by the new and learn fresh ways of noticing and reflecting. Challenging children at all ages involves challenging aspiration, challenging topics and challenging teaching. Tackling these challenges helps children realise and appreciate the role and value of Geography for themselves and others.

To pursue these matters, this article examines several challenges for Geography in pre-school and primary education. One challenge is that we recognise that children are engaged in developing their geographical understanding whether wished for or not. In an informal sense, children are geographers, as explorers, investigators, gatherers, interpreters, explainers and reflectors on their experiences in and of the world. This is an aspect of their being from their start in life. The second challenge is

what primary Geography should focus on to foster and develop children's knowledge, understanding, and appreciation of the real world of today and its future. This is also about the intentions for Geography with younger children, engaging them with Geography's *big ideas* and key interests. The third challenge is how

this is gone about, the guiding principles for primary Geography's teaching and learning, such that children are involved, motivated and learn and apply their geographical understanding. Tackling these challenges helps children realise and appreciate the role and value of Geography for themselves and others.

## 2. The Challenge of Primary Children's Geographies

Younger children are embryonic geographers. From birth through to 11/12 years old they develop intrinsically and informally geographical perceptions and conceptions through living their lives. Children are involved in many things which Geography studies and which fascinate geographers about places, environments and responses to them, but for younger children it is at their scale and in their context, a bigger world than is often recognised. Chil-

dren's Geographies are multifaceted, drawing on direct experience as well as on what they learn from others and through various media (MATTHEWS 1994; FREEMAN & TRANTER 2011; NAIRN & KRAFTL 2016, among many others). Fig. 1 provides a brief summary.

Playing with mud, soil, and sand is familiar fun and connects children with the natural environment, as do wandering among trees, bushes, ponds, river paths, and grassland.

- (1) Children's limited, modest, or extensive experience in and of the environment through activities, travel, and times spent in places alone or with others
- (2) Children's engagement socially and culturally in various places, contexts, and means, from person-to-person to digital interactions
- (3) Children's environmental and spatial awareness, learning, and capabilities through activities, representations, interactions, and communications
- (4) Children's growing competence in extending and using their *geographical* vocabulary and language to articulate and communicate their knowledge, questions, reflections, and ideas
- (5) Children's ability to sense and use *geographical* affordances during their engagements in places and environments
- (6) Children's developing awareness and realisation of the scales of places, communities, and events, from their home to the neighbourhood to much larger areas and nationally to the global, based in personal experience, engaging with others, and through social media
- (7) Children's awareness of *geographical* realities, through information and expressed concerns about the world locally and elsewhere, via family and peers, news, social media, and school
- (8) Children's feelings about peoples, events, places, and environments which express and foster their place and environmental attitudes and values
- (9) Children's building up of their factual information about environments and places, alongside their ways of noticing connections and groupings and developing conceptual awareness and constructs which make sense to them of what they encounter and which they can apply and adapt
- (10) Children's developing sense of their future in the world and their emerging appreciation of what that future might become along with what they would desire for themselves and others

**Fig. 1.** Ten facets of younger children's Geographies: a brief summary (Source: author).

Parks and rough ground are attractive. Stimulating outdoor places are features of kindergarten and many schools for play and learning (WALLER ET AL. 2017). Journeys by foot, bus or car in the neighbourhood or into town provide experiences in and of the urban environment its features, services, and care (BLUNDELL 2016; EVANS & HORTON 2016). Pre-school and younger primary children's encounters with places are accompanied, but older primary children may have some freedom to roam on foot or by bike or bus, often with friends. They may stretch their home range beyond supposed bounds, being adventurous. Given such opportunities children see the affordances or opportunities provided by places they are in, perhaps for a den site in a park or a *hidden* nook in a tenement stairwell (CAMSTRA 1997; CHRISTENSEN & O'BRIEN 2003; VALENTINE 2004; MALONE 2018). This range of experience varies naturally between children. It depends on parents/carers and family, where children live, whether transport is readily accessible, their peers, their confidence out about alone or with others, what appeals to them and their age. Every child's everyday, informal Geography is personal and differs from others across communities, nations, and globally. Children in the same classroom have similar but different place experiences and knowledge to draw upon; their understandings are diverse.

Children's Geographies are broad and varied. From an early age they encounter and build a sense of the wider world beyond their experience (ROBERTS 2014; BARLOW & WHITEHOUSE 2019). They develop ideas about other places through family tales and photographs, their peers, brief personal holidays, and sources such as tourist advertising and television news programmes about what happens around the world, including natural and human disasters, and from films, some access to social media posts, through illustrated information books, and from stories told and read to and by them. Their knowledge, though, is not always broad or accurate. Primary children develop knowledge and misunderstandings about topics of global debate from climate change and extreme weather events to migration concerns and the scale of plastic waste (NÍ LAOIRE ET AL. 2011; CATLING & WILLY 2018). They may know their own neighbourhood only partially. Younger children de-

velop ideas and at times misconceived, even negative, stereotypes about people, communities, cultures, and some countries, based on limited or dramatic information which remains unchallenged because never revisited or reconsidered (SCOFFHAM 2019). Yet children respond compassionately when they encounter people's needs in demanding and distressing circumstances, such as the effects of poverty, the lack for others of resources and services which they take for granted, like water and sanitary access, and the impacts of hurricane or earthquake disasters. Primary children hear about and at times see images in which people exploit and damage the environment. They can be distressed by such actions and events, and wish to support ways to help people and care for the environment. Often such information, images, and perspectives are limited and unbalanced, giving only one sense of lives in other parts of the world. Children may gain no sense of how ordinary and normal life usually is and miss the resilience and determination of people and communities to create the best lives they can for now and the future. They tend to take their own lives and places as norms to evaluate others by seeing difference as separation rather than as diversity providing richness in the world.

Younger children develop a positive sense about places and what is attractive about environments. They wish to conserve what they find interesting and pleasant, however small scale, and to see actions to improve and even change places. They can value replacing features they regard as uninviting, hoping for benefits, and they appreciate cleaning up places and acting differently to maintain improved sites (MURNAGHAN & SHILLINGTON 2016; FREEMAN & VAN HEEZIK 2018). Children's concern about the amount, availability, and impact of waste in neighbourhoods, the countryside, the seaside, and the oceans illustrate their response to local and global concerns. They notice carelessness about places because they learn about this through the media, their peers, family, and school, where such concerns are raised, questioned, and discussed. Children know also that tackling such matters can be contentious and lead to conflict. Children know it is not easy to argue or act when others are unconcerned or challenge why it should matter. This raises issues of fairness, personal engagement, social

justice, and power about the inequalities they encounter locally and elsewhere, and younger children will express their views about these effects in their own lives and neighbourhoods and in the lives and communities of others, and question why they are not tackled.

Children's Geographies are multifaceted (FOG OLWIG & GULLØV 2003; SKELTON & AITKEN 2019). The strong dynamic in their lives is what is personal and affects them, and so is locally oriented, but there are many influences which shape their knowledge and understanding of the world about them and elsewhere and that shape their values and attitudes to people, places, and environments. This connects with their developing awareness from a young age of their sense of place, as home place and nationally, drawn from personal experience and external influences. Primary children develop an imaginative sense of place, which emerges through their engagement with the people, places and events in stories, of what they might wish their world to be like, their hopes for the future and their place in it. Their sense is usually realistic though tempered with hopefulness.

Younger children's emergent and evolving Geographies provides structure, coherence, and conceptual sense for them, though they are only gradually able to express and communicate this through action, their developing graphic capabilities, and with vocabulary and language, moving from active to symbolic representations. Children have agency within their own contexts, for instance in constructing their spatial awareness of places and in using this in familiar and new settings and in realising their activities and actions can have impacts on people and environments when making some sites their own or being noticed *out of place* by adults (TISDALL ET AL. 2014). Children's understanding of their places and what happens in and to them often

goes deeper than they show and tell. Their people, place, and environmental engagement is empowering for children at all ages (FIRTH 2013) and, while frequently silent or only expressed outside adult range, it lies at the heart of children's everyday or *Ethnogeographies* (MARTIN 2008; CATLING & MARTIN 2011; CATLING 2017). Their Ethnogeographies evolve with their experiences and the ways they accommodate what they learn through their place and spatial activities and encounters. Children learn, adapt, trial, and develop new strategies in the places and spaces of their lives.

Understanding and appreciating younger children's Geographies is important for primary Geography. Children bring the building blocks for deepening their geographical understanding into school from their earliest years. Harnessing this has been advocated, for example, in England for many years (BARKER 1974; BALE 1987; CATLING 1988; BLYTH & KRAUSE 1995; COOPER ET AL. 2006; CATLING & WILLY 2018). It is essential that primary teachers realise, draw on and build on the Geographies children bring, as well as challenge children's misunderstandings and misconceptions and develop the knowledge they have yet to gain. Geographical studies should build richly on children's constant geographical experience, enabling them to broaden their knowledge and deepen their understanding, consistently and progressively taking them beyond what they know and giving them a stronger structure for making better sense of the world (YOUNG & LAMBERT 2014). This is what school studies in Geography offer: enhancing children's knowledge of and giving new insights into the world, building from the discipline's range of perspectives (JOHNSTON & SIDAWAY 2016; HOLT-JENSEN 2018), and its dynamic capacity for evolution, new lines of enquiry and its realm world focus and evidence (STOLTMAN ET AL. 2015).

### 3. The Challenge of Today's Geography

Geography today is essential for understanding the challenges faced by the world (CRANE 2018; DORLING & LEE 2016; MURPHY 2018), challenges, such as change and development in our urban and rural places, climate change and its modifying effects on weather patterns, ocean and land waste pollution, the impacts of migration and conflict and their

social consequences, and the variety of ways digital media provide different worlds to and for us. These are matters which primary children notice and are aware of, increasingly so the older they are. They seem better informed than many adults prefer—perhaps essentially so for their present and future lives.

School children's and young people's climate demonstrations have been one example, in which primary age children have participated, often with their parents (THUNBERG 2019). Children as young as 6 and 7 years old have participated because they have noted the increasing changes and drama in their own and other's weather and the concerns about its causes and effects, such as increased and more severe storms, flooding, heatwaves and wildfires nationally and around globally (ARMSTRONG ET AL. 2018; FOSTER 2019). Their senses of concern and urgency are not only for themselves but for future generations (ABATE 2020). Family and younger children's uses of television and on-line and social media provide information and access to the influences on climate change and the climate emergency that has arisen. Children's awareness of environmental concerns includes the damaging extraction and continuing very high use of fossil fuels, the destruction of tropical and temperate forests to meet agricultural needs in food production, and continuing urban encroachment as cities grow and raise demands for services, water, waste removal, and transport networks. Children notice shop closures and increased home delivery services. They have concerns about the volume of wrapping on goods and food and about food waste, as well as how we dispose of waste, both casually in places and for collection. They extol the increasing emphasis on goods recycling and reuse. Plastic waste in our oceans has hit home through its impact on ocean wildlife.

We are now aware of the scale of micro-plastics found in fresh, recycled and spring water. These concerns bring together Physical and Human Geography as Environmental Geography (DURAM 2018; HIMIYAMA ET AL. 2020). They highlight the need to understand their origins, how they are caused or created, their uses and impacts on people and places, and in what ways these outcomes are helpful and problematic and need or need not occur.

These issues raise core geographical challenges in the world today. They are about topics which affect us directly in our localities, from vehicle use and the impacts on road networks and parking, to increasing demand for fresh and processed foods, to the encouragement to continue to wear *out-of-date* fashionable clothing traded around the world. Fundamentally, we are all interdependent with many other places and people; this affects both theirs and our own lives and environments. It has become increasingly the case that the sustainability of our lifestyles, livelihoods, and places is questioned. Primary children need to engage with these matters, to ask what is happening in the world, what natural and human processes cause and create these situations, how people, places, and environments are affected, whether there are benefits or not, and what might and should be done. Such issues and young people's climate crisis strikes and protests point to the vitality of Geography (DOLAN 2022), not only as an investigative discipline but in everyone's daily lives, child and adult alike, matters of social justice (PIKE 2021).

#### 4. The Challenge of Progression in Primary Geography

Developing primary age children's understanding and knowledge of the world presents the challenge of developing and building up what they know, engage with and are enthused by. This presents a significant challenge for Geography in the school curriculum in order to provide for progression in their geographical learning, working with and development of their geographies (BARLOW & WHITEHOUSE 2019). An important focus will be on the development of their geographical knowledge of the world, of its places and locations, of the processes, changes and outcomes involved in these human and natural contexts, of the impacts and concerns raised and the values ex-

plored, which involve contention and controversy, and of the enquiry methods and geographical skills younger children need to learn to enhance and apply their geographical understanding, as indicated in Fig. 2.

In pre-school and their earliest years in school, children should be involved in geographical studies. While such studies may not be formally *listed* in the curriculum as Geography, it is important that their teachers have thought through the Geography which they are helping children to learn during these years (CATLING & WILLY 2018; REYNOLDS 2019; WILLY 2019). Their purpose should be to enable children to have a variety of geographical

experience and to achieve a foundational level of understanding. By around the age of 7 years old young children should have been finding out about places and people's lives and activities locally, including of their school, begun to build up some basic information and locational knowledge about people, cultures, places, environments elsewhere and in the world, help them to have a sense of themselves and of their place locally, nationally and in the world. Their curiosity should be stimulated and developed by encouraging their observations, through questioning of and by them, and by being introduced to photographs and appropriate globes, atlases, and maps. They should talk about what these and other sources show and how they are helpful in telling them about places, people and the environment. They should expand their vocabulary by describing what they see, noticing some similarities and differences, some distributions and patterns in and between places, and some connections they have with other people. Young children can talk about and compare their feelings about their own places and what they think is important and of concern for themselves and others, including changes they see and the extent to which places are looked after.

Developing their geographical studies, whether in a cross-curricular context or as a subject itself, by about 9 years old children should have investigated other places and compared them with their own place, have

continued to extend their locational knowledge of their locality, nationally and the world, while becoming more aware of key natural and human features at each scale. They should be able to share what they think of and feel about their neighbourhood and places nearby (PIKE 2016; WILLY 2019). Fieldwork investigations should have taken them into their local area and beyond, observing, recording, and describing a variety of features and sites, looking at uses and links with elsewhere. Such interconnections should help children explore people's and places' interdependence with the wider world and involve making comparisons and becoming aware of diversity in common needs and experiences from shopping to transport. Children should begin to recognise that people live differently, in contrasting circumstances and have differing needs, but that they should be thoughtful about how they comment and be wary of making judgements. Their enquiries should involve an increasing use of a range of sources, from maps and books to people and websites, and include reflection on their usefulness. Children should begin to recognise that people, including their peers, may have different views about the same places, changes and environmental care and concerns, but that they can reasonably disagree.

As their geographical experience develops and extends, children by the ages of 11/12 should know they have been studying Geography. They should have a more extended framework of world knowledge and be able to

Geographical dimensions	An elaboration
Having local, national, and world knowledge	Primary children develop their knowledge of geographical features, places, and locations through increased fluency and greater breadth and depth in their contextual knowledge.
Understanding of geographical processes creating and changing places and environments	Primary children develop their knowledge and understanding of the geographical conditions, interactions, distributions, patterns, changes, and impacts locally to globally, enabling them to make increasing sense of the world at a range of scales by seeing connections between natural and human processes and effects affecting places, people, and environments.
Appreciating that aspects of place and Environmental Geography involve controversy and contention	Primary children develop their awareness and understanding that people's values, feelings, attitudes and beliefs affect how they respond to, act and have impacts on places, people, and environments positively and negatively.
Using geographical enquiry and skills	Primary children develop their skills in using and applying observation, collection, description, analysis, explanation, evaluation, and communication of geographical information and findings, and their reflection on their geographical learning.

**Fig. 2.** Key aspects of primary children's progression in geographical learning (Source: author).

use globes and paper and web atlases and maps to locate places in the news, their studies and otherwise met. Children should realise how their locality fits into the wider world of their country, continent and the world (BUCHANAN 2013; PIKE 2016; DOLAN 2020). They should be able to talk about aspects of life in their country, and be able to state some comparisons with other cultures and places in the world. They might have made further focused investigations in their locality and be able to analyse and explain what the area is like and some causes of and reasons for changes. Through studies of various places at different scales, children should be aware of the spatial patterns of selected natural and human features and the geographical processes which lead to these. They should be able to discuss the links between and interdependence of people and places. They should be aware of environmental and cultural

diversity locally, nationally, and globally, and of the distribution of wealth and poverty and its effects, how people have sought to improve their lives and why and how this is supported and encouraged. Children should be aware of the variety of environments and the impact of natural and human-caused hazardous events, and how these are responded to. They should have had opportunities to consider and express their views about the exploitation of and care for and improvement of places and environments, both locally and globally (BOYLE-BAISE & ZEIN 2014). In undertaking their studies and enquiries children should develop their questioning skills and use of primary and secondary evidence and sources and be able to consider the quality and integrity of these. They should communicate and discuss their findings, conclusions and reflections, debating these and appreciating why others may hold different views.

## 5. The Challenge of Purpose for Primary Geography

Through such a spiral curriculum progression (BRUNER 1960), children gradually gain insight into and perspectives on the world which help them recognise what it is like and its challenges. A key purpose is to foster children's sense of awe and wonder. Another is to help them realise that there is much more involved in understanding places, the ways we use spaces, how we exploit and try to improve the environment, the scales at which we act, the diversity of places and people's lives, where all this happens and how we make sense of it in our local, national and global mental maps (PIKE 2016; BARLOW & WHITEHOUSE 2019). Furthermore, primary Geography must encourage children to interrogate what they study, to ask why they need to know about some places rather than others, what is informative for them about any particular topic and why being connected with other places, people, and environments is significant for us all (WILLY 2019). Studying Geography to build knowledge about the world involves developing the skills to do this, from map skills to fieldwork and making use of secondary sources. Children need to realise that they often access only pre-digested and reconstructed sources of information. They need to be becoming critical geographers.

Progression in geographical learning gradually leads primary children to recognising

the subject called *Geography* and what it offers. They should also begin to realise what provides Geography's coherence, not its facts or urban or landform studies but its *big ideas* or key concepts. There are a variety of views and suggestions about Geography's key concepts. One set suggested for primary schools in England identifies place, environment (physical and human processes), space, scale, interconnections, environmental impact and sustainability, and cultural awareness and identity (CATLING & WILLY 2018). These are outlined in Fig. 3.

There is consistency among Geography educators about place, space, environment, and scale as central concepts in Geography (for instance, see JACKSON 2006; LAMBERT & MORGAN 2010; BARLOW & WHITEHOUSE 2019). These *big ideas* provide Geography's essence. They apply across the variety of the subject's interests and systematic areas of study, though not all of them in all areas. For instance, geographers apply these core concepts in investigations of climate and weather changes and their impact, and in examinations of food and clothing sourcing and uses locally and globally, just as they do in studies of children's play spaces, shop sourcing and selling of goods, energy generation and access, and the causes, impacts of and responses to migration. These primary Geography curriculum



<b>Geography's big ideas</b>	<b>The key concepts briefly summarised</b>
<b>Place</b>	...encompasses real as well as perceived and imagined places and refers to: what is in places and what happens there; ways places change and develop; their character and what they are like; how we conceive of and respond to places; how we prefer them to remain or evolve. Place is multifaceted, involving cognitive and affective understandings of places.
<b>Environment (physical and human processes)</b>	...covers the land and oceanic surface of the Earth, its geology and its atmosphere. It includes the range of Earth's natural and people-created features, and the natural and human actions affecting the world. It explains the processes that create and change natural, built, modified, and social environments. This concept helps us predict and plan what might happen.
<b>Space</b>	...refers to where features and places are located, their distribution, the patterns identified and the networks connecting them. Space describes the formal layouts in the natural and human environment and their fluidity and change. It enables recognising and explaining the processes affecting them.
<b>Scale</b>	...provides the lens to look at the world, from very small sites to local, regional, national, continental, and oceanic areas, to the whole Earth. Scale enables many relationships to be identified and particular and wide-ranging patterns and connections to be recognised. Scale supports understanding environmental and place processes and making predictions.
<b>Interconnections</b>	...refers to the nature and significance of links between features, places, events, and people. It enables recognition and appreciation of interdependence, locally, regionally, or globally, whether ecological or socially generated. It examines the importance and impact of maintaining, modifying, or breaking interconnections.
<b>Environmental impact and sustainability</b>	...concerns the interactions between the natural and human environments and their effects on each other, particularly of change and its consequences. It examines the quality, management, and care of environments, places, and lives. It considers the responsible and exploitative uses of Earth's resources alongside responses to the degrading of natural and modified environments and damage to people's lives. It concerns ways to improve people's futures and the Earth, and the ethics of doing so.
<b>Cultural awareness and diversity</b>	...encompasses the local and global diversity and disparities in and of people's lives and communities and their connections to the natural world. It encompasses social and cultural interests and the dynamics in shared, common, and different ways in which people use environmental resources, adapt places, interact and value and modify or conserve their local and national cultures, places and identities.

**Fig. 3.** Geography's *big ideas* or key concepts (see CATLING 2019, p. 23)

topics involve not simply studies in and of particular places at various scales but examine the physical and human contexts and processes involved and the interconnections and spatial networks evident, as well as people's culturally diverse reactions and responses and the environmental impacts and sustainability issues and actions. Primary Geography holds to its *big ideas* in developing children's knowledge, understanding, and appreciation of the world in which they, their families, and the rest of us live, engage, act, and affect.

Yet, there is a deeper purpose in fostering progression in children's geographical learning. It is to empower younger children's thinking about the world, giving them access to the range of knowledge involved so that they appreciate and value their world. One way to state this is through the ways in which geographical learning empowers children, as Maude has argued proposing a typology of five ways in which Geography is a powerful subject (MAUDE

2016, 2017, 2018). Here, eight ways are suggested, building on Maude's typology, in which geographical learning and knowledge are significant for and empower primary children. Their focus is to help children make better sense of the world, to take them beyond their everyday experiences, to engage them in a fuller and deeper awareness of the Geography of the world, to encourage their care for the environment, to foster their geographical enquiry capabilities, to engage them in debating concerns about the world, to build their sense of place and identity, and to be able to say what Geography studies and why. These are set out and elaborated on in Fig. 4.

The interplay between younger children's everyday Geographies and their school learning in Geography provides ways through which children gain a fuller and deeper understanding of their own local and more broadly interconnected lives and their interactions with the world to their own and other's benefit.

<b>Geography is empowering for primary children because...</b>	<b>A brief elaboration</b>
...they can focus on and make increasing sense of their experience in and of their own and other places and people and of the wider environment.	Children's experience is multi-layered in their local places and community. Equally, it includes other people, places, and environments through family, friends, peers and via various media sources and school.
...they are able to extend their experience and awareness beyond their natural personal experiences to the wider world.	Geographical study enhances their knowledge of the world's environments, places, societies, and cultures through their encounters with those which they may well not come across without formal intervention.
...they are provided with insights and understanding into the varieties of knowledge they have and gain about the world at all scales which involves them in thinking consciously in new ways about their own contexts and the world.	By studying and investigating ways in which Geography structures, explains, and reflects on places, environments, space, interconnections, processes and so forth, children can access its systematic foci and <i>big ideas</i> to make increasing sense, link in new information and themes, think forward about the world at all scales, and begin to make these their own.
...they are encouraged to develop their values about concern for and care of places, environments, and people, locally, nationally, and globally.	Studies of geographical processes and effects on people, places and environments raise ethical questions which concern children about the impacts of natural and people-induced events, responsiveness, fairness and social justice, and ways in which better and good treatment of places, the environment and people can be provided and achieved. This can lead to how children might take action and justifications for these.
...they can begin to explore, question, investigate, describe, analyse, explain, understand, reflect on, appreciate, and critique the world.	Studies of geographical processes and effects on people, places, and environments raise ethical questions which concern children about the impacts of natural and people-induced events, societal responsiveness, fairness, and social justice, and ways in which better and good treatment of places, the environment, and people can be provided, enacted, and achieved. This can lead to children considering right actions, justifications for them and possibly taking action.
...they can participate in discussions and debates about local, national, and global events, concerns, and issues.	By moving beyond describing and explaining to questioning, critiquing, and considering impacts and consequences, children develop capabilities and skills to contribute to, test claims, develop viewpoints, make arguments, and apply learning to unquestioned and contentious matters affecting places, communities, societies, and environments.
...it facilitates their sense of personal identity, grounding it in their sense of place and of being in the world.	In learning about the world from locally to globally, children learn better who they are, recognise influences on their thinking and viewpoints, develop personal perspectives and values, and appreciate how, why, and where places, society, and environments affect them directly and indirectly.
...they are able to begin to articulate for themselves and to others their knowledge and understanding of the world.	Through geographical studies children learn ways to describe Geography and its studies in their own terms and language, and from their own experiences and contexts, and to distinguish it from other subjects, interests in, and perspectives about the world.

**Fig. 4.** Eight ways primary Geography empowers younger children (developed from MAUDE 2016, 2017, 2018)

## 6. The Challenge of High-Quality Teaching for Primary Geography

Teaching is central to primary children's geographical learning, and a core challenge lies in the confidence, enthusiasm, knowledge, skills, and qualities primary teachers bring to their

Geography teaching. Key to this is their curriculum making which, whether or not in the context of external curriculum and teaching requirements and standards, concerns the

challenge of how they create geographical learning for their children of all ages. There are several essential characteristics of high-quality primary Geography teaching. These are drawn from analyses in the United Kingdom about exemplary high-quality teaching of Geography in primary schools (CATLING 2013, 2015, 2017; TILL 2020), about which globally there has been very limited research. Many of these features exhibit the characteristics of expert primary teachers more generally (EAUDE 2012, 2018).

Key to enabling high-quality primary Geography is the educational value system in a school. Geography is taught well because a school's leadership and staff recognise the significance of Geography in and for children's present and future lives and for the wider context of the planet. There is a commitment to providing and developing children's geographical experience and learning (WILLY 2019). There is the sense among the staff that Geography is part and parcel of their daily lives. The teachers know that the development of children's attitudes towards, experiences in, and knowledge, understanding, and appreciation of geographical insights and perspectives depends on them. They know that for themselves and their children Geography is of real significance (TILL 2020). In such a context, primary teachers know that what they teach matters a great deal, as does how they go about their teaching. This involves, whether they are fascinated by Geography or not, exhibiting an honest enthusiasm for Geography, and appreciate that geographical studies motivate children. They convey curiosity about the world and enjoyment of its study.

Teachers know their children learn about life around them, locally, nationally, and far away from many sources. Primary teachers build up their knowledge of their children's Geographies, recognising children's experiences and understandings differ while they may share much. They appreciate their children's interests, strengths and limitations in worldly knowledge, skills, values, and attitudes. They recognise the value for children in connecting with the Geography topics they study (PIKE 2016; BARLOW & WHITEHOUSE 2019). These teachers know their own geographical strengths and limitations. They understand and appreciate their own Geographies and the need to know the nature of the

Geography in each topic and about the school's locality. Their preparation clarifies what is relevant and informs them enough to be aware of the wider possibilities for geographical learning. They are learners about the world (CATLING 2017).

In teaching their Geography curriculum, these teachers have goals but appreciate that geographical learning is broader and more nuanced for each child. They are flexible about their planned curriculum, and do not plan fully because unexpected and unconsidered opportunities arise (CATLING 2013). They have the confidence to be opportunistic, even risky, grounded in what they aim to achieve, for their children's geographical learning. Such teachers are responsibly open-minded, responsive to the potential of children's suggestions for and in a Geography topic, and they allow geographical topics to evolve. Children are given a real role in developing their geographical learning. By trusting them teachers enable children to initiate and move forward in their geographical studies. The Geography curriculum is an active dialogue with their children. Furthermore, they set high standards for their children's geographical studies and learning. They have high expectations of the children who know these and respond to them.

Geography is appreciated by these teachers and their schools as tackling challenging and controversial topics. They know Geography examines what is happening in the world and engages with difficult matters (DOLAN 2020). Teachers recognise that in exploring issues and concerns and looking at ways forward, children gain a clearer world reality, exploring optimism and hope. They educate for globally realistic children. To do so effectively, teachers use motivating, active, and appropriate approaches based in geographical enquiry and adapt and introduce new elements to their teaching repertoire as necessary, to engage children and their learning. They take risks with their teaching to learn themselves. Progression is valued and understood as not necessarily linear. Teachers and schools revisit Geography's key concepts, thematic areas, and skills within and across topics in a spiral approach (PIKE 2016). They use key environments, especially locally, to refocus and to initiate new ideas, topics, and ways of looking, knowing children learn best through familiar and novel contexts for children enjoy new territories. They know what their children have stud-

ied previously and into which areas of Geography studies they will move; they work in the context of a whole school approach not simply their own annual class Geography curriculum.

Key for their teaching is that teachers know and keep under review their children's geographical strengths and needs. They are aware of what the children have investigated and learned, what

they have found challenging and why, and they support them in taking their next steps forward, which should involve new challenges to take up. Teachers use formative assessment and engage their children in self-assessment, using rigorous questioning and encouraging their children to justify what they consider they should do next. They involve the children in recording this and in

### Eight characteristics of high-quality teachers of primary Geography

- (1) **Teachers are committed to Geography:** High-quality Geography is taught by primary teachers who are committed to Geography as an important element in their broad curriculum and who exhibit an honest enthusiasm for Geography, and who, as class teachers, believe in and see that Geography is important for and motivates children. They convey fascination and enjoyment.
- (2) **Teachers know their children's Geographies:** Teachers know their children live and learn about life around them, locally, nationally, and far away. They build knowledge of their children's Geographies, recognising children's experiences and understandings differ while they share much. They appreciate their children's interests, strengths, and limitations in worldly knowledge, skills, values, and attitudes.
- (3) **Teachers know their geographical selves:** Teachers know their own geographical strengths and limitations. They understand and appreciate their own Geographies and the need to know the nature of the Geography in each topic. Their preparation clarifies what is relevant and informs them enough to be aware of the wider possibilities for geographical learning. They are learners about the world.
- (4) **Teachers know their intentions and opportunities for Geography teaching:** In teaching their annual Geography curriculum these teachers know where they are going, have goals and appreciate that geographical learning is broader and more nuanced for each child. They appreciate it sits in a whole school Geography curriculum context. They are flexible about their planned curriculum and do not plan fully because there are roles for their children, and for the unconsidered and the unexpected. They have the confidence to be opportunistic, grounded in what they aim to achieve, for their children's geographical learning.
- (5) **Teachers give children agency in their geographical learning:** Teachers are responsibly open-minded, responsive to the potential of children's suggestions for a Geography topic, and allow a topic to evolve. Children have a real role in setting the agenda of and developing a topic. By trusting children, teachers help them initiate and move forward their geographical studies. The Geography curriculum is an active dialogue with their children and colleagues.
- (6) **Teachers engage children with challenging Geography:** Geography is appreciated by these teachers and their schools as tackling demanding and controversial topics. They know Geography examines what is happening in the world wherever we look and engages with difficult matters. Teachers recognise that in exploring issues and concerns and looking at ways forward, children gain a clearer world reality, exploring optimism and hope. They educate for globally realistic children.
- (7) **Teachers' approaches to Geography teaching stimulate their children:** Teachers use motivating, active, and appropriate approaches based in geographical enquiry and adapt and introduce new elements to their teaching repertoire as necessary, to engage children and their learning. They take risks with their teaching to learn themselves and motivate the children.
- (8) **Teachers build children's geographical progression spirally:** Teachers do not see geographical learning as successive achievements or needs. Progression is valued but understood as not necessarily linear. Teachers and schools revisit Geography's key concepts, thematic areas, and skills within and across topics in a spiral approach. They use key environments, especially locally, to refocus and initiate new ideas, topics, and ways of looking, knowing children learn best through both familiar and novel contexts. Children are engaged and enticed by new *territories* to explore.

**Fig. 5.** Eight characteristics of high-quality primary teachers of Geography (Source: author).

reflecting on what they have learned and need to keep in mind for their future learning.

High-quality primary Geography teaching is demanding and challenging for the teacher, as

well as for their children, who benefit considerably from it (CATLING 2017; CATLING ET AL. 2022). In summary, the characteristics of expert primary Geography teaching are outlined in Fig. 5.

## 7. The Challenges for Primary Geography

High quality primary Geography teaching and learning integrates the focus on real and meaningful Geography, a progressive, thoughtful, and responsive curriculum, the full engagement of the children, varied and engaging activities using a range of good resources, and the commitment of their teacher to children's geographical learning. These present exciting opportunities when creating a Geography curriculum for primary children. Yet, there is more to learn about primary children's geographical learning and about primary Geography teaching. There is limited research into the curriculum, teaching and learning of Geography in primary schools (CATLING & WILLY 2018; BUTT 2020), into what children gain from their geographical education, how they feel about this subject and their learning of and through it, and into their primary teachers' knowledge, views, and attitudes.

Drawing on what has been presented in this article, ten challenges for primary Geography are outlined. They are challenges to keep in mind in creating, providing, and recognising children's learning in their Geography curriculum. They present research demands too. These are noted for each challenge as research questions. Their purpose is to indicate aspects of primary Geography which require thorough investigation, in order to advance understanding about the state, role, potential, and development of Geography's curriculum, teaching and learning.

The *first challenge* is to enable all primary children to develop their understanding of their own Geographies and to broaden their horizons, expanding their geographical awareness. This involves accommodating into their familiar Geographies, the Geographies of external events and other places, societies, cultures, and environments learnt about through school studies. Research questions: How do children do this? How do their personal geographies change and develop? Do they become better informed and, if so, how do they use their acquired knowledge?

Connected with this is the *second challenge* which is to fostering children's growing awareness of the ways Geography investigates and understands the world, building their appreciation of what Geography is, such that in their later primary years they can say something about what the subject studies and offers. This involves reflecting from time to time on Geography's *big ideas* and its significance. Research questions: What do children think Geography is about and whether it has value for them? What influences their views? How does their understanding change over time?

This links to the *third challenge* which is to empower children through the development of their geographical knowledge and its application in their lives and the lives of others. This involves ensuring children notice the geographical dimensions of the world, that Geography is *everywhere* and that without Geography *they are lost* when understanding the world. Research questions: What geographical knowledge matters for and to younger children? What do they think they should study in Geography? Why do they say this?

*Fourthly*, a further challenge is the study of the real world: its places, cultures and societies, environments, and natural and human-generated events. These include matters, such as play areas, shopping and trade, water use, migration, climate change, oceans, pollution, sanitation, earthquakes and floods, food, energy and trade, waste, transport, tourism, and much more. They involve investigating and examining causes, process, impacts, and outcomes for people, places, and the environment, people's responses, and taking environmental responsibility and care. Research questions: What to children is *the real world*? How do they understand and appreciate geographical features, processes, impacts, and outcomes, and about environmental responsibility?

A *fifth challenge* lies in developing children's awareness of and knowledge about the Earth's diversity of its environments, peoples, cultures,

and places, from the familiar to the new and different. It is about what diversity offers, how it is implicit in their lives and ways of living. The world is a multitude to be valued and treasured. Research questions: How well do children recognise global diversity of places, peoples, and environments? Do they consider this important, and why do they think this? What affects their attitudes and values about people and places?

This challenge leads to a *sixth*, which is to explore, discuss, and reflect on contentious and controversial matters, such as causing and disposing of food and material waste, energy production and use, people moving and the impacts of migration, and the effects of gradual and sudden changes in the weather. Primary children, aware of such matters, are better helped by learning about the natural and human processes involved, that the different outcomes are contentious for different people, and that there are values and attitudes to appreciate; these are not simply factual matters. Research questions: What to children are contentious and controversial environmental matters and issues? How do they know about them? What views do they have about particular controversies, and why?

*Seventh*, there is the challenge to develop geographical understanding progressively, building information and thematic knowledge and the skills in enquiry from kindergarten onwards. Geographical learning begins in informal and play-based contexts and moves into investigating locally and elsewhere actively and with secondary sources, stories and drama, and debating some of the big issues as children move through primary school. Research questions: What is the variety of ways in which children are and have been taught about Geography? Which pedagogic approaches have had effective impacts on their geographical learning? How have these stimulated and motivated children?

An *eighth challenge* is to provide a context in which teachers feel able to use their initiative

## 8. Conclusion

Providing and ensuring geographical learning in the early years and primary schooling is a challenge—but this is true for every primary school subject—and it is influenced by national and state policy decisions, school concerns, priorities, resource access, and teachers' knowledge and interests. What has been em-

while continuing to aim to develop agreed geographical outcomes. This requires structure and flexibility for teaching and learning opportunities to be taken. It includes recognising, involving, and trusting the children's contributions, giving them a real and deep stake in their geographical learning. Research questions: How rigid or flexible are school Geography curricula? How comfortable are primary teachers with their school's approach? How well do teachers listen, take up children's ideas and trust their instincts to take risks? What would they change and why?

An important *ninth challenge* is to provide fair time for Geography in whichever subject or interdisciplinary context it is taught. This requires a school commitment to support children's progress and development through the school, with time for depth of study, not an overloaded Geography curriculum, and including possibilities and choices. Research questions: What Geography really can be taught in the time available? Is depth more helpful than breadth in a Geography curriculum? What limits or enables time for teaching Geography? How does this enable progression in Geography's teaching and learning?

The *tenth challenge* is for primary Geography to be taught by teachers who know the subject, value how it enables children to build their understanding of the world, and appreciate what Geography fundamentally is about, have knowledge of the topics and relevant pedagogic skills to help children learn effectively, and appreciate that everyone has a geographical dimension to their lives. This requires school leaders to provide opportunities for teachers to maintain and enhance their Geography teaching through in-service professional development. Research questions: What do primary teachers need to know to teach Geography well? What helps teachers to keep up-to-date about Geography, and why? What support is provided by their school for this?

phasised is that children bring an evolving geographical awareness, knowledge, and understanding into school. In the modern world, geographical learning is essential in children's schooling to enhance their lives (DOLAN 2020). It broadens their horizons, deepens their understanding, and helps them recognise the

challenging place our world is. To undertake and achieve this for and with children requires primary teachers to aim high, challenge their children, use a wide variety of teaching approaches and skills, and help their children know what they have achieved and will continue to need to learn.

Geography in earliest years and primary education is not only a significant need for children; it is a core aspect of their lives. Un-

derstanding and applying geographical knowledge and insights is essential for and to their futures and for the places, people, and environments of the world.

<sup>1</sup>This paper is based on the invited keynote presentation sponsored by the ZGD at the Deutscher Kongress für Geographie (German Congress for Geography) held in September 2019 in Kiel.

## References

- ABATE, R. (2020). *Climate Change and the Voiceless: Protecting future Generations, Wildlife, and Natural Resources*. Cambridge University Press.
- ARMSTRONG, A., KRASNY, M., & SCHULDT, J. (2018). *Communicating Climate Change: A Guide for Educators*. Cornell University Press.
- BALE, J. (1987). *Geography in the Primary School*. Routledge & Kegan Paul.
- BARKER, E. (1974). *Geography and Younger Children*. University of London Press Ltd.
- BARLOW, A., & WHITEHOUSE, S. (2019). *Mastering Primary Geography*. Bloomsbury.
- BLUNDELL, D. (2016). *Rethinking Children's Spaces and Places*. Bloomsbury.
- BLYTH, A., & KRAUSE, J. (1995). *Primary Geography: A Developmental Approach*. Hodder & Stoughton.
- BOYLE-BAISE, M., & ZEVIN, J. (2014). *Young Citizens of the World: Teaching Elementary Social Studies through Civic Engagement*. Routledge.
- BRUNER, J. (1960). *The Process of Education*. Vintage Books.
- BUCHANAN, J. (2013). *History, Geography and Civics: Teaching and Learning in the Primary Years*. Cambridge University Press.
- BUTT, G. (2020). *Geography Education Research in the UK: Retrospect and Prospect: The UK Case within the Global Context*. Springer.
- CAMSTRA, R. (Ed.) (1997). *Growing Up in a Changing Urban Landscape*. Van Gorcum.
- CATLING, S. (1988). Children and Geography. In D. MILLS (Ed.), *Geographical Work in Primary and Middle Schools* (pp. 9-18). Geographical Association.
- CATLING, S. (2013). Teachers' Perspectives on Curriculum Making in Primary Geography in England. *The Curriculum Journal*, 24, 427-453.
- CATLING, S. (2015). Introduction: Thinking about Primary Geography. In S. CATLING (Ed.), *Research and Debate in Primary Geography* (pp. 1-20). Routledge.
- CATLING, S. (2017). High Quality in Primary Humanities: Insights from the UK's School Inspectorates. *Education 3-13*, 45, 354-364.
- CATLING, S. (2019). Key Concepts. In T. WILLY (Ed.), *Leading Primary Geography* (pp.16-27). The Geographical Association.
- CATLING, S., & MARTIN, F. (2011). Contesting Powerful Knowledge: The Primary Geography Curriculum as an Articulation between Academic and Children's (Ethno-) Geographies. *The Curriculum Journal*, 22, 317-336.
- CATLING, S., & WILLY, T. (2018). *Understanding and Teaching Primary Geography*. Sage.
- CATLING, S., GLANVILLE, K., KTAUSE, J., LOMAS, J., OWENS, P., RAWLINSON, S., & WITT, S. (2022). *Aspiring to High-Quality Primary Geography*. Retrieved on 04. October 2022 from [here](#).
- CHRISTENSEN, P., & O'BRIEN, M. (Eds.) (2003). *Children in the City: Home, Neighbourhood and Community*. Routledge.
- COOPER, H., ROWLEY, C., & ASQUITH, S. (Eds.) (2006). *Geography 3-11: A Guide for Teachers*. David Fulton.
- CRANE, N. (2018). *You Are Here: A Brief Guide to the World*. Weidenfeld & Nicolson.
- DOLAN, A. (2020). *Powerful Primary Geography: A Toolkit for the 21st Century*. Routledge.

- DOLAN, A. (Ed.) (2022). *Teaching Climate Change in Primary Schools*. Routledge.
- DORLING, D., & LEE, K. (2016). *Geography*. Profile Books.
- DURAM, L. (2018). *Environmental Geography: People and the Environment*. CA: ABC-CLIO.
- EAUDE, T. (2012). *How Do Expert Primary Class-teachers Really Work?* Critical Publishing.
- EAUDE, T. (2018). *Developing the Expertise of Primary and Elementary Classroom Teachers*. Bloomsbury.
- EVANS, B., & HORTON, J. (Eds.) (2016). *Play and Recreation, Health and Wellbeing*. Springer.
- FIRTH, R. (2013). Why Epistemology Matters. *Primary Geography*, 82, 14-15.
- FOG OLWIG, K., & GULLØW, E. (Eds.) (2003). *Children's Places: Cross-cultural Perspectives*. Routledge.
- FOSTER, J. (Ed.) (2019). *Facing up to Climate Reality: Honesty, Disaster and Hope*. Greenhouse Publishing.
- FREEMAN, C., & TRANTER, P. (2011). *Children and their Urban Environment: Changing Worlds*. Earthscan.
- FREEMAN, C., & VAN HEEZIK, Y. (2018). *Children, Nature and Cities: Rethinking the Connections*. Routledge.
- HIMIYAMA, Y., SATAKE, K., & OKI, T. (Eds.) (2020). *Human Geoscience*. Springer.
- HOLT-JENSEN, A. (2018). *Geography: Its History and Concepts*. Sage.
- JACKSON, P. (2006). Thinking Geographically. *Geography*, 91, 199-204.
- JOHNSTON, R., & SIDAWAY, J. (2016). *Geography and Geographers: Anglo-American Human Geography Since 1945*. Routledge.
- KLAFKI, W. (2010). Didaktik Analysis as the Core of Preparation of Instruction. In I. WESTBURY, S. HOPMANN & K. RIQUITS (Eds.), *Teaching as a Reflective Practice: The German Didaktik Tradition* (pp. 139-159). Routledge.
- LAMBERT, D., & MORGAN, J. (2010). *Teaching Geography 11-18: A Conceptual Approach*. Open University Press.
- MALONE, K. (2018). *Children in the Anthropocene: Rethinking Sustainability and Child Friendliness in Cities*. Palgrave Macmillan.
- MARTIN, F. (2008) Ethnogeography. Towards Liberatory Geography Education. *Children's Geographies*, 6, 437-450.
- MATTHEWS, H. (1994). *Making Sense of Place: Children's Understanding of Large-Scale Environments*. Harvester/Wheatsheaf.
- MAUDE, A. (2016). What Might Powerful Geographical Knowledge Look Like? *Geography*, 101, 70-76.
- MAUDE, A. (2017). Applying the Concept of Powerful Knowledge to School Geography. In C. BROOKS, G. BUTT & M. FARGHER (Eds.), *The Power of Geographical Thinking* (pp. 27-40). Springer.
- MAUDE, A. (2018). Geography and Powerful Knowledge: A Contribution to the Debate. *International Research in Geographical and Environmental Education*, 27, 179-190.
- MURNAGHAN, M., & SHILLINGTON, L. (Eds.) (2016). *Children, Nature, Cities*. Routledge.
- MURPHY, A. (2018). *Geography: Why It Matters*. Polity Press.
- NAIRN, K., & KRAFTL, P. (Eds.) (2016). *Geographies of Children and Young People 3: Space, Place and Environment*. Springer Nature.
- NI LAOIRE, C., CARPENA-MENDÉZ, F., TYRRELL, N., & WHITE, A. (2011). *Childhood and Migration in Europe*. Ashgate.
- PIKE, S. (2016). *Learning Primary Geography*. Routledge.
- PIKE, S. (2021). Geography Education for Social and Environmental Justice Education. In M. KAVANAGH, F. WALDRON & B. MALLON (Eds.), *Teaching for Social Justice and Sustainable Development Across the Primary School* (pp. 37-53). Routledge.
- REYNOLDS, R. (2019). *Teaching Humanities and Social Studies in the Primary School*. Oxford University Press.
- ROBERTS, M. (2014). Powerful Knowledge and Geographical Education. *The Curriculum Journal*, 25, 187-209.
- SCOFFHAM, S. (2019). The world in their Heads: Children's Ideas about Other Nations, Peoples and Cultures. *International Research in Geographical and Environmental Education*, 28, 89-102.
- SKELTON, T., & AITKEN, S. (Eds.) (2019). *Establishing Geographies of Children and Young People*. Springer.
- STOLTMAN, J., LIDSTONE, J., & KIDMAN, G. (2015). Powerful Knowledge in Geography: IRGEE Editors Interview Professor David Lambert, London Institute of Education. *International*



[Research in Geographical and Environmental Education](#), 24, 1-5.

- TILL, E. (2020). Fused Identities: An Exploration of Primary Teachers' Geographical Identities. *International Research in Geographical and Environmental Education*, 29, 74-88.
- TISDALL, K., GADDA, A., & BUTLER, U. (2014). *Children and Young People's Participation and its Transformative Potential*. Palgrave Macmillan.
- THUNBERG, G. (2019). *No One Is Too Small To Make A Difference*. Allen Lane.
- VALENTINE, G. (2004). *Public Space and the Culture of Childhood*. Ashgate.
- WALLER, T., ÄRLEMALM-HAGSÉR, E., SANDSETER, E., LEE-HAMMOND, L., LEKIES, K., & WYVER, S. (Eds.) (2017). *The Sage Handbook of Outdoor Play and Learning*. Sage.
- WILLY, T. (Ed.) (2019). *Leading Primary Geography*. Geographical Association.
- YOUNG, M., & LAMBERT D. (2014). *Knowledge and the Future School*. Bloomsbury.