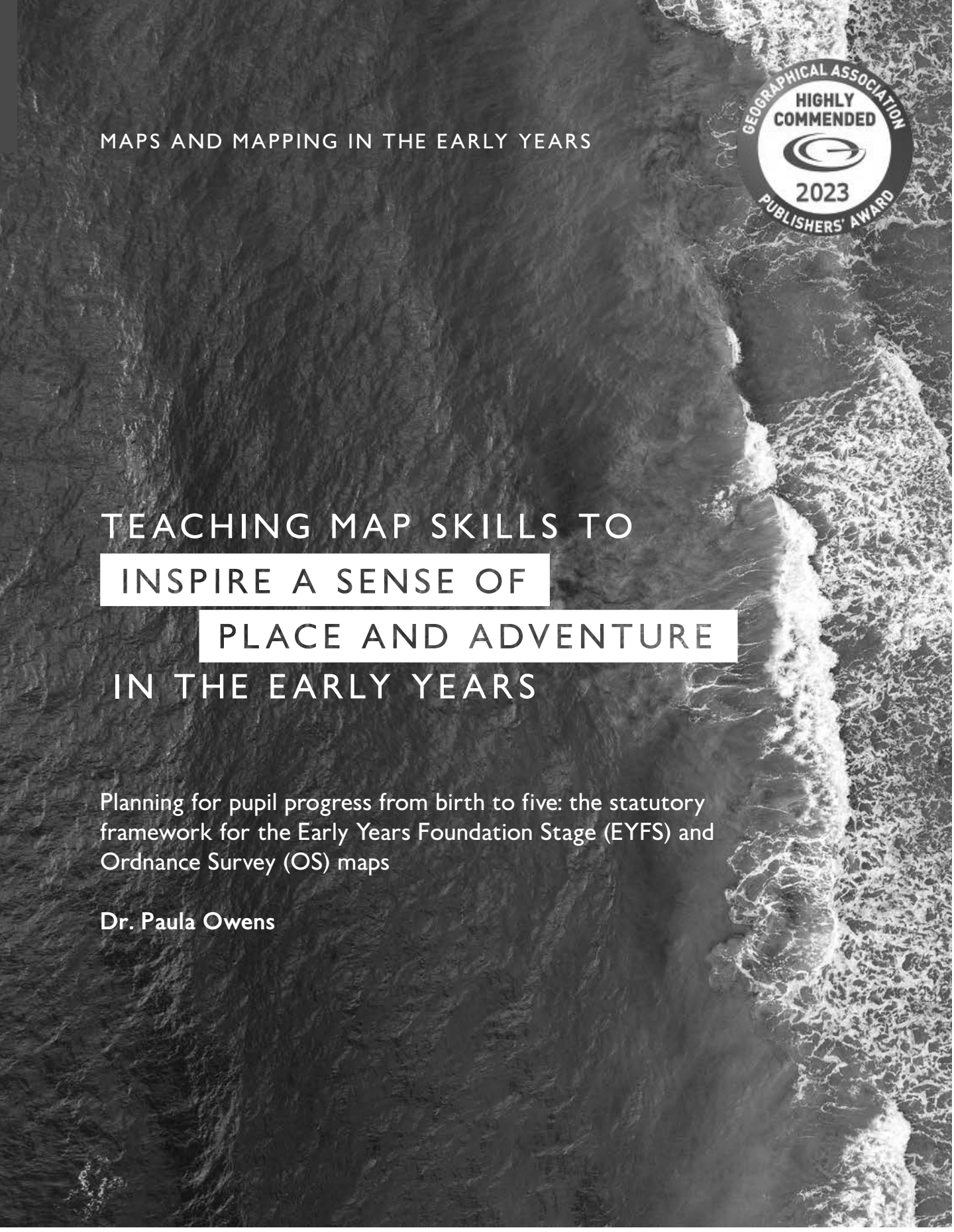


MAPS AND MAPPING IN THE EARLY YEARS

GEOGRAPHICAL ASSOCIATION HIGHLY COMMENDED 2023 PUBLISHERS' AWARD

TEACHING MAP SKILLS TO INSPIRE A SENSE OF PLACE AND ADVENTURE IN THE EARLY YEARS

Planning for pupil progress from birth to five: the statutory framework for the Early Years Foundation Stage (EYFS) and Ordnance Survey (OS) maps

Dr. Paula Owens

Ordnance Survey

SEE > BETTER PLACE

Every child deserves the best possible start in life, and the support that enables them to fulfil their potential. Children develop quickly in the early years and a child's experiences between birth and age five have a major impact on their future life chances.

DfE (2021a)

Children are remarkably adept at making maps and appear to develop the spatial awareness required from an early age. The maps that they draw not only provide a fascinating insight into their practical engagement with the world but also provide an insight into the places that they value or that worry them.

Vujakovic et al (2018) p.12

In 'doing geography' with the child, one is participating in a process which is even more fundamental and therefore more important still: namely, one is in a humble way facilitating the child's very personal development of self-identity which will shape much of their lives, their values, sense of belonging and self-worth.

Spencer (2005) p.305

Contents

> Children learn and develop more from birth to five years old than at any other time in their lives.
>
> **DfE (2021b) p.6**

The Early Years Framework

"The Early Years Foundation Stage (EYFS) sets the standards that all early years providers must meet to ensure that children learn and develop well and are kept healthy and safe. It promotes teaching and learning to ensure children's 'school readiness' and gives children the broad range of knowledge and skills that provide The right foundation for good future progress through school and life."

DfE (2021a) p.7

The EYFS Framework (DfE 2021) became effective in England for all early years' providers in England, from 1 September 2021. The seven areas of learning comprise three prime areas that help ignite and build children's curiosity and enthusiasm for learning, as well as relationships, and their ability to thrive:

- communication and language
- physical development
- personal, social and emotional development

and four specific areas, through which the three prime areas are strengthened and applied.

The specific areas are
- literacy
- mathematics
- understanding the world
- expressive arts and design

(DfE 2021)

Guiding Principles for early year's settings

Four guiding principles should shape practice in early years settings. These are
- every child is a unique child,
- positive relationships
- enabling environments
- children develop and learn at different rates.

(DfE 92021) p.6

The Early Years' Framework and Geography

The EYFS framework is one that is designed to be flexible, holistic and to meet the developing needs of young children at this vital stage of their development. The curriculum aims to offer children a range of opportunities and experiences to flourish, as indicated by the seven areas of learning, and in these early years, geography is part of the area of learning called Understanding the World: it does not appear as a separate and distinct subject until pupils begin to follow the National Curriculum in England (DfE 2013) in year one.

However, in the EYFS curriculum, geography not only has a distinct and cohesive role to play in Understanding the World, but also offers contextual relevance across other areas of learning too. The flexibility of the subject in being able to contribute to other areas is due partly to the intended holistic nature of the EYFS framework, and, because geography is an active subject that itself takes a holistic view of the world, and employs a wide range of skills and approaches in developing its own key concepts. Geography in the early years would appear to be flourishing. In a sample of geography subject inspections, Ofsted (Freeland 2021) found that:

"Teaching geography in the early years was almost universally strong. Teachers were adept at helping pupils to understand their locality, the wiwder world and phenomena, such as the weather and seasons."

Inspections by Ofsted look at the early roots of subjects because careful planning and provisioning at this stage of education, nurture the progression of distinct subject strands, building a more secure understanding in the later school years. The most recent geography subject research review (Ofsted 2021) states the importance of planning coherently from the early years onwards.

> A clearly mapped journey starting in the early years and developing through the curriculum is critical if pupils are to move towards becoming experts in the subject.
>
> **Ofsted (2021)**

Skills such as graphicacy, of which mapping is a part, can, when taught well, contribute to whole child development, as well as later geographical thinking and understanding. This publication will highlight ways to strengthen early geographical knowledge and skills but will also identify how maps and mapping are tools and skills that enhance the whole curriculum, especially at this key stage. Maps and mapping are a vibrant part of the curriculum weft and weave of the EYFS framework.

Curriculum Weft and Weave	Communication and Language	Physical (gross and fine motor skills)	Personal, Social and Emotional
Literacy	Communicating through maps: vocabulary, narratives, and stories.	Maps and active exploration; identifying and naming features.	Using personal and story maps to write emotive responses to place.
Maths	Communicating and organising spatial information through number, shape, direction.	Opportunities through maps to think about scale, in contexts using gross and fine motor skills.	Confidently using maps to evaluate and estimate distance and direction.
Understanding the World	Using and making maps to describe and compare people and places.	Active exploration of the world around us and increasingly detailed representations of it.	Using maps to investigate and represent culture and diversity.
Art and Design	Making maps using a range of media.	Drawing maps and fine motor skills.	Using creative media to represent feelings about places in maps.

Maps in the early years

Guiding young children's curiosity about the places where they live, play and learn is at the heart of all high-quality Early Years practice. They love to explore what a place looks like from the air and making their own maps – whether that be of their playground, the ant farm they have been watching, the landscape they have made out of blocks, or the mapped journey through their favourite story. These play-based experiences are grounding, messy and exploratory, and therefore vital to their geographical, spatial and cultural development. Most importantly, to our youngest learners, it is fun, memorable and collaborative; and engages them with the places that surround them.

Helen Martin (2021) Head teacher Graffham Infants and Duncton Junior school. Chair of the Early years and Primary Phase Committee of the Geographical Association

Young children develop their geographical and environmental awareness from their very earliest years and bring their developing 'everyday geographies' into pre-school and nursery settings as 3/4 to 5/6 year olds (Catling and Willy 2018). Children come to school as burgeoning curious explorers, and this curiosity is something to be nurtured through provision that offers inviting, varied and challenging experiences. Which is exactly what good planning for indoor and outdoor areas does in nursery and reception settings. This is the only phase of schooling where practitioners need to plan the provision for outdoor spaces as well as indoor ones, in a holistic way, and this approach benefits enquiry through real, concrete experiences both indoors and out.

A study by OECD (2021) found that curiosity is strongly linked to children's early cognitive development.

The International Early Learning and Child Well-being Study shows that curiosity is indeed helpful, finding strong relationships with five-year-olds' learning in emergent literacy, numeracy, mental flexibility and even in children's abilities to retain and recall information. Curiosity is more strongly linked to these early cognitive outcomes than the other areas of early social-emotional development included in the study, such as being confident or well-behaved.

Phair, R. (2021)

Curiosity, exploration and maps are a powerful package. A young child's curiosity is fed through exploration, and develops through appropriate scaffolding, careful provision, and dialogic support. Maps aid enquiry, communication and expression; they are a joyful and intuitive way to help children ask questions, share information and communicate their growing delight in everyday discoveries about the world. Maps help children build confidence in and through their active encounters with the world.

While some research suggests that children have some early ability in engaging with maps and spatial thinking, Wiegand (2006) says that it is the nature of the engagement with maps that matters, and though he agrees that young children exhibit some basic map ability, there is more evidence to suggest that map skill is acquired gradually.

> It is more productive to focus on which map-related concepts and tasks are more difficult than others to establish principles of progression in learning, from which to derive appropriate support strategies.
>
> **Wiegand (2006) p.13**

Wigand (2006) notes that children tend to focus on topological, spatial information first, in which children can say that objects on a map are near another one, or that marks on the paper are inside another. It is only as their understanding develops that they begin to see the spatial relationships between objects on a map within a geometrical framework.

Map and verbal knowledge are thought to have different representations in long term memory storage. This is referred to as Dual Coding Theory (Wiegand 2006) and is thought to enable a richer retrieval base from which to recall knowledge, when maps and language are used in tandem. This provides another argument for the use of maps alongside talk in all areas of learning to support knowledge retention and retrieval. However, Wiegand (2006) warns that it does not explain all the complexities of children's thinking with maps.

Key map skills and understanding to develop

Simon Catling advises that the key local map skills and understanding to develop in younger children should focus on them realising and appreciating during their primary years that:

- A vertical aerial photograph shows the features and layout of an area from a 'bird's eye' view 'directly' above.
- A map graphically presents the view of the features and ground area it shows differently to a vertical aerial photograph.
- The pictorial, plan and abstract symbols used on maps represent the features of an area, which generally needs a key to identify correctly what is shown.
- Maps show the location and distribution of features in an area, that features have relative location to one another, and they can be located on maps using an overlain grid system.
- Local maps can be used to find and give directions using relative and compass directions and that directions need restating when moving around maps.
- Maps are selective in what they include, with purpose and scale determining the sort of map that is drawn and how its contents are selected and represented, in detail or more generally, with different types of map for different purposes.
- Maps may or may not be drawn to a formal scale, depending on the intentions of the map maker, but certainly can be accurately to scale enabling measurements of distances and areas to be made.
- Local maps need to be related to the features and area they show through use outdoors in the area and by relating them to ground level and aerial photographs.
- Maps are time-dependent, even if recently drawn or updated, and need to be checked against the places they show so that they can be updated.

Catling (2020) p.275

Some mapping issues in the early years

Map projections

While globes can be very different in terms of their political geography, generally the physical geography is more straightforward, the equator and poles are in the right place relative to the ocean and land, the comparative size of countries is as it should be and there is no one fixed view because the view rotates: all views take equal place.

However, apart from the conceptual difficulty of asking young children to imagine a 3D object represented as a 2D one, there are many difficulties associated with the use of 2D maps. One is projection. Since 3D does not translate easily into a neat rectangular 2D shape, something has to give. Either a compromise is made with the size of countries so that relative distances are preserved, or the shapes are distorted to keep the area as it should be. Geographers have long argued over the best map projection to use. It is good practice to use more than one type of map projection and to explain to children what the problem is. This conceptual thinking is something they should be exposed to from the early years of schooling

Examples of map projections:

- Mercator projection: this map projection was developed by Gerardus Mercator in 1569 for navigational purposes. While useful for navigation it distorts the size of countries such that Greenland appears much larger than it should do in relation to Africa.
- Gall-Peters projection: this map gives a fairer idea of land area but distorts shape.
- Robinson projection: often known as a compromise map, this has neither the shape or land area mass of countries correct. It takes a best fit approach between the two.

Activity:

Give each pair of children an orange – you could ask them to draw some shapes on it to represent the continents. But the main activity is asking them to peel it carefully, and open it up into one piece of orange peel that will lay flat. This could be modelled by a practitioner instead. It is one way of conveying how tricky it is to show a globe view as a rectangular 2D view.

Map bias

Another problem is the egocentric view used on a 2D map of the world. Have you noticed how the UK is usually, and conveniently in the centre of the map? This is due to the positioning of The Royal Observatory in Greenwich as the place where 'east meets west at Longitude 0°'. In the late 19th century, 72% of the world's commerce depended on sea-charts which used Greenwich as the Prime Meridian. Britain was an important sea faring nation then, and colonial power. This is one example of the bias of maps. You can get maps that are not UK centric and some that are 'upside down'. After all – what is the right 'way up' in space? Older children will enjoy thinking about this problem and exploring different projects. Younger children benefit more from extensive use of globes and atlases, though they should have experience of seeing the 2D world in different views.

Using Ordnance Survey Maps

Ordnance Survey (OS) maps are specifically mentioned and required to be used in the teaching of geography in the primary curriculum. They are not specifically mentioned in the EYFS curriculum, although 'maps' are. We would not expect early years children to be able to fully engage with formal maps at this age and yet, there is a compelling argument to introduce them to young children along with many other kinds of maps, plans and globes.

OS maps and Digimap for Schools offer detailed and clear aerial imagery in their digital forms, vital for the progression of spatial awareness and understanding. Digimap for Schools also offers large scale maps of 1:1250, which allows children to 'zoom' in and see the names and outlines of their own homes, making the mapping relevant for them. There are many ways for young children to engage with maps and mapping at this stage of their development; many of them play-based and using 3D manipulation in sand, mud and water. But ideally, by the end of the foundation stage, maps in a variety of forms, and including OS maps, should be viewed by children as familiar and everyday tools for exploring the world around us.

Young children are capable of both making and using maps. Their ability to do so can be enhanced by the opportunities, tools and materials, and scaffolding, that they are provided with.

Using maps is about:

- Exploring the familiar and unfamiliar world through models and representation
- Navigating paths and routes
- Developing an understanding of pattern, symbol and spatially encoded information
- Unlocking information
- Developing visual literacy
- Being inspired by possibilities
- Developing skills of orientation, scale and positioning
- Interpreting different representations of reality.

Making maps is about:

- Interpreting and modelling reality and spatial relationships
- Creating models and drawings to convey spatial information
- Translating perceptions of the world around us and emotive responses
- Developing the ability to translate first-hand and concrete experiences into abstract expression
- Expressing feelings and knowledge about places
- Committing spatial information to models and codes.

Useful items for mapping provision include the following:

- Blow up globes in different sizes: political and physical, and ones you can write on.
- Stand alone globes to have ready for story time.
- A range of maps of different scales and genres.
- OS maps at a large scale of the local area i.e., 1:1250 or 1:2500.
- Access to digital mapping with annotation facilities, such as Digimap for Schools.
- First Atlases.
- Story maps.
- Access to aerial imagery in digital and printed form, especially of the school and local area.
- A range of media and prompts for creating 3D and 2D maps: including sand, water, and small-world play.
- Large scale printed maps cut up into rectangles and laminated to make simple jigsaws and talking points.

1 What are you trying to achieve?

This section has guidance on mapping progression in the early years to help you plan carefully for opportunities and experiences that will support your curriculum intent. There is also guidance as to how the use of maps and mapping skills can enable children to work towards and beyond, the Early Learning Goals (ELGs), for each of the Areas of Learning (AoL).

Development Matters

The early years is a time that literally lays the foundation for future learning and is a key time for children's development. In thinking about what we want children to achieve, we need to plan the best curriculum and select the best kind of appropriate content that will meet their needs.

Development Matters, the non-statutory guidance for the EYFS sets out seven key features of effective practice of which one is curriculum: what we want children to learn.

- The curriculum is a top-level plan of everything the early years setting wants the children to learn.
- Planning to help every child to develop their language is vital.
- The curriculum needs to be ambitious. Careful sequencing will help children to build their learning over time.
- Young children's learning is often driven by their interests. Plans need to be flexible.
- Babies and young children do not develop in a fixed way. Their development is like a spider's web with many strands, not a straight line.
- Depth in early learning is much more important than covering lots of things in a superficial way.

DfE (2021b) p.9

How can we build children's spatial and mapping skills in the early years, taking the entire EYFS framework into account? How do mapping skills support children to make progress starting from the intent inherent in the AoL and its intended impact? The ELGs give the expectations of what children should be able to do by the time they are ready for Year 1, though this is not a ceiling of expectations but rather a general and best fit guide. Each AoL sets out the kinds of experiences and opportunities children should have and gives a sense of what it is trying to achieve. For example, in this opening extract from Understanding the World:

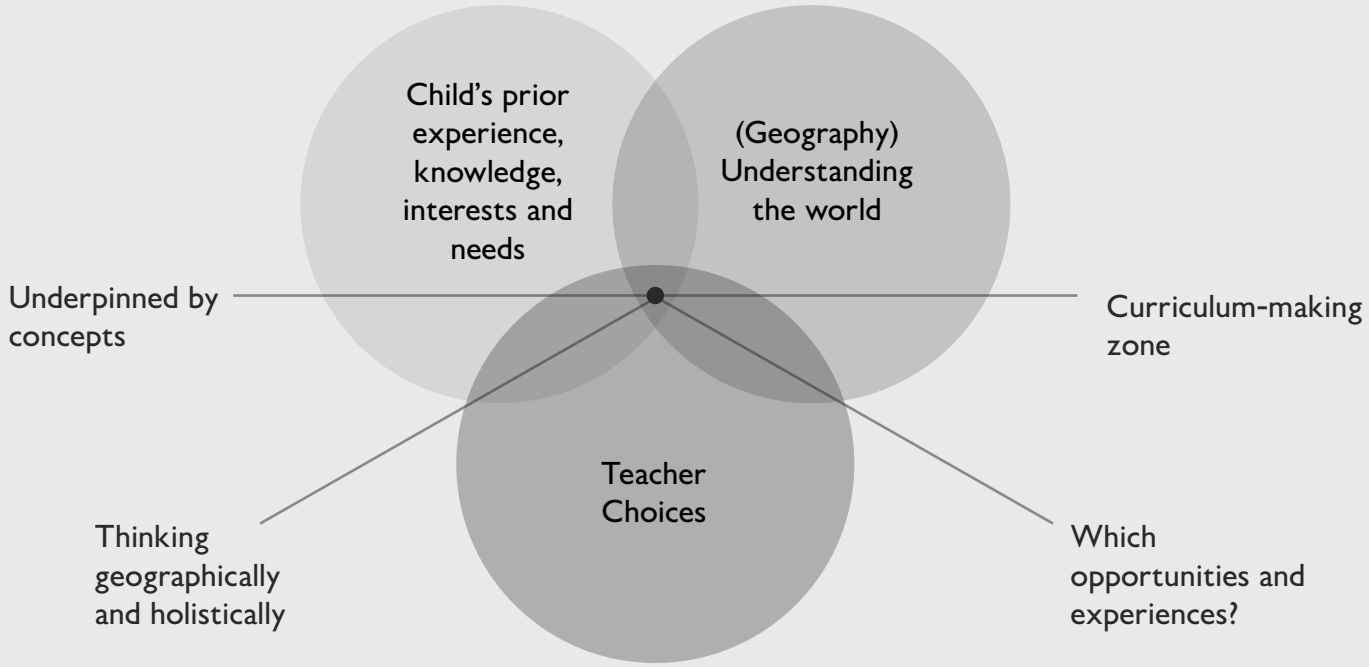
> It involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them, from visiting parks, libraries and museums to meeting important members of society.
>
> **DfE (2021a)**

Part of the section of the ELGs for this AoL, People, Culture and Communities, states that as part of these expectations:

> Children at the expected level of development will:
>
> Describe their immediate environment, using knowledge from observation, discussion, stories, non-fiction texts, and maps.
>
> **DfE (2021a)**

Between the AoL guide to intent, and the ELGs guide to impact, lies the expectation of a curriculum that will bridge the gap between the two and take the child beyond what they already know. This is the magical space of curriculum-making in which pupils' prior experiences, teacher choices and the demands and rigour of a particular AoL – and the subject-linked, conceptual threads within it, come together.

Curriculum making



... a clearly mapped journey [of geography] starting in the early years and developing through the curriculum is critical if pupils are to move towards becoming experts in the subject. (Ofsted 2021)

To guide us further in constructing the bones of a relevant and purposeful curriculum, we can think about what we know about how children learn and develop. For example, those short extracts from the EYFS framework chime well with thinking about children's spatial development by Geist (2016) who advises us that:

> The importance of children's exploration of their environment goes beyond the obvious benefits of physical activity and exposure to nature. As children walk, they are constructing a mental coordinate system. Each time children make a turn or reference a landmark, they are building their mapping ability, and each time children explain how to get from one place to another, they are constructing their two-dimensional coordinate system. So, get out there and take children for mapmaking walks!
>
> **Geist (2016) p.54**

The importance of depth rather than superficial learning (DfE 2021b) further emphases how something simple like a repeated walk in the local area has the potential to be a beneficial part of the curriculum, aiding knowledge and understanding about the world through vocabulary development, sensory and affective reflections, and spatial awareness. There might be different contexts for the same walk such as different times of day, of year, and different prompts may be used; but through building a deep, familiar knowledge base children can begin to apply thinking to other contexts and grow their understanding. Pivotal to this process is language acquisition and use and it is here that regular and practised mapping activities can support and reinforce memory, provide conversation points that tap into the social elements of learning and help children think and reason in abstract ways.

Children think and reason largely in the same way as adults. However, they lack experience, and they are still developing important metacognitive and executive function skills.

Goswami (2015) p. 25.

We now know that young children can think logically using symbolic and abstract material and Goswami (2015) notes that even babies are capable of basic forms of learning and reasoning. This is dependent on the child's knowledge base which, along with working memory grows as does the child. Maps and mapping activities can support and augment that growing knowledge base across all areas of learning (see Figure XX) but particularly in the area in which geography sits: Understanding the World.

A study of toy-play mapping by three-, four-, and five-year-old children demonstrates that children can clearly represent a cognitive map at the age of three and are able to cope with the demands of more formal mapping on school entry (Blaut and Stea 2007). Some children will be able to manage this but there is likely to be a vast range of developmental difference in the early years and provided there is provision and repeated practice of a high quality, the mapping skills will develop.

In planning provision consider the following points:

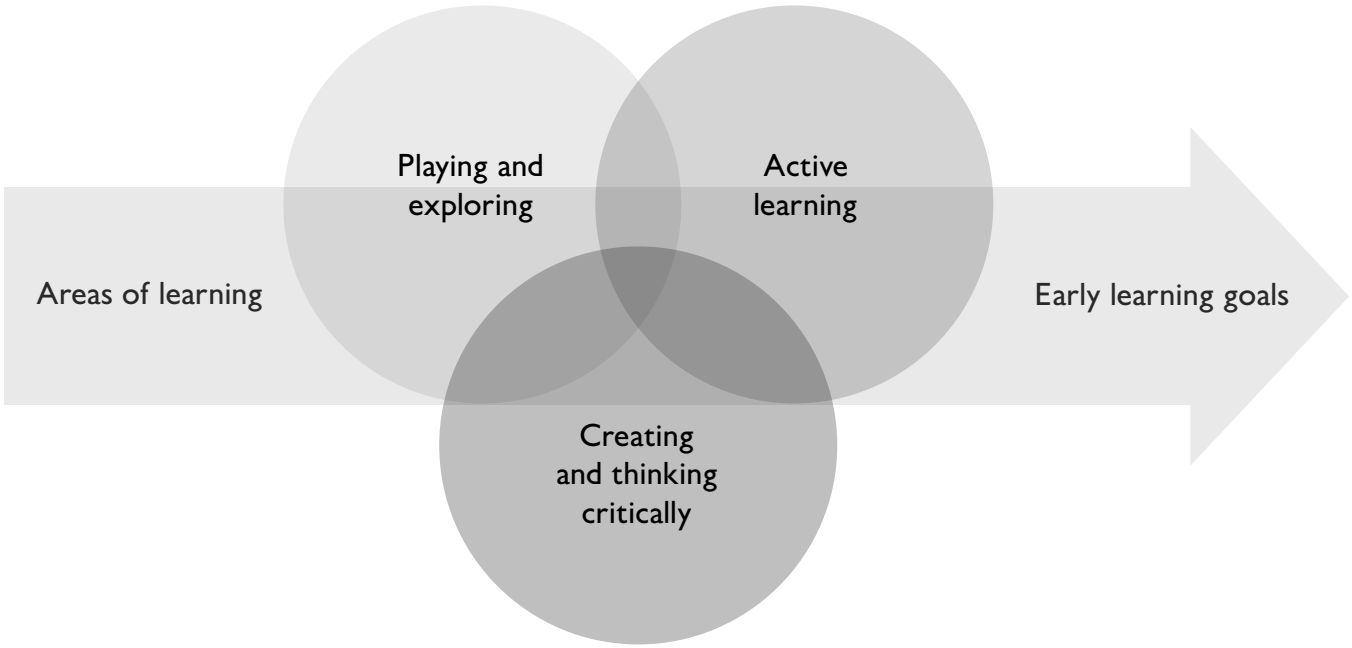
- Frequent familiarity with a range of maps: children talk about them, find places, journeys, holidays and use them to orient themselves.
- Frequent walks, growing familiarity with the local area. Children experience and learn about the local area through careful and repeated observation.
- On walks, talk about and notice and / or record landmarks. Ask children to identify landmarks they like and think matter. Stop to take photographs, sketch, map and ask questions.
- Use all the senses on frequent excursions and allow children some time to explore. Sensorimotor skills matter on maps to young children. Using the senses helps children remember what they have seen and experienced e.g. touching tree bark.
- Encourage the use of landmarks in describing where something is located e.g., next to that large Oak tree. Where did children touch that tree bark? Notice a bee?
- Use relational language to help children describe 'where' e.g., before, after, next too, inside etc.
- Provide opportunities for group maps so that children have to discuss and agree on where to put things.
- Provide opportunities for children to represent their spatial knowledge through maps. Each time they do this, their ability in map-making increases.

Adapted from Geist (2016)

Atlases and maps are inherent with stories about the world and there is so much in them for children to pick up on that teaches them about more than just spatial matters: identity, values, bias; and in a similar way, children's own mental maps offer us a window into their thinking, values and misconceptions when planning encourages them to use them dialogically.

(Catling 2020).

Using Maps towards the Early Learning Goals



Playing and exploring:

maps help children investigate and experience things

Active learning:

maps help children concentrate and keep on trying if they encounter difficulties, and enjoy achievements. They are an aid to exploration and self-regulation.

Creating and thinking critically:

maps help children develop their own ideas, make links between ideas, and develop strategies for doing thing they support pretend play and help solve problems

Using Maps Towards the Early Learning Goals (ELGs)

Area of Learning	Maps enabling learning	ELGs
Communication and Language (C&L) **The development of children's spoken language underpins all seven areas of learning and development.** Children's back-and-forth interactions from an early age form the foundations for language and cognitive development. The number and quality of the conversations they have with adults and peers throughout the day in a language-rich environment is crucial. By commenting on what children are interested in or doing, and echoing back what they say with new vocabulary added, practitioners will build children's language effectively. Reading frequently to children, and engaging them actively in stories, non-fiction, rhymes and poems, and then providing them with extensive opportunities to use and embed new words in a range of contexts, will give children the opportunity to thrive. Through conversation, storytelling and role play, where children share their ideas with support and modelling from their teacher, and sensitive questioning that invites them to elaborate, children become comfortable using a rich range of vocabulary and language structures. DfE (2021a)	· Maps are (visual and tactile) prompts for talk. · Maps help unlock, share, and reinforce new vocabulary about the world. · Maps support the recall of features from a story or real life. · Maps help sequence events in story retell. · Imaginary maps are contexts for talk using familiar and new vocabulary. **Examples** Children have opportunities to: · Create a 3D or 2D map of a real setting, such as their own home, or of an imagined one prompted by a story, to discuss features and / or what you can do there. (UtW) · Use their own or other maps to follow and give directions and use positional language: right, left, up, down, next to, in front of etc. (M, UtW). · Select materials to create their own map showing a given feature such as a mountain, and talk about their different interpretations of this activity. (A&D)	**Communication and Language** ELG: Listening, Attention and Understanding Children at the expected level of development will: · Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions. · Make comments about what they have heard and ask questions to clarify their understanding. · Hold conversation when engaged in back-and-forth exchanges with their teacher and peers. ELG: Speaking Children at the expected level of development will: · Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. · Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate. · Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses, and making use of conjunctions, with modelling and support from their teacher DfE (2021a)

Area of Learning	Maps enabling learning	ELGs
Personal, Social and Emotional Development **Children's personal, social and emotional development (PSED) is crucial for children to lead healthy and happy lives, and is fundamental to their cognitive development.** Underpinning their personal development are the important attachments that shape their social world. Strong, warm and supportive relationships with adults enable children to learn how to understand their own feelings and those of others. Children should be supported to manage emotions, develop a positive sense of self, set themselves simple goals, have confidence in their own abilities, to persist and wait for what they want and direct attention as necessary. Through adult modelling and guidance, they will learn how to look after their bodies, including healthy eating, and manage personal needs independently. Through supported interaction with other children, they learn how to make good friendships, co-operate and resolve conflicts peaceably. These attributes will provide a secure platform from which children can achieve at school and in later life. DfE (2021a)	· Maps can be made and / or interpreted as spatial behavioural cues. · Maps encourage a developing familiarity with, and exploration of, places. · Using and making maps builds confidence in navigating familiar and new environments. · Maps help express feelings about people and places. · Maps can be used to tell stories about friendship, family, and familiar loved places. **Examples** Children have opportunities to: · Discuss with each other what they can and can't do in different parts of their outdoor area and work on a map together using different colours or marks to show this e.g., where you can run and where you need to be quiet. (C&L) · Create a map of the route used by Little Red Riding Hood. They use emoticons, markers or their own drawings to show how she felt at different points of the route. (L, A&D)	**Personal, Social and Emotional Development** ELG: Self-Regulation Children at the expected level of development will: · Show an understanding of their own feelings and those of others, and begin to regulate their behaviour accordingly. · Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate. · Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions. ELG: Managing Self Children at the expected level of development will: · Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. · Explain the reasons for rules, know right from wrong and try to behave accordingly. · Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. ELG: Building Relationships Children at the expected level of development will: · Work and play cooperatively and take turns with others. · Form positive attachments to adults and friendships with peers. · Show sensitivity to their own and to others' needs. DfE (2021a)

Area of Learning	Maps enabling learning	ELGs
Physical Development (PD) **Physical activity is vital in children's all-round development, enabling them to pursue happy, healthy and active lives.** Gross and fine motor experiences develop incrementally throughout early childhood, starting with sensory explorations and the development of a child's strength, co-ordination, and positional awareness through tummy time, crawling and play movement with both objects and adults. By creating games and providing opportunities for play both indoors and outdoors, adults can support children to develop their core strength, stability, balance, spatial awareness, co-ordination, and agility. Gross motor skills provide the foundation for developing healthy bodies and social and emotional well-being. Fine motor control and precision helps with hand-eye co-ordination, which is later linked to early literacy. Repeated and varied opportunities to explore and play with small world activities, puzzles, arts and crafts and the practice of using small tools, with feedback and support from adults, allow children to develop proficiency, control, and confidence. DfE (2021a)	· Maps stimulate activity and exploration. · Maps help develop co-ordination and positional awareness. · Maps can be prompts for different kinds of movements across a space. · Maps help children investigate, come to know, and feel confident in landscapes around them. · Making maps encourages fine motor control and precision with eye-hand coordination. · The making of maps using a range of different media can promote confidence and proficiency. **Examples** Children have opportunities to: · Create a chalk map on the playground of a route and add cues for movement e.g., walking, hopping, running. They take it in turns to follow the route and the cues. (UtW) · Draw a tabletop map and add some written labels and drawn features. They use this as a base for their small world figures to explore and tell stories about this. (C&L).	**Physical Development** ELG: Gross Motor Skills Children at the expected level of development will: · Negotiate space and obstacles safely, with consideration for themselves and others. · Demonstrate strength, balance and coordination when playing. · Move energetically, such as running, jumping, dancing, hopping, skipping, and climbing. 13 ELG: Fine Motor Skills Children at the expected level of development will: · Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases. · Use a range of small tools, including scissors, paint brushes and cutlery. · Begin to show accuracy and care when drawing. DfE (2021a)

Area of Learning	Maps enabling learning	ELGs
Literacy (L) **It is crucial for children to develop a life-long love of reading.** Reading consists of two dimensions: language comprehension and word reading. Language comprehension (necessary for both reading and writing) starts from birth. It only develops when adults talk with children about the world around them and the books (stories and non-fiction) they read with them, and enjoy rhymes, poems and songs together. Skilled word reading, taught later, involves both the speedy working out of the pronunciation of unfamiliar printed words (decoding) and the speedy recognition of familiar printed words. Writing involves transcription (spelling and handwriting) and composition (articulating ideas and structuring them in speech, before writing).	· Maps help scaffold and explain texts. · Maps support word recall when reading. · Maps provide contexts for writing new vocabulary and stories. · Globes, atlases, and maps help locate stories and develop awareness of the wider world. **Examples** When reading a story like e.g., John Burningham's 'Oi get off My Train!', a globe is used to show where some of the animals in the stories might be found. From the same book – children make their own pictures or tableaux of the animals in their natural habitat and sequence them together as a route map to retell their own story. Children have opportunities to: · Find and mark features found in a landscape on a paper or digital map, adding written labels. · Make journey strings on a walk and collect items that they tie on as they go. They then retell the walk, naming the items found and sequencing the journey, before drawing a linear map. · Create journey strings to illustrate stories they have heard, using appropriate objects, e.g., a range of forest items might be provided to illustrate Little Red Riding Hood's journey through the woods.	**Literacy** ELG: Comprehension Children at the expected level of development will: · Demonstrate understanding of what has been read to them by retelling stories and narratives using their own words and recently introduced vocabulary. · Anticipate – where appropriate – key events in stories. · Use and understand recently introduced vocabulary during discussions about stories, non-fiction, rhymes and poems and during role-play. ELG: Word Reading Children at the expected level of development will: · Say a sound for each letter in the alphabet and at least 10 digraphs. · Read words consistent with their phonic knowledge by sound-blending. · Read aloud simple sentences and books that are consistent with their phonic knowledge, including some common exception words. ELG: Writing Children at the expected level of development will: · Write recognisable letters, most of which are correctly formed. · Spell words by identifying sounds in them and representing the sounds with a letter or letters. · Write simple phrases and sentences that can be read by others.

Area of Learning	Maps enabling learning	ELGs
Mathematics (M) **Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically.** Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding – such as using manipulatives, including small pebbles and tens frames for organising counting – children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space, and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes. DfE (2021a)	· Maps record and communicate simple data e.g., number and measure. · Maps can visually represent conservation of number and number bonds. · Maps invite data interpretation. · Maps and aerial imagery support the recognition and identification of simple shapes and patterns. · 2D and 3D maps provide opportunities to use comparative, shape, and directional language. **Examples** Children have opportunities to: · Count and record birds, trees or other flora and fauna on a map of the school grounds. (PD) · Use a base map on which to arrange a given number of things e.g. five Robins. This supports discussion about number bonds. (C&L). · Look at images of the Earth as seen from outer space and talk about what the patterns and colours on the surface represent, e.g., sea, land, clouds. (UtW) · Use a large-scale aerial image to discuss what shapes and patterns they can see. (UtW) · Record simple non-standard and standard measurements on maps and plans. (UtW)	**Mathematics** ELG: Number Children at the expected level of development will: · Have a deep understanding of numbers to 10, including the composition of each number. 14 · Subitise (recognise quantities without counting) up to 5. · Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. · ELG: Numerical Patterns Children at the expected level of development will: · Verbally count beyond 20, recognising the pattern of the counting system. · Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. · Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. DfE (2021a)

Area of Learning	Maps enabling learning	ELGs
Understanding the World (UtW) **Understanding the world involves guiding children to make sense of their physical world and their community.** The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries, and museums, to meeting important members of society such as police officers, nurses, and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes, and poems will foster their understanding of our culturally, socially, technologically, and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension.	· Maps identify, describe and make sense of the world around us. · Maps can visualise chronological activity over time. · Maps support the understanding of stories from the past. · Maps help compare similarities and differences between places. · Using and making maps invites engagement with the natural and contrasting environments around us. **Examples** Children have opportunities to: · Mark on an existing plan or map where they have been during the day and talk about this chronologically. · Create memory maps of their school grounds and then explore out of doors to match identified features. · Do a 'Drift' walk, noticing and mapping what they are looking out for e.g., 'the colour yellow'.	**Understanding the World** ELG: Past and Present Children at the expected level of development will: · Demonstrate understanding of what has • Talk about the lives of the people around them and their roles in society. · Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class. · Understand the past through settings, characters and events encountered in books read in class and storytelling ELG: People, Culture and Communities Children at the expected level of development will: · Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps. · Know some similarities and differences between different religious and cultural communities in this country, drawing on their experiences and what has been read in class. · Explain some similarities and differences between life in this country and life in other countries, drawing on knowledge from stories, non-fiction texts and – when appropriate – maps. ELG: The Natural World Children at the expected level of development will: · Explore the natural world around them, making observations and drawing pictures of animals and plants. 15 · Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. · Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. DfE (2021a)

Area of Learning	Maps enabling learning	ELGs
Expressive Arts and Design (A&D) **The development of children's artistic and cultural awareness supports their imagination and creativity.** It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe. DfE (2021a)	· Maps invite a wide range of media and techniques in their creation. · Maps encourage and support creativity in thought, intent and design. · Making and using 2 or 3D maps encourages imaginative role play and narratives. · Maps aid memory recall in recount of learnt rhymes and tales. **Examples** Children have opportunities to: · Experiment with a range of media: textiles, chalk, paint, natural objects, sand, water, stones, junk modelling etc. to make 2D and 3D maps. · Create maps as a response to, and memory aid for, everyday rhymes and tales. e.g. a map showing the different routes taken by each of the Little Piggies – market, town, home etc. or a map showing the 'mountain' that 'the Bear went over' or the hill climbed by Jack and Jill. · Create maps using different techniques such as drawing, painting, gluing, writing, sticking, modelling etc.	**Expressive Arts and Design** ELG: Creating with Materials Children at the expected level of development will: · Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. · Share their creations, explaining the process they have used. · Make use of props and materials when role playing characters in narratives and stories. ELG: Numerical Patterns Children at the expected level of development will: · Invent, adapt and recount narratives and stories with peers and their teacher. · Sing a range of well-known nursery rhymes and songs. Perform songs, rhymes, poems and stories with others, and – when appropriate – try to move in time with music. DfE (2021a)

Progression in Mapping EYFS – KS1

EYFS	Using and Interpreting	Position and orientation	Drawing	Symbols	Perspective and Scale	Digital Maps
Birth to 3	Use all their senses in hands-on exploration of natural materials. Beginning to use pictorial maps for play e.g. a road map for cars, a farm map for animals.	Point in the direction of features when asked. Follow simple instructions to look or move in a certain direction.	Enjoy drawing and mark – making. Express ideas and feelings through making marks, and sometimes give a meaning to the marks they make.	Begin to notice simple patterns. Begins to use objects symbolically e.g. a banana for a telephone.	Use pretend play and start to compare sizes between models and reality.	Recognises that maps like SatNavs help you find your way. Begins to play with online video games where you manipulate a character in space.
Nursery 3-4	Begin to understand that maps hold information in patterns and print. Use maps for pretend play. Make imaginary maps with marks that have meaning. Follow simple routes on maps. Use journey strings or sticks to record information on a route, Recall the journey and sequence the event, using the string or stick as a map.	Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind'. Beginning to use 'right and left' with increasing confidence.	Create closed shapes with continuous lines and begin to use these shapes to represent objects and features. Draw maps using shape and purposeful mark-making.	Use some symbols as cues e.g. follow painted footsteps on a playground. Use objects as symbols to represent other objects e.g. line of sticks as a road.	Talk about distance and know that some places are further away than others. Begin to explore scale through small world play.	Recognise some features at a large scale, using aerial views. eg the cars in the car park, the school building. Play simple digital games moving figures on a plan view e.g. of a room.
Reception 4-5	Derive information from a simple map. Use a simple plan map of the school grounds to find and / or mark in features. Follow a simple route at a local scale, using familiar landmarks. Use journey sticks or strings to create simple drawn maps.	Point to the North and South Poles on a globe. Use a compass to identify the direction of North. Use more complex directional language and confident using right' and 'left'.	Draw and create simple maps from memory about features and a familiar environment e.g. home, the school grounds.	Begin to use simple symbols on maps to show features and journeys. Recognise the use of symbols on maps and what they mean.	Start to gain knowledge of their own country and its features. Zoom in to a map to find the school using a postcode. Know that you need to zoom out to see a larger area.	Manipulate and annotate large scale maps, adding simple text, markers, and photographs.
	Resources: Maps of different types and at a range of scales. Picture and story maps, play maps, floor maps. 3D maps, blow up globes, access to aerial imagery and satellite imagery, digital maps, compasses, telescopes and binoculars. **Materials:** sand and water play, chalk, paint, flour, modelling clay, video and digital cameras, junk modelling, Role and small world play, small cardboard picture frames, pens and pencils, glue, material, pebbles, stones and other natural objects.			**Suggested Books:** We're going on a Bear Hunt. Michael Rosen and Helen Oxenbury Window. Jeanne Baker The Bear in the Cave. Michael Rosen and Adrian Reynolds Oi Get off our Train. J Burningham Here we Are. O Jeffers		

Progression in mapping skills

KS1	Using and Interpreting	Position and orientation	Drawing	Symbols	Perspective and Scale	Digital Maps
Year 1 and 2	Find information on aerial photographs. Know that maps give information about the world (where and what?). Follow a route on a prepared map. Recognise simple features on maps such as buildings, roads and fields. Recognise that maps need a title. Use maps to talk about everyday life for example, where I live, journey to school, where places are in a locality. Begin explaining why places are where they are. Find and name oceans and continents on maps, significant landforms such as rivers and mountain ranges.	Beginning to use directional vocabulary. Say which direction N,S,E,W is for example, using a compass in the playground. Know which direction N is on an Ordnance Survey map.	Draw a simple map (real or imaginary place) for example, freehand maps of gardens, watery places, route maps, places in stories. Create maps using a range of media.	Use symbols on maps (own and class agreed symbols). Know that symbols mean something on maps. Find a given Ordnance Survey symbol on a map with support. Beginning to realise why maps need a key. Growing awareness of map conventions.	Look down on objects and make a plan for example, on desk, high window to playground. Draw objects to scale (for example, on table or tray using squared paper 1:1 first, then 1:2 and so on). Use large scale, vertical aerial photographs. Know that when you 'zoom in' you see a smaller area in more detail.	Find places using a postcode or simple name search. Add simple information to maps for example, labels and markers. Draw around simple shapes and explain what they are on the map, for example, houses. Use a measuring tool with support to show distance for example, my house to school, to the shops. Zoom in and out of a map, draw a simple route, highlight areas & add an image to a map.
	Work confidently with: Large scale street maps and large scale Ordnance Survey maps (1:1250. 1:2500), aerial photographs and satellite imagery, games with maps and globes. **Have experience:** of a range of different maps for example, tourist brochure, paper maps, storybook maps, Ordnance Survey digital maps at different scales and globes and atlases. **Introduce:** simple grids, four cardinal points, basic digital mapping tools, zoom function of digital maps. Context: focus on the local scale–- home, school, neighbourhood, everyday lives (their own and others), work in the school grounds; global scale – world maps, globes and through story.			**Suggested Digimap for Schools Activities (* Ks1-2)** Letter to our school Where do I live? How can we get to Grandma's safely? What's the quickest way to school? My geography glasses Who goes to school by boat?* Where does our milk come from?* Where do I go in a week?* Capital Stops* My Dream Island* The Magic Telescope*	**Suggested Books** Voices in the Park. A Browne The Rhythm of the Rain. G Baker-Smith River Story M Hooper The Journey. F Sanna We are Britain. B Zephaniah Where the forest meets the sea. J Baker The World came to My Place Today. J Readman & L H Roberts	

Ofsted

Children begin their geography education journey in the EYFS and Ofsted (2021) comment that the framework update in 2021 sets out much 'clearer, identifiable geographical knowledge' that children are to learn, particularly within the AoL Understanding the World. They also note the opportunities to draw on geographical content in other AoL. The early years is 'crucially' when children begin to acquire the foundation of their geographical vocabulary (Ofsted 2021).

In the Ofsted Geography Research Review (Ofsted 2021) there are several areas identified as being essential to good practice generally in geography education. The key points of these are summarised below from the report.

High-quality geography education indicators

- The geography curriculum identifies sufficient breadth of content and ensures that pupils learn this in sufficient depth.
- Pupils' geographical education begins in the early years and builds year on year, developing pupils' expertise.
- The organisation of the curriculum builds knowledge so that pupils can draw on it in future learning. Pupils are increasingly able to apply generalisations to understand the world around them.
- Teachers are the adjudicators of curriculum content and select it judiciously. They use their good subject knowledge to do this and take into account how pupils build their geographical knowledge over time.
- Geographical expertise is built on substantive geographical knowledge. Drawing from the breadth of concepts gives pupils the knowledge they need to appreciate the whole domain of geography. They understand how common concepts draw different aspects of the subject together.

Ofsted (2021)

Location

In the Geography Subject Review. Ofsted (2021) note the importance of the early years in laying foundations for geographical knowledge and skills. Locational knowledge for example, essentially begins in the early years and is developed through curriculum planning. More particularly, a secure knowledge of distance, orientation, scale and positioning systems begins in the early years say Ofsted and provides the framework children need to understand locational knowledge. Geographical language and basic concepts need to be well established by the end of the Reception year. This includes:

- A grasp of positionality (where one feature is in relation to another)
- a secure understanding of directional and locational information so that children can locate features and navigate their way
- concepts of near and far, left and right, and behind and in front, enabling children to progress to using compass terminology with greater confidence in year 1

Ofsted (2021)

Place

The concept of place also requires development and pupils need the knowledge to understand 'place' and its representation.

From the early years, the geography content that children learn can allow greater awareness of people, the environment, the relationships between them and the child's place in this relationship. This sense of belonging is recognised as being significant in children's social and emotional development and in preparing them for more formal learning. It is important, therefore, in Nursery and Reception, that teachers set curricular goals so that children build their place knowledge and begin to appreciate the connections between people and the physical environment. In doing so, pupils need to learn the vocabulary in order to express these ideas.

Ofsted (2021)

Environmental, physical and human geography

From the early years on, the curriculum should set out how pupils gain knowledge of environmental, human and physical processes so that pupils can:

- describe their own and others' environments
- recognise the similarities and differences between the world around them and contrasting environments
- understand important processes and changes in the world around them, including those affecting the land, bodies of water and the air, people, and wildlife

Map Skills

There is a positive relationship between a child's ability in mapping skills and their ability to relate to geographical concepts and discern spatial patterns. To this end, mapping activities should include the use of aerial and satellite imagery across the curriculum (Ofsted 2021)

In order for pupils to become proficient in map skills, the curriculum ensures that pupils have the knowledge they need, such as knowledge of direction and scale, to draw and analyse maps. This is likely to build from drawing plans of areas that children in the early years are familiar with, such as their classroom or the school premises, through to more complex maps of larger areas and more distant places. Through drawing maps, pupils may identify relationships between features or ask questions about which processes have led to particular patterns, such as settlement distribution. Ofsted (2021)

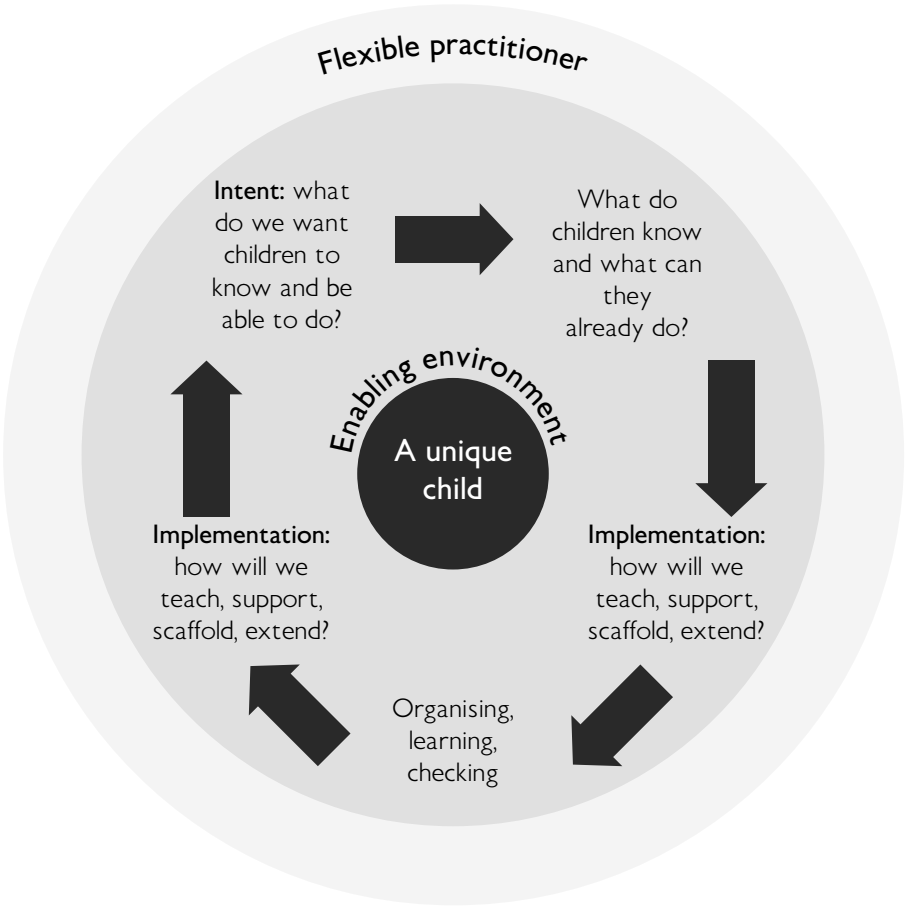
Building this early knowledge across these components enables children to feel confident in making connections. In the early years and KS1, the curriculum should have accessible chunks of information that build and connect language with geographical features and simple processes. A well-structured curriculum in the early years and KS1 builds curiosity and knowledge, and thus motivation (Ofsted 2021). The implications are that there need to be well planned opportunities and provision that includes access to maps, globes and atlases at different scales, of different types, paper and digital and which offer repeated contexts for pupils to practise and apply their vocabulary and thinking.

2 How will you organise learning?

The early years are the crucial time for developing children's enjoyment of learning, their engagement and motivation. It's an important time for children develop their ability to persist and show gritty determination.

Grenier (2021)

Planning to support every child



Curriculum interpretation

How the learning environment is enabled to help fulfil the ambition of the planned curriculum will vary enormously between settings. Grenier (2021) comments that curriculum, pedagogical approaches and enabling environments are likely to be varied and flexible in order to match the range of learners and every, unique child, in a particular setting. including those with special educational needs and disability (SEND). As figure 2.1. suggests, the child is at the heart of this process of planning, teaching and evaluation. Yet this is not to imply that approaches should be entirely 'child-centred' but rather that the intended outcomes always take into account the needs of the child.

Neither will the curriculum be rigidly planned, as that flexibility to adapt can be needed at any moment: unexpected snow, a visitor to school, or a child with a new baby brother or sister, can all provide meaningful and relevant, yet unexpected, opportunities for learning. At the same time, there will be clearly identified outcomes that need to be achieved. As Grenier 92021) reminds us, it is through sensitivity to the needs of each child that curriculum interpretation will happen.

> At no age level is it recommended that education should be entirely "child-centred" or "teacher-directed". Interaction with adults is key in all domains and activities in small groups appear particularly effective.
>
> Grenier (2021) p.69

There is a need for all pupils to share the same curriculum, with the same level of ambition and expectation of the geographical knowledge that pupils should know. In the case of pupils with the most complex learning needs, there may be occasions when it is appropriate to modify the curriculum. However, this will be the exception.

Ofsted (2021)

Special Educational Needs and Disabilities (SEND)

The learning environment should be structured in such a way that all can succeed. Careful scaffolding and additional support should be in place to enable this to happen. Ofsted (2021) gives some specific examples relevant to geography, when teaching approaches and resources may need to be modified: for dyslexic pupils this may mean well-spaced print, while visually impaired pupils may benefit from clear fonts, overlays, printing on pages of a specific colour, the use of relief models for mapwork, and audio descriptions of images.

Maps and mapping activities can help provide support too for some children with SEND, providing prompts, contexts, tactile as well as visual support and an aid to memory. All children need to have the opportunity to play with, use and make maps and in the EYFS especially, all of the children will need scaffolding and dialogic intervention as well as self-initiated play, so that learning is well supported and extended.

Effective approaches

Ofsted go onto to say that high-quality geography education has the following features:

- Pupils are proficient in carrying out enquiries and decision-making exercises because they are secure in the prior knowledge they need for these.
- Carefully structured tasks give pupils sufficient instruction, guidance and support.
- The enquiry approach supports the development of pupils' disciplinary knowledge. For example, it increases their capacity to recognise and ask geographical questions, and to critique sources and reflect on what they have learned, as well as the methods used.

Ofsted (2021)

The approaches teachers take are critical when translating the planned curriculum into effective experiences that allow pupils to learn and remember new content. Research shows how, through the choices they make about their approaches, teachers can helpfully promote pupils' spatial thinking, improve their efficiency and gain insight into the way of geographers (disciplinary knowledge).

Ofsted (2021)

Enquiry

An enquiry approach is valid in the early years as well as across the primary curriculum and an effective pedagogical approach for the teaching and learning of geography, whether it is as part of an AoL or not. Five useful key points to have in mind for effective geographical enquiry are:

1. Enquiry starts with a genuine need to know – why are we doing this?

2. Enquiry and good questions spring from some base knowledge – what do we know already?

3. Enquiry gathers, sifts and sorts data – what do we need to know?

4. Enquiry uses techniques – how will we find out?

5. Enquiry is purposeful – why are we (am I) doing this?

Enquiry may be child-initiated through play and experimentation driven by the child's curiosity; it may be teacher directed through a directed question and chosen techniques or it may be collaborative and reciprocal. It might be an enquiry over a short time frame: I wonder what we'll see today on the school field? Or it might be over a longer time frame: what changes would we like to see in our outdoor area? Enquiry needs good questions to be effective and the art of questioning is something that children do not have automatically. It needs to be taught, modelled and reinforced. The ability to ask good questions also relies on language ability and vocabulary. Basic questions about the geographical aspects of the world around us here can be taught and modelled from the early years and will help to build conceptual understanding about key geographical ideas such as place, space and scale.

Basic Question	Supporting and enabling learning	Some Key Vocabulary	
Where is this place?	Use globes, plans, maps and atlases to model and explore spatial elements of place. Build vocabulary relating to spatial description: below, above, next to, surrounded by etc.	above address atlas besides edge far globe	in front of left map near next to right under
What is it like?	Sensory exploration through first-hand experience. Photographs, tv and internet, maps and aerial imagery, Street View, Geograph for Schools, artefacts, memories and stories, geographical imaginations.	beach city hill house mountain park sea school street town village woods	busy cold dirty hot muddy noisy pretty quiet safe ugly wet windy
*What can you do there / here?	observation, logic using the environment as prompts, personal experiences, story, other research.	eat climb picnic play read	run sit shop skip walk

* The affordance of place (Gibson 1979), or what you can do in a place, is an important concern for children who see places in terms of activity potential rather than as an abstract landscape. For children, landscapes hold cues and invitations: for example, a tree may invite climbing, a puddle, splashing and a hill climbing and rolling. Using maps and aerial images alongside photographs of place and first-hand experience helps children relate landscape into activity-related and abstract connotations that they can begin to apply in other contexts and locations. Conversely, thinking about modes of travel across, and activity in, landscapes can be a powerful motivator and enabler for mapping spatial data: this is how we cross the playground; this is where we play on the swings, this is the best place in the field to play football, etc.

A subsidiary question relating to where places are and activity is 'How will we get there?' and supporting children to think about routes, transport, modes of travel and how these might vary with landscape and distance. Children begin to gain a greater understanding of distance through conversations and practical experience that allows them to make reasoned assumptions such as: if it is close you can walk, further away you might need a bus or a train. If it is very far, you might need to fly or go by boat.

Play

The importance of play, especially collaborative and supported play in children's learning and development is well documented (Taggart et al 2015, Grenier 2021) The EPPSE Project found that in the most effective settings, children's play was two thirds child- initiated and one third adult-initiated. In excellent settings, adults supported and extended children's self-initiated play more often. Providing a range of maps and letting children build their own, whether tabletop or room size or even playground size, offers scope for all kinds of imaginary and small-world play. Dialogic interventions then might draw on the kinds of questions and use of vocabulary as suggested above to help children think and talk in spatial ways, and more abstract ways once that some, initial knowledge is established.

Children playing out of doors, may use natural and found materials to create their imaginary landscape of dens, castles or islands. What may appear to us to be a random collection of branches, sticks and leaves is to them, a secret world of their own. Using small figures out of doors can trigger real adventures in scale. A molehill can really become a mountain, a puddle a lake and a shrub a tangled jungle, inviting adventure. Or perhaps children are given clues to look for fairies, gnomes, elves or even dragons, and are given materials to draw maps so they can explain their findings to others.

In a more straightforward imitation of everyday life, maps and globes become props for play corners where salespeople are 'selling' holidays or used by children as weather presenters in role -play mode, or by would-be world explorers off to make great discoveries. Children enjoy just playing with maps and investigating their markings. Provide some young children with pebbles that they can decorate with their initials or simple symbols, and a table top map and they will, with support, enjoy thinking where they will 'place' themselves on the map.

Familiarity with maps and globes and the language of maps helps develop confidence in their use and so motivates children to explore them more. Blow-up globes can be used for 'globe tossing' activities. A child catching the 'world' (itself a great challenge in eye-hand coordination), then needs to point to e.g. The North Pole or the South Pole; an area of ocean or an area of land. By the age of five, children are then easily able to point to whereabouts they live in the world using a globe and name continents.

Images by Clophill playgroup

Story

Stories also invite us to recreate or imagine maps. Some already use maps as part of their narrative. Traditional tales such as Little Red Riding Hood benefit from the use of recreated landscapes upon which to act out the journey, either as drama, small world play or in a more abstract way. The well-known wordless storybook 'Window' by Jeanne Baker invites children to think about how places change over time and offers scope for children to respond through maps and pictures. 'The Bear in the Cave' by Michael Rosen and Adrian Reynolds, details a Bear's journey from a lonely cave on the coast to a busy city and provides many opportunities for map – making, play and talk.

We can also tell stories about us. Mapping our movements, over time, to and from real and imagined places, recalling favourite places, our own homes, the places we play and live: this is who we are, this is our identity and maps help us tell that story. And by listening to each other's stories, we acknowledge and value the power of diversity and difference. Every story counts.

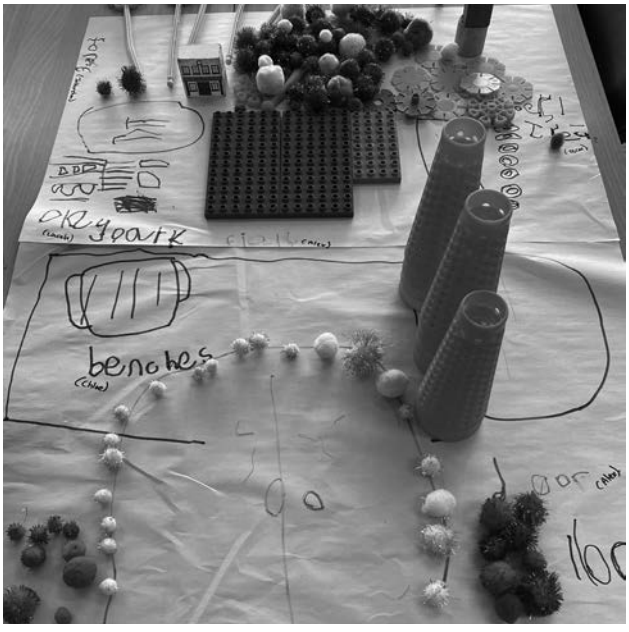
Maps of all sorts are layered documents telling stories. One story is that maps tell children what a place is like as seen and selected by those who made the map, the story intended for readers, such as the significant features of an area, a story with a particular purpose. Another story is about the ways places are represented at large enough scales and recognisable to younger children, connecting them pictorially or through plan drawings and symbols to the place depicted. A third story is that maps are searchable documents over which a child can wander, noticing features, sites and routes and to which they can relate their knowledge of and assumptions about places, such as where they like to go or do not know. The fourth story concerns the messages about a place for to its reader, perhaps unintended, about what matters or what it seems can be done there. Primary children need to engage with these map stories because maps are not singular in the messages they provide; the same map tells a variety of stories.

Catling (2020) p.276

Meaningful Maps

The Meaningful Maps (www.meaningfulmaps.org) project invites children to create maps from memory of places in their immediate home locality adding annotation as they do so and writing about why places have been identified as being special. These have been mainly done by children of primary age but reveal the complex ideas and memory recall that children have about place.

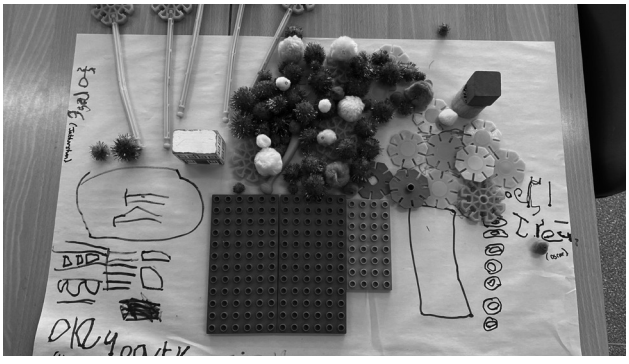
> Affective maps which focus on personal responses are central to this project. You could ask the pupils to think about places which they enjoy visiting or where they feel safe and happy as well as places that matter because they are perhaps scary or unpleasant. They might select places where they do activities such as play, swim, skateboard, watch animals and so forth. Or they might focus on places where they met their friends or visit relatives. It is quite likely that pupils will decide to draw maps of their own home and street, their school and places in the locality where their friends and relatives live. Others may select local parks, play areas, their garden or even their own bedroom.
>
> **Vujakovic et al (2018) p.12**



Exploring children's personal responses to place through maps is also a good place to begin before more formal mapping takes place as it is both diagnostic and informative for the teacher but also allows children to compare places as they exist in their mind, with a formal map such as that from the Ordnance Survey. The activity is a valuable spatial stepping-stone for children, taking them from first-hand experience to formal mapping via their own geographical imaginations.

Mapping the home and other familiar and local areas from memory, does highlight some ethical issues too as Vujakovic et al (2018) note when investigating research in this area. For example, an autistic child mapped their sadness in school when asked to create an emotion map, others identified concerns about bullying and stranger danger.

> Children aged four and five we asked to create maps from memory of their school outside area, using a range of materials. They had to think about what they remembered first of all and then were supported and scaffolded by adults in the setting to create their map in small groups of three or four. The school had a very large field, with a wood at the bottom and several areas of different play equipment. Not only did these young children manage to create a comprehensive map with some accuracy, but they were also able to talk about it and explain it to me at some depth.
>
> **Owens, (2021) work with schools in progress**



Little Red Riding Hood - Traditional Tale

Where is Grandma's house?
What does LRRH see on the way?

Communication and Language

Develop vocabulary. Use your mask to talk about how it feels to be the Wolf, or Grandma or LRRH.

Act the story out with props, in the play corner.

Physical Development

Gross motor: create a route in the playground from home to Granny's house and run along it. Play: What's the Time Mr Wolf.

Fine motor: creating maps and plans.

Personal, Social and Emotional Development

Talk about the different emotions during the story and create emoticons to add to the map.

Use the play corner as a listening space where others can come, in role as LRRH speak about their ordeal.

Discuss grandparents and why they are special.

Literacy

Read the story aloud and re-tell it with pictures and captions.

Create labels for features on the map.

Label the items you would take out in a bag for a walk.

Expressive Art and Design§

Draw a table map of the journey. Use junk modelling or other materials to add 3D features, such as Grandma's house and the woods.

Create face masks for role-play.

Act out the story.

Mathematics

How far is it to Grandma's house? How long does it take to get there?

How big is the wolf?

Opportunities to reinforce language of time, measure and space. Sequence events.

Understanding the World

Carry out fieldwork e.g. a walk around the school, and discuss places that you find scary or exciting. Explain some rules for staying safe when out playing by yourself. What dangers do you have to think about in your local area? Use a digital large-scale map of the school (using Digimap for Schools) and add emoticons to show how you feel. Draw a base map for use with Beebots. Or a chalk map on the playground and give each other directions.

Useful vocabulary

Grandma home house left map path plan right route trees wolf woods

Useful Links

How to get to Grandma's safely? (edina.ac.uk)

The Bear in the Cave - Michael Rosen and Adrian Reynolds

Where is the cave? What is it like there? Where is the city? What is it like there? What does the Bear see on his journey?

Communication and Language

Create a class or group spoken sound poem, by taking it in turns to say what you can hear outside in the school grounds.

Talk about the features of a beach and a city and compare them.

Physical Development

Gross motor: act out moving on the empty beach and how you would move. Then act out moving in the busy market.

Fine motor: creating maps and plans, writing labels.

Personal, Social and Emotional Development

Talk about visiting a beach or the city and what you like about it the most and the least.

Discuss how the bear felt when everyone laughed at him in the park. What advice would you give the bear?

Literacy

Read the story aloud and re-tell it with a linear map and captions.

Choose a favourite scene from the book and write all the things you can spot in it.

Expressive Art and Design

Use egg cartons to make a train carriage.

Use the sand box, shells and stones to create a 3D map of the cave and the beach.

Cover a table with paper and let children experiment with their mapping ideas.

Mathematics

Using egg cartons as the 'train' carriage, and small play figures, let children play with adding different numbers of people and writing down how many there are.

Make a cave big enough for a toy teddy bear to fit into.

Understanding the World

Where do you live? Draw a map of a journey from your house.
Visit a local beach or market. Listen to the sounds you can hear and record some. Make a sound map from one particular spot thinking about the direction the sound is coming from and what it is.

Where do Bears live? Investigate their real habitats.

Useful vocabulary

Buildings car cave city market park sea skyscraper street train waves

Useful Links

Where do I live? (edina.ac.uk)

Window - Jeanne Baker

Where is the window you're looking out of?
What is happening at different times of the day?

Communication and Language

Children tell the story in their own words.

Describe what the astronauts can see through their windows.

Physical Development

Gross motor: act out moving on the empty beach and how you would move. Then act out moving in the busy market.

Fine motor: creating maps and plans, writing labels.

Personal, Social and Emotional Development

Which is your favourite season and why?

How does the boy feel to see his view change?

What is the view like from your window at home?

What do you like best about the story and why?

Literacy

Read the story aloud and re-tell Write some captions and labels for the story.

Use a clipboard to write lists of things spotted through a window.

Expressive Art and Design§

Make a collage to show a seasonal view through the window.

Use small world play and modelling clay or building blocks to create a model of the view you can see.

Mathematics

Use a timer to count things that can be seen through the window e.g. cars, lorries or buses, people passing by, birds, cats or dogs.

Talk about the time of day this happens e.g., morning, lunchtime, afternoon

Understanding the World

Investigate the changes through the window at different times of the day.

Use a compass and find out what direction your window faces. Look at a large scale, aerial image of the school and find your view on it.

Using small carboard picture frames, walk around outside and frame different views, naming what you can see.

Look at streamed images from the Space Station: window on the world.

Useful vocabulary

baby change car environment park day grow Mother nighttime town

Useful Links

International Space Station on UStream | NASA

Fieldwork

Whilst maps, media, story and other models help bring the world alive for young children, they are no substitute for first-hand exploration. Whether playing and exploring around the school or walking through the local area; first-hand experience, in tandem with maps and mapping, helps build spatial cognition.

We can also tell stories about us. Mapping our movements, over time, to and from real and imagined places, recalling favourite places, our own homes, the places we play and live: this is who we are, this is our identity and maps help us tell that story. And by listening to each other's stories, we acknowledge and value the power of diversity and difference. Every story counts.

> The growth of spatial relations is not merely a matter of accumulation or direct teaching about maps or mapping concepts. Children collect a lot of information about their surroundings through their journeys and by exploring their environment.
>
> **Geist (2016) p.54**

In addition to access to the outdoor learning environment that forms part of the usual early years setting, young children should also have opportunities to take part in fieldwork beyond the school gates. Explorations beyond the school, or maybe within the school but beyond the designated outdoor area, will benefit from the use and creation of maps. Julia Tanner (Tanner 2021) details the kind of fieldwork opportunities and experiences that children aged three to five should be having.

Fieldwork experiences in the Early Years Foundation Stage (ages 3–5 years)

EYFS pupils should have plentiful opportunities to freely explore their EYFS setting and outdoor area, and to make visits to places in the immediate vicinity of the school (e.g. local streets, park, shop, church or mosque). They can become familiar with these places through first-hand sensory exploration, observation and talk.

They should have opportunities to ask questions and follow their own interests. These early experiences will provide opportunities for language development as pupils name and describe what they see in discussion with peers and adults.

Young pupils should be provided with opportunities to:

- explore their setting's outdoor area, noticing and naming its features (e.g. play equipment, different areas and surfaces, flower beds)
- experience different weather conditions and their impact on the environment
- examine and discuss natural objects (e.g. leaves, twigs, stones)
- explore the immediate local area through walks and visits to selected sites

During and after their explorations, pupils should have opportunities to record what they observe and notice by:

- using small world play or the role play area to represent a visited place
- making drawings (e.g. of their favourite place in the outdoor area, what they saw at the park)
- taking digital photos (e.g. of a collection of natural objects, buildings in the locality)
- sequencing photos to recall features seen on a visit or short walk
- drawing a map (e.g. of the outdoor area)
- counting (e.g. cars parked at the start/end of the day)
- expressing their feelings about places they visit, saying which features they like/dislike

Tanner (2021) p.16

Here are some ways in which maps, and mapping, can support fieldwork.

Before fieldwork

Children could:

- use aerial imagery from Digimap for Schools to identify the path, school grounds or street that they will walk down as well as the surrounding features. Digimap for schools has a slide function that enables an aerial view to merge into a map view and back again, helping children make connections between the aerial imagery and formal mapping.
- view a 'fly through' of the route, prepared by the teacher using the OS Mapping App. The OS App will work on phones, tablets and computers and a route can be mapped, saved and then viewed in 3D aerial mode on a PC and IWB.
- use Google Earth to gain an oblique and bird's eye perspective of the route to be taken.
- look at Street View on Google Maps or use a programme such Trip Geo (www.tripgeo.com) to make a virtual visit to the route. Children are then involved with risk assessment as they discuss and think about tricky parts of the route and how they can keep themselves safe.

Teachers could:

Use OS mapping to check routes, features and plan risk assessments, measure distances and the location of parking and toilets if needed.

During fieldwork

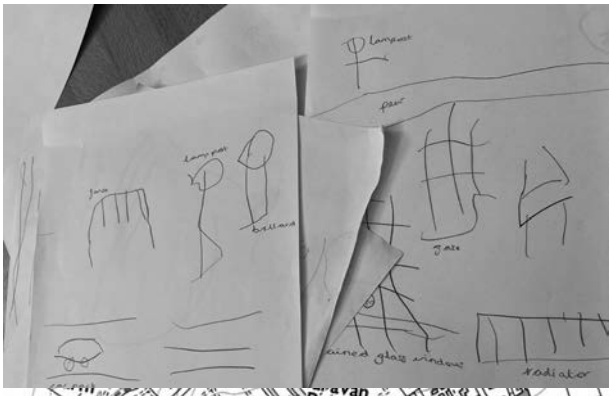
Children could:

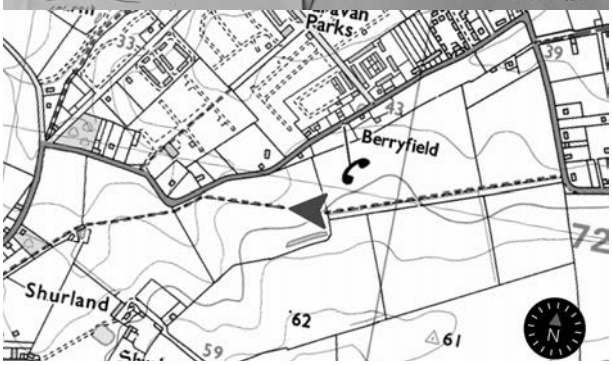
- use large scale maps and aerial images from Digimap for Schools, either printed or accessed directly tablets, to match features they encounter on their route to features on the map.
- follow their geolocated position on the Ordnance Survey Mapping App, using phones or tablets. Adding a pre-programmed into the App, or using a clearly marked road or footpath as the route means that even children aged four and five can 'navigate', with support, by keeping the geolocator on the route line.
- create journey strings by collecting e.g. leaves and other natural objects, Or by taking photographs for a digital version.
- notice seasonal changes and / or gather weather data. The school grounds could be used to fly kites or wind streamers and use compasses with support to check the wind direction.
- carry out a 'Geographical Drift' walk. This involves deciding what to look out for whilst on the walk. It might be an object such as a post box, a colour or patterns of straight lines. Children enjoy choosing something as a class they can search for together and it helps focus attention to what they see. A Drift can also provoke much discussion and surprise, for example the colour yellow might be found on gates, doors, parking lines and flowers. Children can discuss what they spot and where, and whether they managed many observations or just a few. Back in class they can add their findings to a class map.
- use the school grounds for a treasure hunt following clues on a map.
- investigate the best place to hold a Teddy Bear's Picnic in the school grounds.
- decide the location of a nature trail or adventure walk in the school grounds.
- visit the local shops to buy a basket of fruit that they can bring back to school and then find out where it came from.

After fieldwork

Children could

- make 2D and 3D maps using a range of materials.
- upload photographs, emoticons, numbers and / or text to digital maps
- add printed photographs, journey strings and other found objects to hand drawn map
- create models using Lego, building blocks, sand or junk modelling
- use a printed and laminated large scale 1:1250 OS map of the school and surrounds as a base table map for children to build and / or draw on.
- add weather symbols to a class map of the UK.





3 Achieving

Assessment is about noticing what children can do and what they know. It is not about lots of data and evidence.

Grenier (2021) p.43.

Noticing what children know and can do

Helpful assessments identify how well a child is progressing towards the setting's curricular goals and will be used to plan next steps and resourcing. The ELGs specifically for the AoL Understanding the world will guide general 'best fit' ideas about progress in geography related thinking and skills like graphicacy but as noted, the learning is also holistic in the early years and there is overlap between different parts of the curriculum.

In thinking about what a child can do and what they know, it is good to reflect on whether they have had ample opportunities and sufficient teaching support to be able to do what is hoped or expected. For example, if children have not been shown a globe or an image of the world from space, how will they be able to talk about and know there are different surfaces on Earth such as land and water? If children have not had experiences of stories, artefacts and film from other countries and cultures, and opportunities to find these countries on a globe, they will be able to say very little about the wider world. If children have not had opportunities to notice, make and use maps, then they will not have any mapping knowledge or skills to exhibit.

Language is a key part of the EYFS framework and curriculum, and the language to identify and name geographical features and describe relative space is vitally important. Using maps as props for talk is helpful in unlocking what children know and the language they have at their disposal. Sometimes it is easier to notice the children who do need additional support and scaffolding when a task or an opportunity is pitched carefully within the expected reach of everyone.

Planning for the use of maps, should consider expected and desired outcomes, and ensure there is scope for children to achieve. Dialogic interactions and 'noticing' help to inform how this is going and should then shape and modify what is provided next, and how children are engaged. There does not need to be a task and an 'outcome' every time children use maps – much play and experimentation, with and without scaffolding will be necessary to help children manipulate ideas, talk about them and think carefully about what it all means.

Example 1

Mental mapping with children aged four and five

Context: three children from Reception class had been working on a map of the school grounds from memory with a Teaching Assistant (TA) and were now recounting what they had done. The TA asked them to start at the 'classroom door' on one edge of the map and take it in turns to talk.

Child 1: We went out the door

Me: And where did the door go to?

Child 1: Into the school.. (long pause)

Me: Oh so all this is a map of your school grounds?

Child 1: Nods

Me: So what did you map?

Child 2: And ... these are the cones, and that's the field, and that's the forest and that's the class ... (pointing accurately to different parts of the map).

Me: Oh!

Child 3: And that is the playground (points)

Me: And what do you do in the playground?

Child 3: I play

Me: of course you do! And whose idea was it to use all these lovely colours?

Child 3: Me was doing these (points to yellow fluffy bits on the map) for the buppercups [buttercups]

Me: Buttercups! They're just the right kind of bright yellow aren't they?

Child 3: And that is the tree! (Points to a tree on its own) ... that is a Oak tree (names this unaided).

Child 2: And these are the trees at the forest (points to a line of trees at the edge of the map) and .... I done that bench! (points to a drawing of a bench drawn as a plan view and labelled).

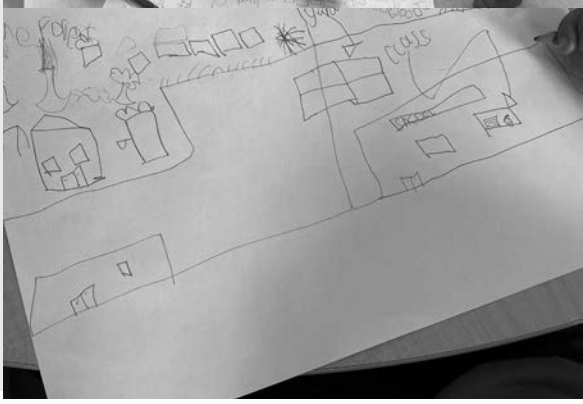
Through further conversation, I notice that the children may have had some support and prompting when making the map with the TA, but they need no support in explaining it to me, pointing out and naming features correctly and explaining colour and shape as representation symbols. Using the grid mapping progression grid guide for the 4 and 5-year-old child, I can see that these children are working easily within the expectations for this age group. There is not a simple or linear progression in the early years and primary so these aspects of understanding will need to be reinforced and applied in different contexts. The TA confirms that the children have done well and that she was surprised at the recall and accuracy of their map. Other groups in the class have also been working at this and show similar spatial accuracy, features naming and recall.

Example 2

Mental mapping with children aged five and six

A mixed Year R and 1 class were asked to draw maps from memory of the school grounds and to do this with a talking partner so that they could collaborate on the map. These children produced more abstract maps but again, were able to achieve some good degree of accuracy and name many features. These children were able to work in a more abstract way and with just one partner as a support.

After drawing their maps the children went out into the field with their teacher and their maps to look around and see how their map compared with the reality. The children were highly motivated and were keen to call out all the features they had remembered to include and where they were. Some children added additional features back in class.



Example 3

Mapping following a planned sequence of activities with Reception

In another school, children drew collaborative maps of the road outside the school, after a visit to the local church. These maps were accurate and showed a good deal of spatial awareness and abstract thinking. The children had first, had some input from their teachers. They found and looked at their school on OS Digimap for Schools together as a class, on the Interactive White Board. The children had time to talk about features in and around the school and what the map showed. They looked at aerial imagery too and matched the school to the building drawn on the map.

Children then had large print outs of the same map to look at and were given time to play in groups, with chalk, drawing their map of the local area on the playground. The children were scaffolded by the teachers and TAs and used the printed map as a reference point. Working together, the children were able to think about how to represent features in a relative way to each other. The Teacher first drew a rectangle to 'contain' the map and then asked the children to find the school on the map and think whereabouts it would go in the rectangle. Children then stood inside the rectangle, representing different features with their body so that they could move around util they were happy.

Once the main bones of the map were in place, children settled down in twos and threes in a social way to talk about what they were drawing. Some of the children knew places in great detail and spent a lot of time putting this in. Most children knew where the chip shop and takeaway was, as well as the church and the school.

Maps matter

As well as producing some great geographical understanding of the local area, and enhancing the AoL: Understanding the World; local exploration, enquiry and representation helps children develop through the core strands of the EYFS: Communication and Language; Physical development, and Personal, Social and Emotional Development. Children feel that they belong to a place when they engage with it deeply and get to know it.

> From the early years, the geography content that children learn can allow greater awareness of people, the environment, the relationships between them and the child's place in this relationship. This sense of belonging is recognised as being significant in children's social and emotional development and in preparing them for more formal learning.
>
> **(Ofsted 2021)**

It's essential to begin geographical knowledge and skills in the early years and tap into, and encourage, children's inherent curiosity. Alan Parkinson reminds us that:

> ... adults aren't the only experts and they're not the only geographers in the classroom either.
>
> **Parkinson (2021)**

Children come to pre-school and school as beginning geographers, with some exciting and important ideas inside their heads: personal geographies that they will add to over time. This knowledge is important and shows how they are noticing the world around them and making sense of it. As educators, our role is to find out how we can build on that, challenge misconceptions, and take children beyond what they already know. In growing that knowledge, we need to use and teach skills such as mapping. Mapping, like most skills, gets better with practice. As children become more adept with their spatial skills, they build confidence and this in turn helps build knowledge and understanding about the world. Maps matter.

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Useful Links

Maps and mapping

Digimap for Schools www.digimapforschools.edina.ac.uk
https://dfsresources.edina.ac.uk/
https://dfsresources.edina.ac.uk/resource/progression-mapping

Ordnance Survey

Ordnance Survey Education | Resources (ordnancesurvey.co.uk) https://www.ordnancesurvey.co.uk/education/teacher-resources
https://www.ordnancesurvey.co.uk/mapzone/
https://www.ordnancesurvey.co.uk/documents/resources/teaching-map-skills-primary.pdf (Colour)
https://www.ordnancesurvey.co.uk/documents/resources/teaching-map-skills-primary-greyscale.pdf (greyscale)

Other mapping sites

Google Maps https://www.google.co.uk/maps/
Bing Maps www.bing.com/maps
ARC GIS www.arcgis.com
Scribble Maps www.scribblemaps.com
Worldmapper https://worldmapper.org/

Subject Associations

The Geographical Association https://www.geography.org.uk/
The Royal Geographical Society (and Institute of British Geographers) RGS (IB) https://www.rgs.org/schools/
OS mapping programme by subscription about £100 per year for primary. World mapping plus OS coverage at different scales of GB. Historical layers 1950s and 1890s, aerial imagery, can annotate and add images, measure lines and areas, add shaded areas etc. Linked to geography for schools.

Other Websites

BBC Bitesize https://www.bbc.co.uk/bitesize/subjects/zcdqxnb
Go Jetters and teaching ideas eg 'continents' https://www.bbc.co.uk/teach/class-clips-video/eyfs-ks1-geography-go-jetters/zj8ypg8
BBC Teach https://www.bbc.co.uk/teach/ks1-geography/zkdxbdm
Meaningful Maps - http://meaningfulmaps.org/
NASA https://www.nasa.gov/
National Association for Environmental Education http://naee.org.uk/
National Geographic https://www.natgeokids.com/uk/
Time for Geography https://timeforgeography.co.uk/