Geography

Based on a conversation with Dr David Preece

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What is it to be a geographer?

Think 'geographer' and you've probably conjured up a sequence of images. Let me guess.

Tweed jackets and/or elbow patches? Map reading? Oxbow lakes? Maybe, if you're from another humanities subject, there's also a gently teasing 'colouring pencils' comment that's come to mind!

Let's take some of those things head on. First, oxbow lakes are much rarer than geography teachers would like you to believe. You know it's just one of those things – it's a nice physical model; it's a really, lovely sequence of events. It's memorable because you can picture it wiggling around in your brain and it's real enough for most people's experience that they accept it, as opposed to something like glaciation or atmospheric science which feels a bit abstract.

To get away from that abstract concept, students can only have their awareness of where they are in the world if they have a comprehensive knowledge of the world. That is why the map reading and oxbow lakes are not always helpful for geography teachers. Any time you put a geography colleague in a quiz team and a map round or a 'capitals' round comes up, they will inevitably be told that they must know the answer to this, because 'they're a geographer'. The suggestion that geography is reductionist – limited to a list of place names or capital cities or recognizing flags or knowing a certain number of words or certain things – is unhelpful, too.

Ultimately, the challenge in defining what it is to be a geographer is that it is as much about a *mindset* and a way of viewing the world as it is about knowing a specific litany of facts or places or recalling specific content. A geographer who goes out into the world, having made the decision not to study it at GCSE or A level, needs to be able to recognise the complexity of the world and appreciate the interconnectedness of different aspects of the world.

In geography, we want our students to be mindful of their positionality within the world. We use concepts of place and space as examples of the 'lenses' through which geographers view the world in order to understand how the world works. Where do they sit compared to other people? How does their experience, their status – in terms of social position, education, economic ranking – and their identity compare with the rest of the world? In the end, what you want a geographer to do is to be able to go out into the world as a thoughtful citizen, understand what's going on and understand how they can choose to make a difference.

But – and it is a big but – that does not mean that everyone goes and joins Extinction Rebellion. Nor should you expect that to mean everyone goes into investment banking or spends their lives building wind turbines. Those are all different components of the way in which the geographical lens sometimes gets played out in terms of the stereotypes. You want Year 9 students to be curious about the world and their place in it and to have the tools to be able to investigate that and come up with their own frame of understanding and their own decision making. That is what geography should be as a discipline and what a Year 9 geographer should be able to do.

A little bit like other creative and humanities subjects (e.g. RE, or art), geography takes inspiration from themes rather than having a linear sequence of learning. You can be a brilliant geographer, even a world-class geographer, without having studied certain things, but you could not be a world-class mathematician if you didn't know how to do algebra. Geography is not necessarily linear; it draws on key themes from different aspects of the discipline. Now at heart, geography is about three big ideas:

1. There's a human world and there are things that humans do to construct that. We can talk about urban themes; we can talk about the construction of space or the construction of meaning; we can talk about a number of big human topics.
2. There's a physical world where people are and there are processes that are taking place within the natural world. We can talk about rivers, atmosphere and weather; we could talk about glaciers, deserts, ice – whatever we wanted to talk about.
3. Finally, there's the thing that makes geography what it is: the synoptic system. How do those worlds and things connect? Why is one thing influenced by the other? Why does that make a difference for that and why are those things so important? How do those two things connect with the balance between human and physical?

At university level, you can take a geography degree and come out having studied mostly human topics and graduate with a BA. You can follow a physical geography degree having specialised in mostly physical geography topics and graduate with a BSc. The key to being a 'geographer', rather than being a geologist or an urban planner, is that you are required to look at the connections between the human and the physical worlds.

No tweed jackets or colouring pencils required.

What are the fundamental concepts or the big ideas that it's important for your pupils to know as they go through key stage 3?

The big idea behind the whole discipline of physical geography is the concept of a physical or a 'geomorphological' process. There is something that starts in this place *like this*, and it ends somewhere else in that place *like that*, and there's a sequence by which the shape of the

land is altered. Really, that underpins most of what we would define as physical geography. It can be brought down to what the process is, what it needs, what conditions make it faster or slower, what happens when you let the process run. That's how we get landforms and that's how we get physical features around the world. That's physical geography in a nutshell.

The second big concept that underpins most of human geography is that there are inequalities that humans try to overcome. Whether that's a difference between an urban lifestyle and a rural lifestyle, or between a high net worth individual or a rural peasant, or between a high-income country or a low-income country, more developed or less developed, the cause of the inequality is the key. Whatever language you want to use, most of the human geography topics and themes are underpinned by unequal access to some set of resources or unequal implications of some process. Some people have got oil; some people haven't. *So what?* Some people have got farming and coal; some people haven't. *So what?* How do people close that gap? And where do they go to close that gap?

The final thing that makes it 'geography' is the other big concept of how stakeholders make decisions, and that fundamentally underpins the way in which we look at management, conflict, and challenge. Why do some people value this resource and other people don't? Why does the differential valuation of this resource lead to management here but not there? Let's give some terribly stereotypical examples if you're a geographer – why is there a groyne at Mappleton but there isn't one further down the coast? Why do they value that village but not another village on the North Yorkshire coast? Why do planners in York build flood defences that mean flood water is merely diverted to flood Selby 14 miles downstream on the River Ouse? This concept of people making decisions based on the values that they hold as stakeholders fundamentally underpins the connectivity of geography.

They call the process 'cost benefit analysis', and it's fundamentally at the heart of the decision-making skill that we teach our students. How do other people make decisions? What decision would you make? Why is your decision the same or different from theirs?

So, those are your three big concepts: geomorphological processes, unequal resources and human stakeholder decision making.

Constructing the key stage 3 geography curriculum

Most people's experience is that key stage 2 colleagues have a significant variability in what and how they approach their geography. So, the fastest way to turn off your students from day one of Year 7 is to do something that half of them think they've done before and think they are brilliant at, and half of them have never heard of. So, if you go in on day one with map skills, a third of your class will say, 'Sir, I know how to do six-figure grid references. Sir, I'm in the scouts. Sir, I know all about that,' and they may, or they may not. You'll get a third of them who've probably heard of that at primary school but aren't quite sure about it; and you'll get a third of them who will ask, 'What's a map?'

That is the fastest way to lose people and, consequently, lose the beauty of the subject. You want them to go home and have conversations with their parents about what they're seeing on the news, or read a news article, or hear their parents say something and be able to respond, 'I can tell you something about that because I was talking about that in geography today.' That's what you want *from day one* because that's how you get people choosing your subject at GCSE and A level and going on to study the subject at degree level. That's how you get thoughtful, enthusiastic geographers.

The first challenge for a geography subject leader is deciding on the balance between the different components of geography. Often, it can be influenced by the make-up of your teaching team. Have you a team of human geography lovers? Or a team of physical geography lovers who have skewed the curriculum in one way or another? Is there a balance? Do you have lots of non-specialists? So, when you are evaluating the geography department's curriculum, as a member of SLT, your first question is probably going to be, 'Who's a human geographer, who's a physical geographer, and where does your disciplinary training come from?'

The balance between human and physical geography established, you then want to decide as a subject leader whether you are actually showing students the rich breadth of the human world? Are you showing them the rich breadth of a number of natural processes in a number of different environments? You want to have a balance between the human world, the physical world, and the connectivity of geographical thinking.

The second challenge is to decide on which locations on the earth you are going to study. Try a quick experiment with your geography

department. Here's a map; annotate all your case studies from key stage 3. Annotate all your case studies from GCSE. Annotate all your case studies from A level. If they're all the same, as a subject leader, ask yourself why. If they're all in Europe, why? If they're all stereotypical rich northern hemisphere or poorer southern hemisphere, why? What are you doing to broaden the student's gaze in terms of places and specific understandings? There's a number of really good articles and writers who have talked about the danger of a single story (e.g. Chimamanda Ngozi Adichie's TED talk, or the Factfulness team). Say to a modern student, 'Bangladesh,' and they will come up almost instantaneously with the word 'flooding'. Why? Well, because it's a good case study for flooding. But if we only ever talk about Bangladesh as a place where floods happen and ignore the rest of what happens in that country, we're doing both the students and all Bangladeshis a disservice.

The third big question is a philosophical debate that you want to have about geography and how it has been constructed. There is a strong case for not requiring linearity. You can teach deserts without having taught rivers first. It helps if we can speak the language of fluids and processes and we've done some geomorphology before, but you don't have to have learnt about rivers to learn about deserts. You also don't have to have learnt about deserts to know about rivers. So, you can teach them separately. There isn't a preferred sequence; there isn't a required logic; there are no rules which say, 'You must study this before that; you must study Africa before you can study Europe.' It doesn't work like that for geographers.

Consequently, as a geographer you decide how you apply a lens to construct your curriculum. A popular approach is to apply the lens of scale, so the Year 7 curriculum will be focused on ideas at the local scale, all about your world, your town, your city, your place, the things you know, and the things you can go out and do. You look at things like weather and climate in the UK, or how you understand your local area, which is where map work comes in. If you want to understand what's in the local area, you've got to be able to codify it somehow. And you do that with maps and a sense of place. That's why geographers need those things.

Your Year 8 model might scale up to the regional scale, countries or continents, and you start seeing people look at regional scale curriculum

models. We're going to study Africa from several perspectives. We're going to study Antarctica from several perspectives. We're going to study South America from several perspectives. We're going to study 'Brazil', and you'll see them pull apart a specific place at a regional scale, and they'll pull on the economic geography or they'll pull on the environmental geography or they'll pull on the population challenges and so on. Then ideally in that model, by the end of Year 9, you've scaled up to global scholarship, and you start looking at things that affect everyone, like climate change or geopolitics or development or inequality. You start looking at 'the world' rather than 'your town'.

So, the question to ask as a senior leader looking at a geography curriculum is, 'How often do your topics repeat from key stages 3, 4 and 5? Do you teach coasts at key stage 3 and at key stage 4 and at key stage 5?' If so, why? Of course, there's an argument that repetition breeds confidence. Repetition breeds greater student engagement because they feel like they're already part way there in their understanding. But, on the other hand, there's an argument that says there's nothing more dangerous than students getting to A level and thinking 'I've done this before' because they covered it once in Year 8.

There are too many topics out there, too many really interesting things and challenging disciplines, to teach rivers or coasts three times across key stages 3, 4 and 5. You could, but do you want to? Do your students want to? Or do they want to learn something new, something challenging that they've never encountered before?

Geography is not a linear set of building blocks. There is no empirical evidence to tell you that a non-linear, non-repetitive approach is better or worse than another approach, but experience tells us that students engage more with fresh topics than they do by repeating the same old, same old. The key thing here is the justification for the curricular decisions you take. Of course, the caveat on all of this is that you have to have taught a topic sufficiently well that it's gone into their learning DNA. You want to make whatever you choose to teach key stage 3 geography students is sufficiently broad and as rich as possible but without being tokenistic and just a veneer of learning. This has to be done by building a 'sense of place' – a deep and meaningful understanding about the multiple different components that go into making a particular location unique in physical and human factors.

To teach about *place*, you need three things:

1. World-class storytelling, narrative, documentary showing amazing, immersive worlds; or
2. Really good ICT facilities to access GIS geographic information systems – things like Google Earth, things to build a way that students can inquire and interrogate that world; or
3. Fieldwork.

For geographers, fieldwork is how you do geography. It's not a luxury, it's not a case of how we'd like to go and see this because that will consolidate our understanding; it's how we understand the world in the first place. As part of the A level course, for the non-examined assessment, the NEA, students must complete their own independent geographical investigation. Geographers have to go out and measure and investigate the world and gain first-hand knowledge of it.

School leaders need to know the difference between fieldwork and field trips. Field trips are holidays with geographers: 'We'd like to take you to Iceland because it's cool'; 'We'd like to take you to a volcano because it's amazing.' Students will understand more about the world, but it's a holiday with a geography teacher.

Field*work* is *fundamental academic work* – we must do this as part of our discipline. If you want everyone to do fieldwork, you can't take them to Iceland. You have to make it your local high street or the local river or something that is low cost, accessible to everyone, irrespective of where they come from and why, because you need them to do it. You can't have people excluded from that geography.

Looking at your curriculum in Year 7, you're going to want to do some things with your Year 7 geographers that are about human geography. You are going to want to do some things that are about physical geography, and you're going to want to do some that are about the connections between those things. That's your building blocks for your KS3 geography curriculum.

If you are bold, or inspired by Stephen Covey, you can begin Year 7 with the end (neo-liberal globalisation and inequalities) in mind. You can start by asking, 'How are we connected all around the world? Why are we connected all around the world? Why does it matter? What's the role of us, in this classroom, within this world? And, finally, where's your place in all of this?' And then come back to the same place in Year 9 with a unit

called 'Development and Inequality' which is based on the work of the Rosling Foundation, and their notion of factfulness to challenge all the usual misconceptions.

I deliberately start that final Year 9 unit by saying, 'Look, for some of you, this is the last geography you're ever going to do. We're going to make it count.' We don't want geographers going out into the world believing that there is a Third World – we stopped using that language in 1986 with the Brundtland report, and yet you will still see headlines talking about 'third-world conditions'. Why are we still using the term 'third world'? Stop it! There isn't a second world – with the fall of the Soviet Union, the second world disappeared. So, the story map is there for them from the beginning: you want them to answer the question, 'Where do we fit in the world?' both at the beginning of key stage 3 and at the end.

What does success look like at the end of Year 9, if you have got the geography curriculum right?

Ultimately, to know if you have been successful in educating them to think like a geographer, to find out whether they actually know where they fit in the world, you need to look ten years into the future and see what kind of citizens and what kind of human beings they have become. And as we all know, that is largely impossible. You are educating geographers to live as intelligent, well-informed, responsible members of society who have a generosity of spirit towards all the other inhabitants of this planet.

We are training students to think like adults, and so being able to engage in the conversation at home with adults is hugely empowering for young people. They can join in the grown-up conversation because they know something and can engage as equals; that is part of the development of a young person into a young adult. 'I'm part of this conversation, I'm part of this discipline, I'm part of this world.'

And academic geography is never certain about what it thinks – even with physical geography, which you would think abounds with pretty well-established truths. Around the turn of the 20th century, Albert Einstein was writing his theory of relativity and defining quantum mechanics. It was not until about 1963 that we came up with the theory of what we now call 'plate tectonics'. We've been taught in schools how the plates work, but all of it is caveated by a massive 'We think'. It's only 60 years old as

a theory, and when you start discussing that with students and they ask, 'Why does this happen?', you have to reply, 'We don't know; we're still working on it. Let's ask some scientists; let's reach out on Twitter and talk to someone who's doing this right now; let's see if we can find a better answer.' That's inducting them into the rich scientific disciplinary history of geography as well. We're still figuring a lot of this geographical content out.

Geography: background

Eratosthenes was a Greek polymath and, as the chief librarian at the Great Library of Alexandria, was the first western scholar to work on and identify the field of geography. Working in the second century BCE, he was the first to calculate the circumference of the earth.

In the 19th century, school geography served to tell Britain's imperial subjects about 'their' place in the world. Within England and Wales, the subject has undergone several important changes since its development as a school and university subject during the 19th century. The 1960s were an especially important period of major change, with the introduction of scientific, conceptual elements to the field. Those changes were accompanied by several curriculum projects of national scope that brought the new geography to the classroom. In the 1980s, geography was recognized as a foundation subject, giving it renewed importance within the curriculum of the secondary schools. Within the general framework of education, geography provides a unique perspective. As a discipline, it infuses a global dimension at the macro level and a sense of place at the micro level. That perspective is important since it bridges general knowledge of the discipline to social and environmental issues at various scales.

It is worth quoting the purpose of geography from the national curriculum programme of study:

> a high-quality geography education should inspire in pupils a curiosity and fascination about the world and its people that will remain with them for the rest of their lives. Teaching should equip pupils with knowledge about diverse places, people, resources, and natural and human environments, together with a deep understanding of the Earth's key

> physical and human processes. As pupils progress, their growing knowledge about the world should help them to deepen their understanding of the interaction between physical and human processes, and of the formation and use of landscapes and environments. Geographical knowledge, understanding and skills provide the framework and approaches that explain how the Earth's features at different scales are shaped, interconnected and change over time.[1]

The national curriculum for geography aims to ensure that all pupils:

> develop contextual knowledge of the location of globally significant places – both terrestrial and marine – including their defining physical and human characteristics and how these provide a geographical context for understanding the actions of processes; understand the processes that give rise to key physical and human geographical features of the world, how these are interdependent and how they bring about spatial variation and change over time; are competent in the geographical skills needed to: collect, analyse and communicate with a range of data gathered through experiences of fieldwork that deepen their understanding of geographical processes; interpret a range of sources of geographical information, including maps, diagrams, globes, aerial photographs and Geographical Information Systems (GIS); communicate geographical information in a variety of ways, including through maps, numerical and quantitative skills and writing at length.

Once the importance statements have been revisited, it is helpful for subject leaders and coordinators to discuss and agree with colleagues the reason why their subject, in this case geography, is important for the pupils in their school. One way of doing this is to draw on a quote, in this case from Michael Palin: 'You can travel the seas, poles and deserts and see nothing. To really understand the world, you need to get under the

1 www.bit.ly/3AFo2pU

skin of the people and places. In other words, learn about geography. I can't imagine a subject more relevant in schools. We'd all be lost without it.' This kind of prompt allows us to formulate our way of stating the importance of the subject. We might agree or disagree with such a statement and, in doing so, come to a form of words which expresses our view of the importance of this subject, in this school. This moves us away from the territory of 'We teach this subject because of the SATs or GCSEs.' While the external tests and exams are important, they are not the totality of the subject.

Subject associations are important because at the heart of their work is curriculum thinking, development and resources. The subject association for geography is the Geographical Association,[2] and any member of staff with responsibility for a subject should be a member of the relevant subject association, and this should be paid for by the school. The Royal Geographical Society[3] is the learned society for geography, which connects across all spheres of professional geography, but has some excellent resources for education, too. Both offer excellent opportunities for Schools Members, including world-class lectures, conferences, resources and heavily discounted CPD and training opportunities.

Professional communities

Twitter subject communities are important for the development of subject knowledge because it is here that there are lively debates about what to teach, how to teach and the kinds of resources that are helpful. For geography, it is worth following the Geographical Association on Twitter[4] and the hashtags #geography, #geographyteacher and #geographyteachers.

LINKS

The Royal Geographical Society (with IBG) is the learned society for professional geographers in the United Kingdom. The key bridge between the academic, professional and practitioner worlds, the RGS offers membership for institutions.

2 www.geography.org.uk
3 www.rgs.org
4 www.twitter.com/the_ga

Geographical Association – www.geography.org.uk
MetLink – a resource and teaching site from the Royal Meteorological Society – www.metlink.org
Google Maps – www.bit.ly/3yJGxZF
Earth.NullSchool.Net – a live data site for weather and climate – https://earth.nullschool.net
Ordnance Survey Map Skills – www.bit.ly/2VVvApu
Geographical Information Systems GIS – www.bit.ly/3iHLRXK
World Mapper – www.worldmapper.org
DataShine – UK census data mapped out – www.datashine.org.uk
UK Environment Agency – great resource for lots of physical geography and management, together with lots of live data – www.bit.ly/3yK3mMV
BBC Geography – www.bbc.in/2UdRELh
Time for Geography – www.timeforgeography.co.uk
National Geographic – www.nationalgeographic.com
BBC Radio 4 Great Lives, contains many geographers and explorers – www.bit.ly/37EkWpx
Guardian Eye Witness – www.bit.ly/3AIAo0a
Royal Geographical Society with IBG – www.rgs.org
GIS – www.bit.ly/3jLyOnC

An overview of a key stage 3 geography curriculum

	Year 7	Year 8	Year 9
Autumn	Globalisation • Understanding how and where people are connected around the world Mapping my world: • Map skills including atlas, UK and grid reference skills	Geomorphology of the UK • Covers Geological Time, the Rock Cycle, and the processes of rivers and glaciers, to assess the relative contribution of each to the landscape of the UK	Population & Migration • Exploring mechanics and changes of population (census data, pyramids, transition models) and management of population • Migration focuses on voluntary and refugee examples, to show how & why people move
Spring	Weather & Climate • Observations, measurements, climate graphs, rainfall types and the UK patterns Long Way Down • How does the world change along a single line of longitude? Following it down to explore difference	Global Challenges • Looks at the science, evidence and potential solutions for the climate crisis, and how this can be explored in local contexts (e.g. the debate over Heathrow Airport expansion)	Violent Earth • Introduction to Plate Tectonics and the theory of movement, including assessing evidence of tectonic theory. Exploration of the Hazard Management cycle, and application to earthquake management (Japan/Haiti)
Summer	What is my local area? • Fieldwork and investigative skills, including data collection, primary, secondary and EQS What does my local area need? • Introduction to decision making skills and approaches	Threatened Planet • Looks at the distribution of global ecosystems, and the global and local threats that are posed. Explores case studies of specific environments and their threats/ management	Development & Inequality • Understanding what 'development' means, and how we measure it with reference to Sustainable Development Goals. Identifying models and approaches to development, causes and inequalities. Inspired by Rosling's Factfulness

Three documents for your senior leader line manager to read about geography

1. Although it is not without controversy, the Ofsted Research Series on geography, https://www.gov.uk/government/publications/research-review-series-geography, is a well constructed review of the key themes. There are plenty of debates about what they might have left out (e.g. decolonialising the curriculum, the climate emergency, or the range of case examples etc.), but it provides a good talking point to begin a detailed conversation with your geography department.
2. As a readable and fairly accessible primer for lots of thoughtful conversations about how geography can be done, and to understand how it got that way, Mark Enser's book *Powerful Geography* (2021) is an excellent read for leaders. It crystallises a lot of the *Debates in Geography Education* by Jones and Lambert (2013) in a more senior leader-friendly format.
3. The Geographical Association have published two books: Jones (2017) *Handbook of Secondary Geography*; and Willy (2019) *Leading Primary Geography*. These are in-depth readers, but they cover everything for your geography department at whatever level.

Five questions for your senior leader line manager to ask you about geography

1. What's the aim of your geography education? What do you want your students to be?
2. How have you constructed your curriculum progression? Talk me through your model and thinking.
3. Where do you study, and why?
4. What fieldwork do you need to be able to do, and how can the school best support this?
5. What resources do you need to support the best understanding of place, and how can the school best support this?