MYP *by Concept*
4&5

Geography

Louise Harrison
Thierry Torres

DYNAMIC LEARNING
HODDER EDUCATION

DYNAMIC LEARNING

Dynamic Learning is an online subscription solution that supports teachers and students with quality content and unique tools. Dynamic Learning includes Teaching and Learning Resources, Whiteboard eTextbooks and Student eTextbooks.

Geography for the IB MYP 4&5 **Teaching and Learning Resources** help teachers create outstanding lessons and encourage students to develop, progress and achieve. Using the Lesson Builder tool teachers can:

- create, organise and edit lessons
- share plans, lessons and resources with colleagues
- assign lessons and resources to students
- export lessons and pre-tagged content to a VLE at the click of a button.

Teachers can also combine their own trusted resources alongside those from ***Geography for the IB MYP 4&5*** which has a whole host of informative, exciting and interactive resources including:

- Unit planners for every chapter, including teaching notes and guidance for extension and enrichment of learning
- PowerPoint presentations to introduce the topics
- Student materials and worksheets
- Interactive quizzes to test grammar and vocabulary understanding.

Geography for the IB MYP 4&5 is also available as a **Whiteboard eTextbook** which is ideal for front-of-class teaching and lesson planning.

Whiteboard eTextbooks are zoomable, flickable, searchable pages of traditional printed textbooks that enable teachers to:

- display pages to their class
- export sections of the book to their VLE
- add notes and highlight areas
- bookmark key pages.

Find out more and sign up for free trials – visit: **www.hoddereducation.com/dynamiclearning**

MYP *by Concept*
4&5

IN COOPERATION WITH ib

Geography

MYP by Concept
4&5

Geography

Louise Harrison
Thierry Torres
Series editor: Paul Morris

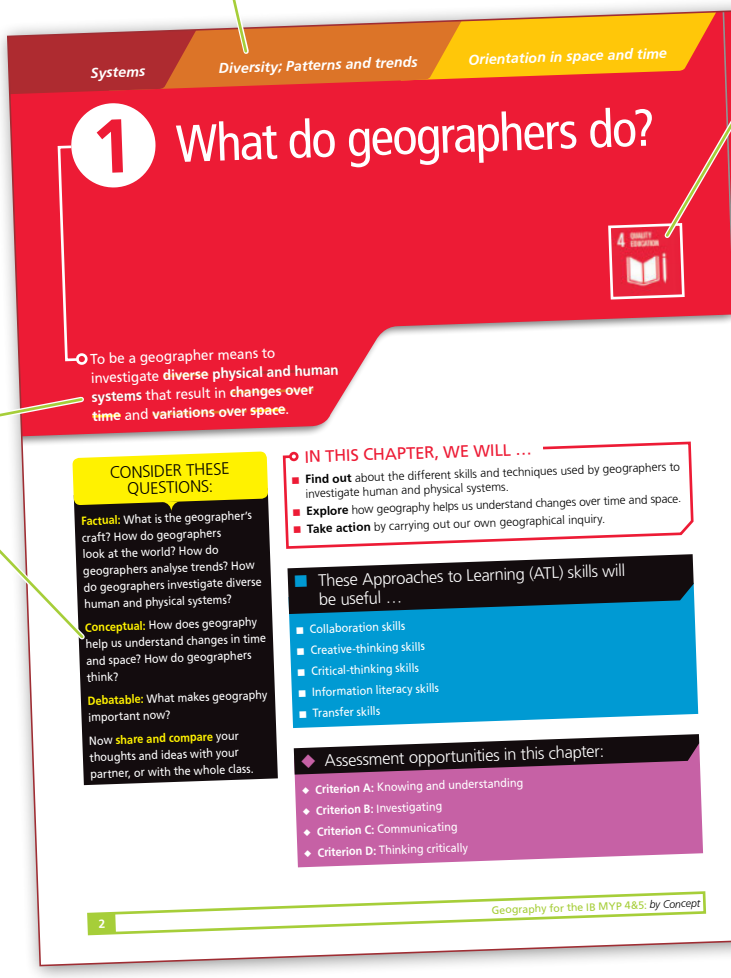
DYNAMIC LEARNING
HODDER EDUCATION
AN HACHETTE UK COMPANY

Contents

How to use this book

Welcome to Hodder Education's *MYP by Concept* series! Each chapter is designed to lead you through an *inquiry* into the concepts of geography, and how they interact in real-life global contexts.

Each chapter is framed with a *Key concept* and a *Related concept* and is set in a *Global context*.



The *Statement of Inquiry* provides the framework for this inquiry, and the *Inquiry questions* then lead us through the exploration as they are developed through each chapter.

KEY WORDS

Key words are included to give you access to vocabulary for the topic. **Glossary terms** are highlighted and, where applicable, **search terms** are given to encourage independent learning and research skills.

As you explore, activities suggest ways to learn through *action*.

ATL

Activities are designed to develop your *Approaches to Learning* (ATL) skills.

Key *Approaches to Learning* skills for MYP Geography are highlighted whenever we encounter them.

Assessment opportunities in this chapter

Some activities are *formative* as they allow you to practise certain parts of the MYP Geography *Assessment Objectives*. Other activities can be used by you or your teachers to assess your achievement *summatively* against all parts of an assessment objective.

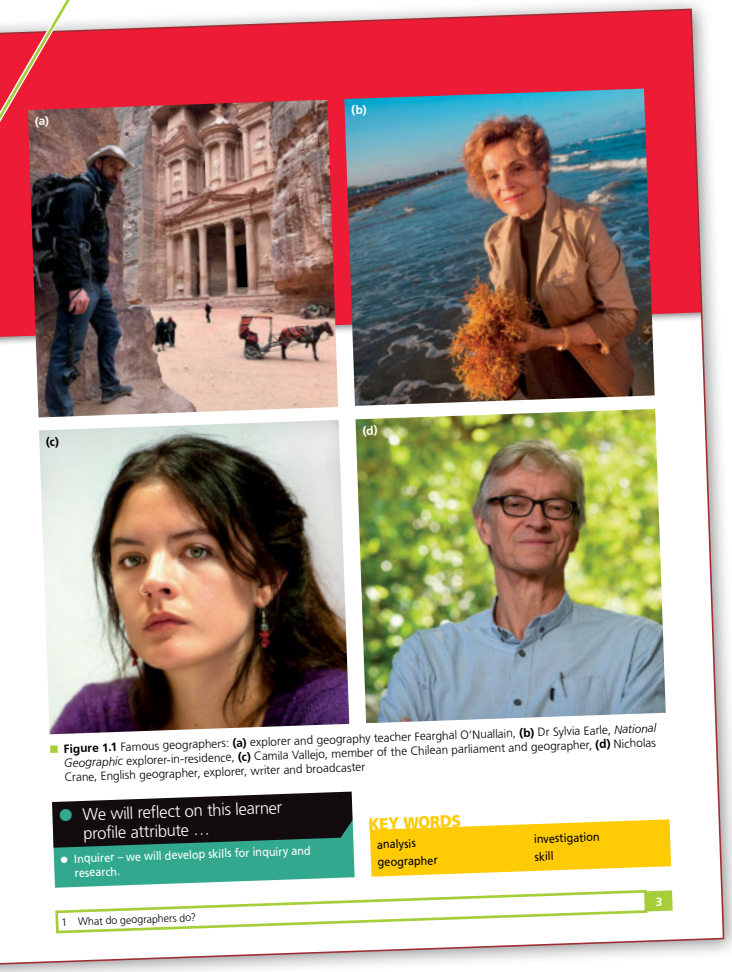
Hint

In some of the activities, we provide hints to help you work on the assignment. This also introduces you to the Hint feature in the on-screen assessment.

EXTENSION

Extension activities allow you to explore a topic further.

The United Nations Sustainable Development Goals (UNSDG) logos show which goal or goals relate to each chapter.



Take action

! While the book provides opportunities for action and plenty of content to enrich the conceptual relationships, you must be an active part of this process. Guidance is given to help you with your own research, including how to carry out research, guidance on forming your own research question, as well as linking and developing your study of geography to the global issues in our twenty-first-century world.

You are prompted to consider your conceptual understanding in a variety of activities throughout each chapter.

We have incorporated Visible Thinking – ideas, framework, protocol and thinking routines – from Project Zero at the Harvard Graduate School of Education into many of our activities.

Links to

Like any other subject, geography is just one part of our bigger picture of the world. Links to other subjects are discussed.

We will reflect on this learner profile attribute …

- Each chapter has an *IB learner profile* attribute as its theme, and you are encouraged to reflect on these too.

Finally, at the end of the chapter, you are asked to reflect back on what you have learnt with our *Reflection table*, maybe to think of new questions brought to light by your learning.

Use this table to evaluate and reflect on your own learning in this chapter					
Questions we asked	Answers we found	Any further questions now?			
Factual					
Conceptual					
Debatable					
Approaches to learning you used in this chapter	Description – what new skills did you learn?	How well did you master the skills?			
		Novice	Learner	Practitioner	Expert
Learner profile attribute(s)	Reflect on the importance of being knowledgeable for your learning in this chapter.				

1 What do geographers do?

To be a geographer means to investigate **diverse** **physical and human systems** that result in **changes over time** and **variations over space**.

CONSIDER THESE QUESTIONS:

Factual: What is the geographer's craft? How do geographers look at the world? How do geographers analyse trends? How do geographers investigate diverse human and physical systems?

Conceptual: How does geography help us understand changes in time and space? How do geographers think?

Debatable: What makes geography important now?

Now **share and compare** your thoughts and ideas with your partner, or with the whole class.

IN THIS CHAPTER, WE WILL …

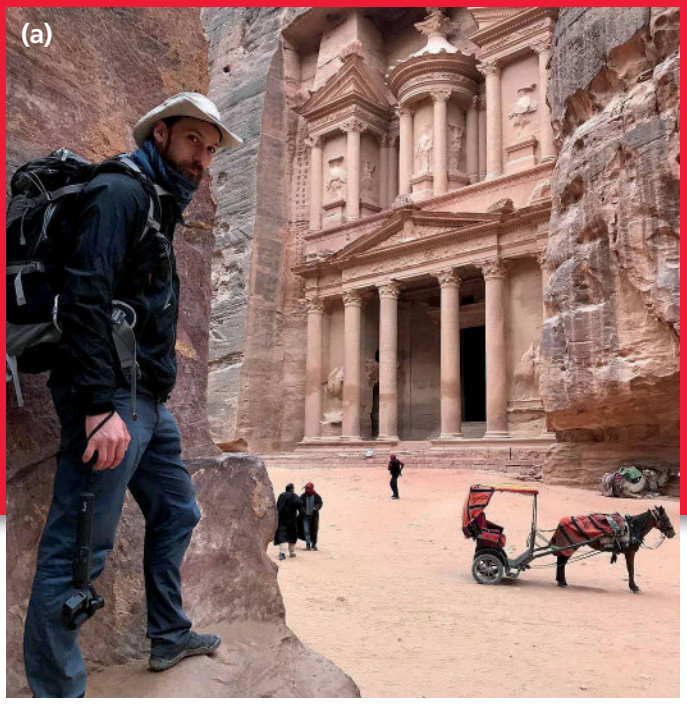
- **Find out** about the different skills and techniques used by geographers to investigate human and physical systems.
- **Explore** how geography helps us understand changes over time and space.
- **Take action** by carrying out our own geographical inquiry.

These Approaches to Learning (ATL) skills will be useful …

- Collaboration skills
- Creative-thinking skills
- Critical-thinking skills
- Information literacy skills
- Transfer skills

Assessment opportunities in this chapter:

- **Criterion A:** Knowing and understanding
- **Criterion B:** Investigating
- **Criterion C:** Communicating
- **Criterion D:** Thinking critically



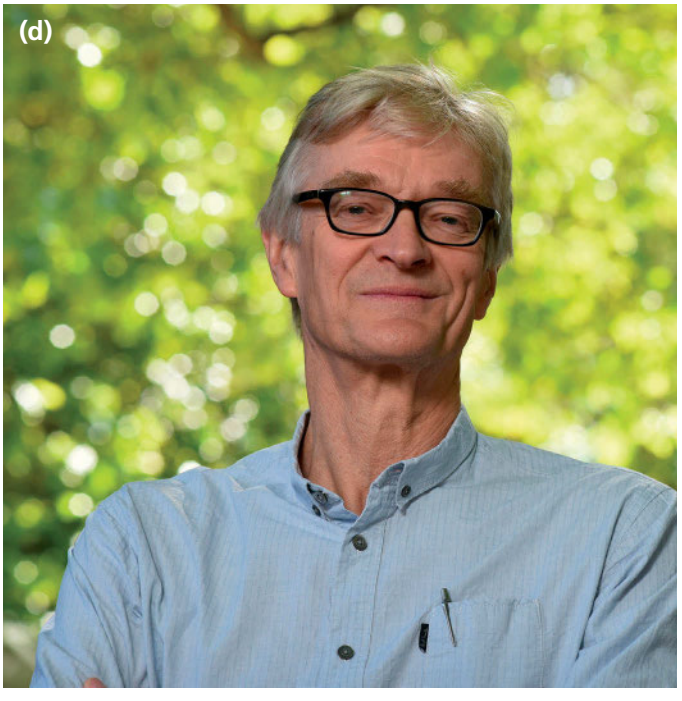


Figure 1.1 Famous geographers: **(a)** explorer and geography teacher Fearghal O'Nuallain, **(b)** Dr Sylvia Earle, *National Geographic* explorer-in-residence, **(c)** Camila Vallejo, member of the Chilean parliament and geographer, **(d)** Nicholas Crane, English geographer, explorer, writer and broadcaster

We will reflect on this learner profile attribute …

- Inquirer – we will develop skills for inquiry and research.

KEY WORDS

analysis
geographer
investigation
skill

What makes geography important now?

Geographers explore the natural world and investigate the interactions between people, places and the planet. They study people (human geography) and the environment (physical geography), drawing on a range of disciplines from the social sciences and the natural sciences. Geographers add to the understanding of the Earth's social and environmental issues by examining the interconnections of different places and spaces.

Figure 1.2 Geographers explore the social and environmental context of places

WHAT MAKES YOU SAY THAT?

What is going on in the photo in Figure 1.2 and what do you think it might show about the purpose of studying geography? What makes you say that?

ACTIVITY: Significant geographers

ATL

- Information literacy skills: Access information to be informed and inform others

1. **Individually, research and identify a significant geographer from a time period of your choice. Search online using the term: famous geographers.**
   Investigate what their main area of research is or was and what they discovered. What was their legacy? What have they helped us to discover about our world?
2. **Present your findings in one of the following ways:**
   - **An obituary for an historical geographer**
   - **A pen portrait of a contemporary geographer**
   - **An online encyclopaedia entry**
3. **Reflect on your research. As a class or in pairs, discuss and compare the lives of the geographers you researched. What did they have in common? What made them geographers?**
4. **Summarize your discussion around some of the IB Learner Profile attributes such as: How are geographers inquirers, balanced, risk-takers, communicators and so on?**

Assessment opportunities

- This activity can be assessed using Criterion A: Knowing and understanding.

ACTIVITY: A geographer's toolkit

ATL

- Information literacy skills: Make connections between various sources of information

Look at the photos that show geographers and geography students doing typical geographical tasks.

Figure 1.3 Geographers doing typical geographical tasks

1 **List** the skills needed to complete all the tasks shown in Figure 1.3.
2 **Draw** a copy of the geographer outline in Figure 1.4. **Annotate** your outline with the skills listed in Question 1. You will need to pay particular attention to the skills that require the use of our five senses: touch, taste, sound, smell, and sight. You may also want to add annotations that refer to the specific kit needed to carry out certain tasks.

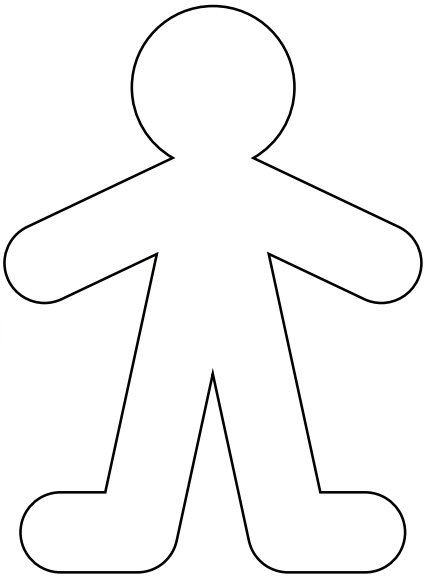


Figure 1.4 Geographer outline

3 **In groups, discuss the similarities and differences between your annotated outlines and try to agree on a list of the skills needed by geographers.**
4 **Discuss as a class and determine a final list. You could then make a final version of your annotated geographer outline for displaying or create a document summarizing essential geographical skills.**

Assessment opportunities

- This activity can be assessed using Criterion A: Knowing and understanding.

What is the geographer's craft?

Figure 1.5 Direct observations

Figure 1.6 The ruined interior of a bank after a volcanic eruption in Plymouth, Montserrat

HOW DO GEOGRAPHERS LOOK AT THE WORLD?

How would you describe the world around you? Most people can see but not many people can observe. Show a person a photograph and they might describe some elements of it: the sky is blue, or the vegetation is green. Show a skilled geographer the same image and they will give you a detailed description of what can be found in the picture and the reasons for it. Geographers are always observing and asking the where, what, who, when and why about places they see.

DISCUSS

In pairs, **discuss** what you think makes geographers well equipped to analyse a photo like that in Figure 1.6. Consider how geographers would use their understanding of physical or human geography to **interpret** the photograph.

ACTIVITY: Virtual field sketching

ATL

- Creative-thinking skills: Create original works and ideas

What is your goal?

Your goal is to **interpret** a landscape, whether physical or human, by examining the inter-related elements of an environment to decide which ones are more important than others.

How will you achieve this?

1 **Working in pairs, use Google Street View to find a suitable location of interest for you and your partner. This could be a place you are studying in your geography class or it could be a location where you have been or you would like to visit.**

Hint

Make sure you keep the view at street level as you want to **draw** your sketch as if you were standing there.

2 **Before you start, individually reflect on the purpose and value of the sketch you are about to draw. Try not to share your ideas at this point. This will guide you on the most relevant aspects to include in your sketch. Depending on the theme you are investigating, you may want to accentuate some features more than others.**

3 **Draw a frame inside which you will draw your sketch. It should fill at least one-third of a page. Start your sketch by drawing features that are in the background, the furthest away from the camera viewpoint, then move on to the features in the middle ground and finally things that are in the foreground. You need to include specific, small-scale features as well as the larger, more general features (see Figure 1.7b for an example).**

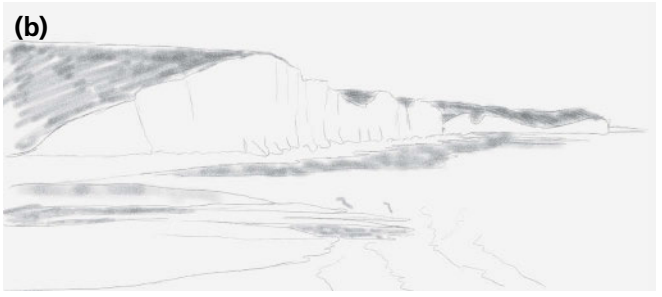


Figure 1.7 (a) The Seven Sisters chalk cliffs in East Sussex, UK and **(b)** a sketch of the same chalk cliff photograph

4 **Add annotations on the main features of your sketch, keeping in mind the purpose and value of your drawing.**

5 **Now, swap your sketch with your partner. Compare and contrast the same scene. Reflect on the following points:**
   - **To what extent have you drawn similar features and used similar annotations?**
   - **How can you explain the similarities and differences?**

6 **Discuss your findings as a class.**

Assessment opportunities

- This activity can be assessed using Criterion D: Thinking critically.

Photographic interpretation

Interpreting photographs is an important skill for geographers. It helps to give a sense of place and sets pictures in given geographical contexts instead of using pictures as simple illustrations showing what a space looks like. Finding out what a place is like connects the geography to human existence, experiences and interactions. The most effective technique to **interpret** a photograph is to use the five Ws:

- Who: Who is in the photograph?
- What: What is shown in the photograph?
- Where: Where is the photograph of?
- When: When was the photograph taken (what is the timescale or the time period)?
- Why: Why does the place look like this?

The technique can be fine-tuned by asking which questions are more significant than others and why.

THINK–PAIR–SHARE

Think: How would you **define** a map?

Think about the definition on your own and then share your thoughts with a partner.

Use the Oxford online dictionary to **explore** the various definitions of 'map':
https://en.oxforddictionaries.com/

Now share your conclusions as a class.

MAPS: THE SCIENCE OF PLACE AND SPACE

Maps are the primary tools of geographers. Essential information about time, place and space can be deduced from maps. Maps allow geographers to examine **spatial** relations which consist of the links that people and places have to one another because of their location. The aim of map analysis is to identify **patterns** and processes, detect anomalies, test hypotheses and theories, and generate located data and knowledge. However, maps – whether printed or to some extent digital – are only a snapshot of certain areas at a certain time. Most printed maps are out of date when they are published and not all digital maps are updated uniformly. A careful evaluation of map sources is essential before attempting any map interpretation and analysis. In the following activity, you will have the opportunity to evaluate a wide range of map sources.

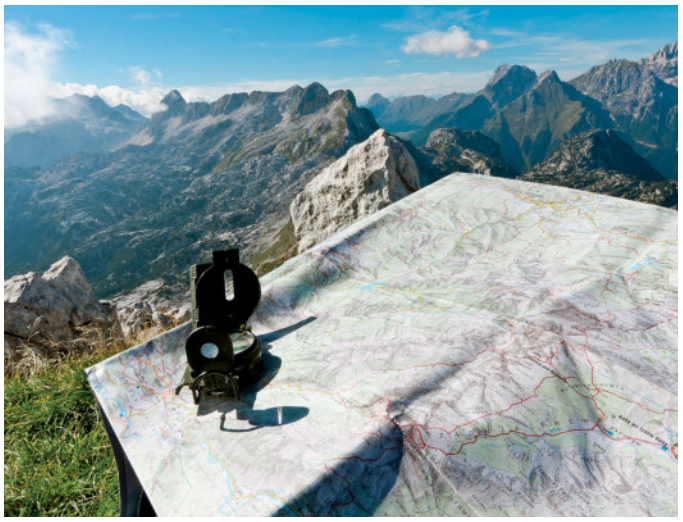


Figure 1.8 A topographic map

ACTIVITY: How valuable are maps?

ATL

- Information literacy skills: Make connections between various sources of information
- Critical-thinking skills: Analyse complex concepts and projects into their constituent parts and synthesize them to create new understanding

What is your goal?

Your goal is to use different **base maps** from Google Maps to **explore** the value of using maps by answering a series of inquiry questions.

How will you achieve this?

Working individually or in pairs, you will need:

- **a device with an internet connection**
- **a web browser**
- **optional: a 'traditional' printed map**
- **a copy of the inquiry table template (Table 1.1) for recording your findings.**

Task 1: How do maps show wilderness?

1. **Explore how 'wild' the landscape of your place is (this could be your school or home) compared to La Grave, a small village in the Hautes-Alpes area in France.**
2. **Search online for the definition of wilderness. Write your own definition in the inquiry table.**
3. **Go to: www.google.com/maps/**
4. **Click on the three horizontal bars on the top left menu next to the search field. Select the third base map down called *Terrain*.**
5. **Now search for La Grave on Google Maps and zoom in by clicking on the '+' on the bottom right so the scale bar is at 1 km.**
6. **Examine the level of wilderness on the map by observing features such as the:**
   - **number of roads**
   - **number of settlements**
   - **distance between settlements (for this you need to right click on the mouse and select the *Measure distance* tool)**
   - **relative amount of vegetation (for this you could estimate the percentage of the map with vegetation cover)**
   - **steepness of the land (for this you could count the number of contour lines in one-quarter or one-eighth of the map).**

Inquiry question (IQ)	Definitions (MYP Geography key concept or key term)	Observations	Map evidence	Evaluation (How useful is the map in answering the IQ?)
How do maps show wilderness?				
How do maps show the main functions of a settlement?				
Your own inquiry question				

Table 1.1 Inquiry table template

7 **Record your findings in the table template.**
8 **Repeat steps 5 and 6 for your home location.**
9 **Optional: you could investigate another location using printed maps if you have them. Search online for map skills to learn more about how to use printed maps.**
10 **Make sure you identify the map evidence and that you evaluate the usefulness of the map.**

Task 2: How do maps show the main functions of a settlement?

1 **Explore how the settlement functions of your place (this could be your school or home) compared to those of La Grave.**
2 **Search online for the definition of settlement function. Write your own definition in the inquiry table.**
3 **Go to: www.google.com/maps/**
4 **Click on the three horizontal bars on the top left menu next to the search field. Select the first base map down called *Map*. You may find switching to the *Satellite* base map useful.**
5 **Examine the main function of the area on the map using the flow chart below (Figure 1.9)**
6 **Record your finding in the table template.**
7 **Repeat steps 4 and 5 for your home location.**
8 **Make sure you identify the map evidence and that you evaluate the usefulness of the map.**

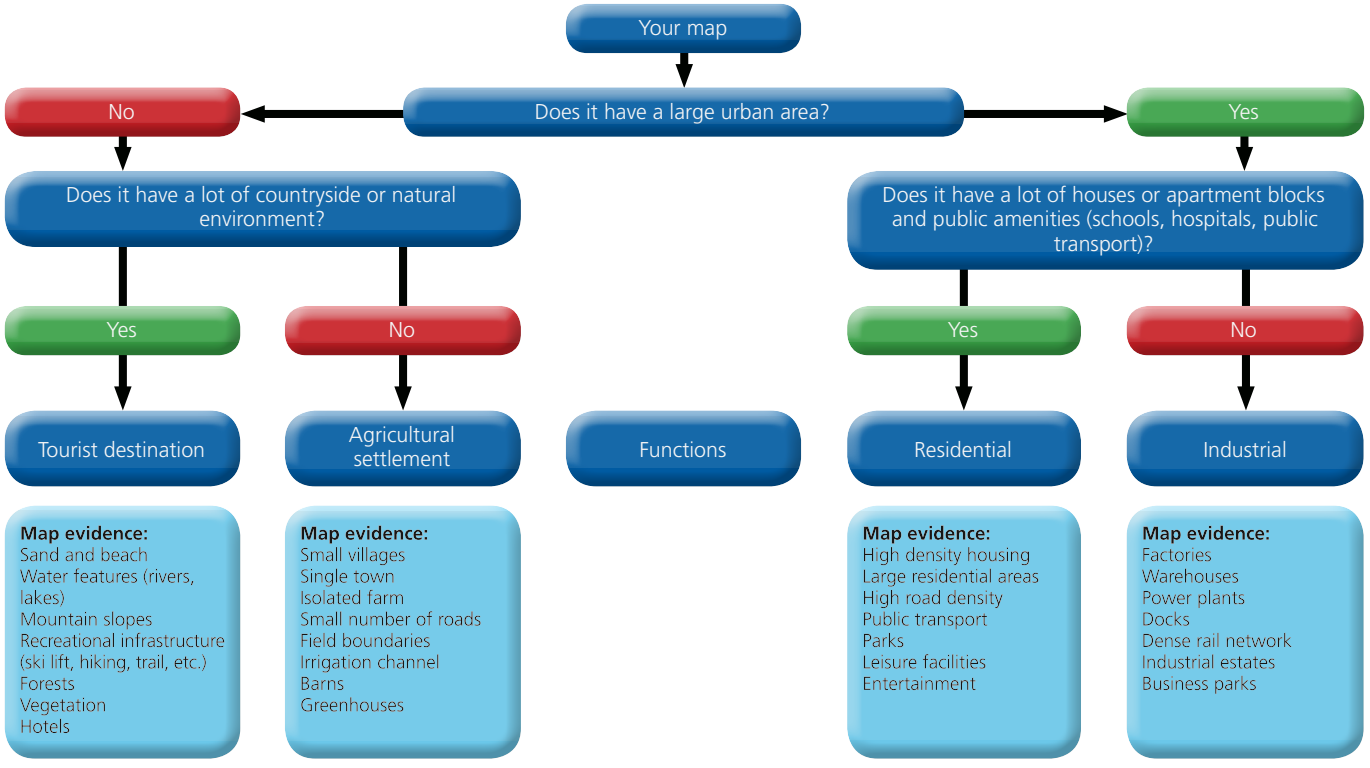


Figure 1.9 Settlement functions flow chart

Task 3

Formulate your own inquiry question to **investigate** your home location and another location of your choice. Use a range of map skills to help you **find** map evidence for answering your question. Make sure you record your findings in the table.

In a conclusion, **summarize** your findings for each activity. **State** whether you were able to answer the three inquiry questions. **Discuss** your findings with a partner.

Evaluate your investigation. Could you have improved your use of map skills or map evidence? **State** improvements you could have made.

Assessment opportunities

- This activity can be assessed using Criterion D: Thinking critically.

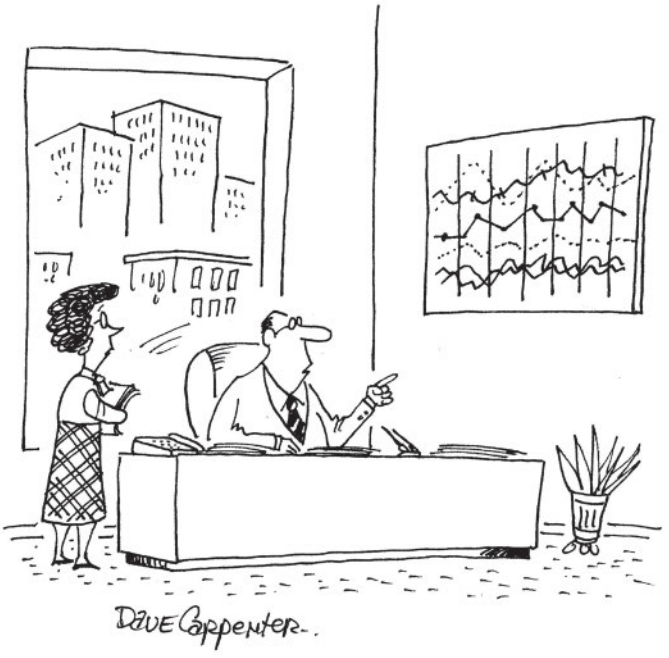
DISCUSS

In pairs, **discuss** the value of creating sketch maps and field sketches in the age of digital technology.

Map making has always been a tool of the trade for geographers. In medieval times, all maps were drawn by hand, which made their distribution rather limited. The use of maps became more popular with the innovation of the printing machine in the fifteenth century. In the activity on page 11, you are going to **create** your own sketch map in the old way, by hand, using just a pencil and a piece of paper. Later in this chapter, you will discover how to design industry standard maps using the technology of Geographic Information Systems (GIS) (see page 18).

Sketch mapping is an effective way of synthesizing concepts and factual information learnt in class for specific locations and case studies. You can take full ownership of the information on your sketch map and can use your map as supportive evidence for your investigations, reports or essays.

HOW DO GEOGRAPHERS ANALYSE TRENDS?



"Is this a piece of artwork or one of our charts?"

Figure 1.10 A humorous look at the use of charts in the workplace, from www.CartoonStock.com

DISCUSS

In pairs, **discuss** what you think the cartoon in Figure 1.10 tells us about the strengths and limitations of using graphs and charts.

We have seen earlier in this chapter how geographers can employ *qualitative skills* when interpreting the landscape while in the field or when analysing pictures and maps. There are also occasions when *quantitative skills* are needed, for example when analysing graphs and carrying out statistical calculations. The data from graphs can be interpreted to extract and simplify essential information. Graph analysis is also commonly used by geographers to make forecasts (see Figure 1.12). In the activity on page 12, you will learn how to use the TEA structure to describe global trends in the number of birth and deaths until 2100.

ACTIVITY: Sketch mapping

ATL

- Transfer skills: Combine knowledge, understanding and skills to create products or solutions

Remember that maps do not show the real world; they are filtered representations of reality. Sketch maps therefore show an even more simplified version of reality (see Figure 1.11). They are a quick and simple way of recording spatial relationships between places and spaces.

You will need to choose the location to **sketch** a map from. This could be your school site, which would make comparisons of sketches in the class more meaningful, or it could be a case study you have learnt about in your geography class.

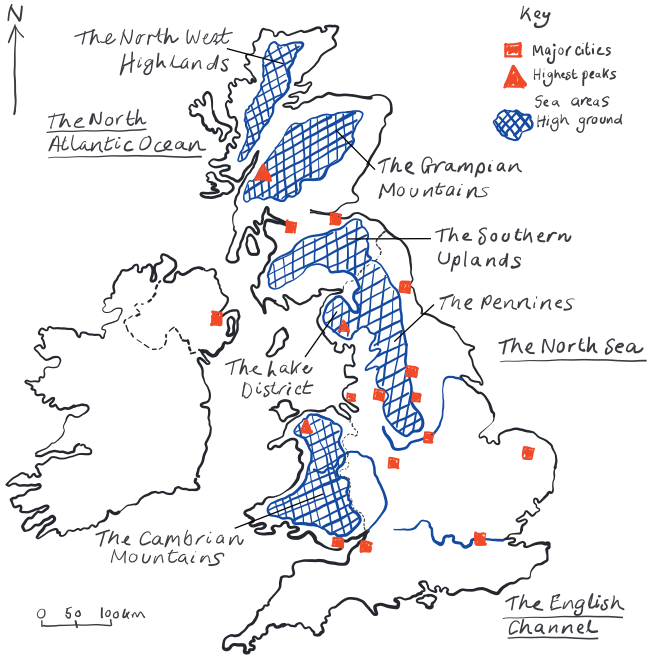


Figure 1.11 A sketch map of the UK

1. **Imagine that you are a bird flying over the area that you are about to draw (or use Google Maps instead). Identify the features you want to record on your map. This will largely depend on the theme, concept or issue you want to exemplify with your sketch map.**
2. **Draw a box on a piece of paper that will include the features you want to record. It should fill at least one-third of a page.**
3. **Before adding the features of your chosen theme, you need to add the main physical and human features of your site that distinguish it from other locations. Think about features that make your location visually different from other locations. It could be the shape of a coastline, the crest of mountains, the course of a river or an estuary or the position of major vegetated areas such as forests, marshes or any other noticeable natural spaces. Do not forget to add any main human features such as the outline of settlements and identifiable land use zones, roads and motorways, railway lines and any noticeable linear infrastructures.**
4. **In some cases, it is more efficient to draw these physical and human features or to use a symbol that is explained in a key on your map. In other cases, it is easier to describe certain features in writing, especially if what you want to show is not visual. You can then use abbreviations and acronyms. Do not forget to give full explanations of abbreviations or symbols you have used in the key.**
5. **Then, you can add the final 'layer' of information on to your sketch map to make your map 'speak'. This is often in the form of short written annotations with arrow heads pointing accurately at the feature you are describing or commenting on.**
6. **The final step is to make sure you STACK your map:**
   - **Scale – Show the scale as a scale bar. If you don't know the scale, write 'Not to scale'.**
   - **Title – The title should be linked to the theme, concept or issue your map is illustrating.**
   - **Accuracy – Make sure that your map keeps relative proportions between all the features.**
   - **Compass – Maps always have the north arrow pointing towards the top of the map/page.**
   - **Key – The key is essential for allowing your audience to understand the meaning of your map.**
7. **In pairs, evaluate each other's maps. Discuss the strengths and the limitations of your partner's map.**

Assessment opportunities

- This activity can be assessed using Criterion C: Communicating and Criterion D: Thinking critically.

ACTIVITY: Describing trends

ATL

- Critical-thinking skills: Practise observing carefully in order to recognize problems

Use the TEA structure to **describe** the graph in Figure 1.12. You could also **describe** any graph of your choice using the same technique.

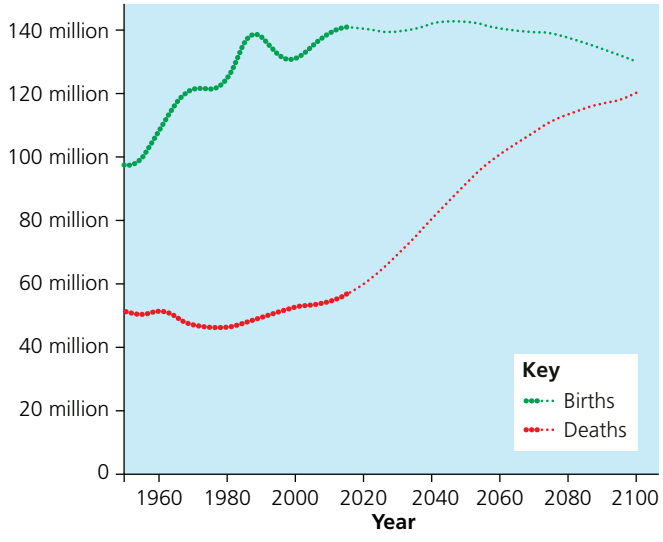


Figure 1.12 The annual number of births and deaths in the world, including the UN projections until 2100

Trend – What is the overview of the graph? What are the changes and movements in data or figures over a period of time?

Various words can be used to **describe** trends.

Downward movement (verbs)	
Decline	Crash
Decrease	Collapse
Drop	Plummet
Fall	Plunge
Slide	Weaken
Lose ground	

Upward movement (verbs)	
Climb	Soar
Rise	Gain
Increase	Jump
Surge	Strengthen

Stability (verbs)

Flatten out, Hold steady, Level off, Recover, Stabilize, Plateau

Degree of change, speed or rate (adjectives)

Slow, Disastrous, Steady, Massive, Slight, Perilous, Sharp, Rapid, Gradual

Figure 1.13 Words to describe trends

Examples – Quote figures from the graph to support your description of the trend, including data examples if these are available on the graph.

Anomaly – Mention any gaps in a bar graph, peaks and troughs in a line graph or outliers in a scatter graph.

Assessment opportunities

- This activity can be assessed using Criterion D: Thinking critically.

The TEA structure is equally applicable for describing maps. The 'trend' on a map is called a pattern. The pattern concerns the distribution of features in a certain space. The distribution is a description of where things are on a map. This could be physical features, for example, where lakes and rivers are located in a certain area, or human features such as population distribution (see Figure 1.14).

Simple descriptive statistics are widely used by geographers in order to perform quantitative analysis. They include the:

- **mean** or average
- **range** – the difference between the maximum and the minimum
- **mode** – the most frequently occurring number, group or class
- **median** – the middle value when all the numbers are placed in ascending or descending rank order.

The use of descriptive statistics is straightforward and can be easily combined with other qualitative description of graphical representation of data when carrying out an investigation (see Take action: Conducting an enquiry on page 25). The next activity will guide you on how to analyse scatter graphs.

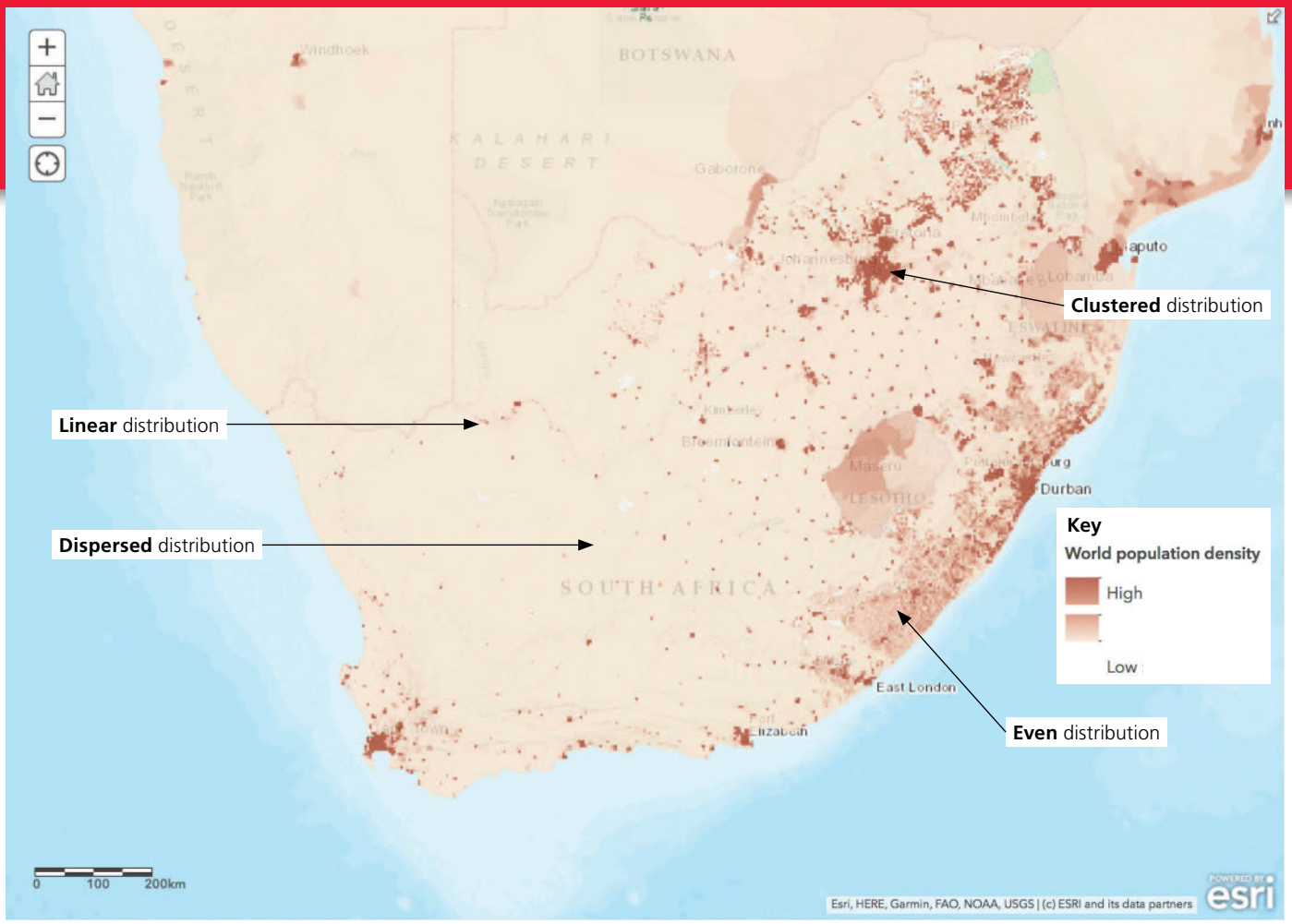


Figure 1.14 Population density in South Africa

ACTIVITY: Analysing scatter graphs

ATL

- Critical-thinking skills: Identify trends and forecast possibilities; Interpret data; Test generalizations and conclusions

You are going to **create** a scatter graph. First decide whether you are going to work on paper or use a spreadsheet on a computer. **Plot** the data from Table 1.2 on your graph to show the relationship between **Gross Domestic Product (GDP)** and life expectancy.

Analyse your graph with reference to the type of correlation, line of best fit and outliers.

Assessment opportunities

- This activity can be assessed using Criterion D: Thinking critically.

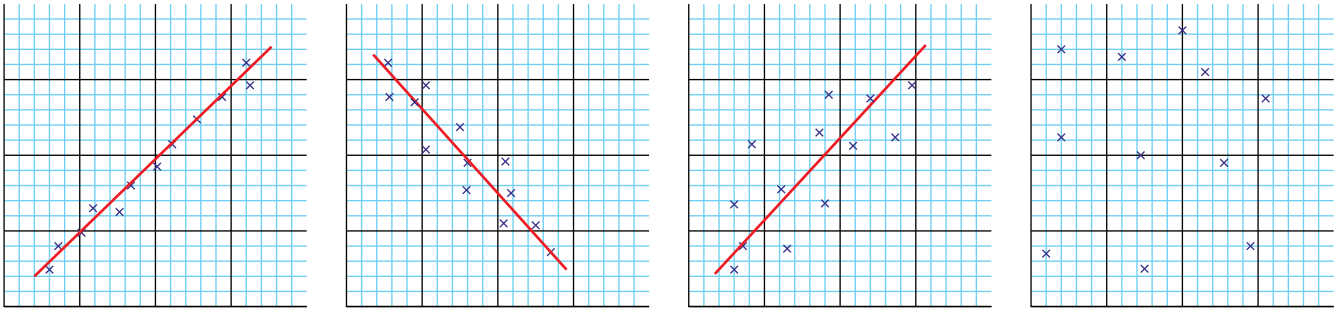
Country	GDP/head in $ (x-axis)	Life expectancy (y-axis)
Bangladesh	1,359	72
Brazil	8,639	76
Cameroon	1,392	58
Canada	42,349	82
China	8,117	76
Czech Rep	18,484	78
Finland	43,433	82
Greece	17,852	81
India	1,717	69
Saudi Arabia	19,982	75
South Africa	5,280	63
South Korea	27,608	82
Turkey	10,863	76
UK	40,412	81

Table 1.2 Development data for selected countries
Source: The World Bank (2016)

Scatter graphs

A scatter graph shows the relationship between two variables by the distribution of dots. It is usual that the **dependent variable** is placed on the y-axis (vertical), and the **independent variable** on the x-axis. Dots are **plotted** on the graph using the two sets of data as coordinates. The arrangement of dots can then be **examined** to see if there is a positive relationship (as one variable increases so does the other), a negative relationship (as one variable increases the other decreases) or no relationship (there is no recognisable pattern to the distribution of dots). A best-fit line is drawn that comes close to as many points as possible. The strength of the relationship between two variables is called a correlation. If the points on the scatter graph lie close to or on the line of best fit then the correlation is strong. The further the points are from the line of best fit, the weaker the correlation.

- Positive correlation – the values of both variables increase and the line of best fit goes up from the bottom left corner to the top right corner of the graph.
- Negative correlation – the values of the independent variable increase while the values of the dependent variable decrease and the line of best fit goes down from the top left corner to the bottom right corner of the graph.
- No correlation – there is no clear tendency for the values of the two variables to move in any particular direction.



Strong positive correlation | Strong negative correlation | Weak positive correlation | No correlation

Figure 1.15 Types of correlation and associated scatter graphs

DISCUSS

'Statistics are only an aid to analysis and no more.'

To what extent do you agree with this statement? **Discuss** with reference to the quantitative and qualitative skills used in geography.

How does geography help us understand changes in time and space?

As we have seen, geography makes connections across a range of disciplines. It offers a unique perspective because of its contribution to unravelling complex interactions between human and natural environments. People's opinions, values and attitudes, upon which they base judgements and subsequently take actions, can result in unintended consequences for our planet. Some judgements are based on impartial, wide-ranging and detailed knowledge and understanding whereas other can be based on purely biased and stereotypical misconceptions. Geographers use techniques to critically analyse the causes and consequences of our everyday actions and in a wider sense how and why humankind is impacting the Earth. In the following activities, you will explore ATL skills such as: how to consider ideas from multiple perspectives, how to recognize unstated assumptions and bias and how to use models and simulations to explore complex systems and issues.

ACTIVITY: Conflict matrices

ATL

- Critical-thinking skills: Consider ideas from multiple perspectives

Conflict matrices are used to **evaluate** how different human activities, uses of resources and the economic or sentimental values attached to resources can lead to conflicts between different groups of people and users. A conflict matrix is an excellent tool to **analyse** conflicts over space as most conflicting interests are dependent on a given geographical location with specific multi-purpose uses of a resource.

Choose five different groups of users of a resource of your choice. Alternatively, you could refer to Chapters 4, 5, 6, 7 or 8 to **find** an example. The resource could be natural or human-made, and can be a location. For example, a lagoon is a location and also a resource for both tourists and local fishermen.

Identify each group and add their name or description in the user groups boxes in your copy of the matrix (Table 1.3).

Complete the empty boxes to assess the level of conflict between two users:

- **If there is conflict, put a cross.**
- **If the two users can co-exist or use the resource without a conflict, put a tick.**
- **If neither, put a zero.**

	Group 1	Group 2	Group 3	Group 4	Group 5
Group 1					
Group 2					
Group 3					
Group 4					
Group 5					

Table 1.3 Conflict matrix

Exemplify the conflicts from your matrix by researching news articles illustrating the causes and negative and positive consequences of conflicts over resources and spaces in the world today.

Discuss your findings with a partner.

Assessment opportunities

- This activity can be assessed using Criterion D: Thinking critically.

ACTIVITY: OPVL source analysis

ATL

- Critical-thinking skills: Recognize unstated assumptions and bias

Newspapers articles, news websites and official reports from national and supranational organizations are widely used as secondary information sources in geography. The constantly changing nature of people's interactions with different spaces means that there are plenty of secondary sources for investigating a geographical theme or issue. The OPVL technique is designed to critically **evaluate** the usefulness of sources. It is based on the following key questions:

Origin:

- **Who created it?**
- **Who is the author?**
- **When was it created?**
- **When was it published?**
- **Who is publishing it?**
- **Is there anything we know about the author that is relevant to our evaluation?**

Purpose:

- **Why does this document exist?**
- **Why did the author create this piece of work?**
- **What is the intent?**
- **Why did the author choose this particular format?**
- **Who is the intended audience?**
- **What does the document 'say'?**
- **Can it tell you more than is on the surface?**

Value:

- **What can we tell about the author from the piece?**
- **What can we tell about the time period from the piece?**
- **Under what circumstances was the piece created and how does the piece reflect those circumstances?**
- **What can we tell about any controversies from the piece?**
- **Does the author represent a particular 'side' of a controversy or event?**
- **What can we tell about the author's perspective from the piece?**

Limitation:

- **What part of the story can we *not* tell from this document?**
- **How could we verify the content of the piece?**
- **Does this piece inaccurately reflect anything about the event or issue?**
- **What does the author leave out and why does he/she leave it out?**
- **What is purposely addressed?**

Working in pairs, **apply** the OPVL technique either to sources you have already used in a prior investigation or to new source material for a geography theme or issue you are currently investigating in your geography class.

Hint

To make the OPVL task manageable try to **evaluate** no more than four sources and only answer one or two prompt questions from each of the OPVL categories in the list.

Assessment opportunities

- This activity can be assessed using Criterion D: Thinking critically.

ACTIVITY: Sequencing flow, systems and landform diagrams

ATL

- Critical-thinking skills: Use models and simulations to explore complex systems and issues

In this activity, you are going to practise using the sequencing technique often employed by geographers. The technique is used to **present** the:

- **causes and effects of geographical issues in flow diagrams**
- **components of a system in systems diagrams**
- **processes at play in physical geography (see Figure 1.16).**

The principle is to **show** a sequence where a set of particular events or processes follow each other in a particular order over a certain timescale.

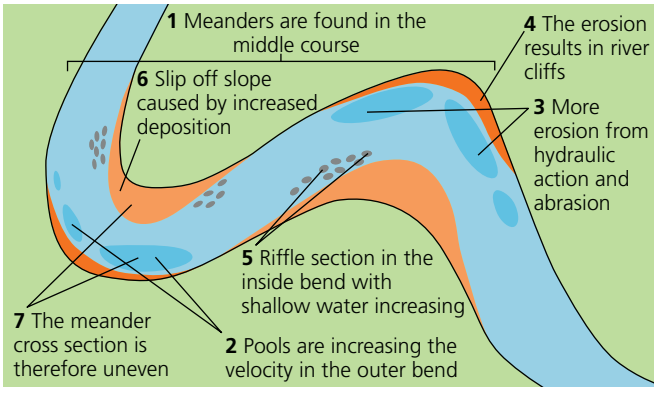


Figure 1.16 The formation of a meander–sequence diagram

Working in pairs, **recall** a geographical process or issue you have learnt in your prior study of MYP Geography. This could be a process in physical environments or it could be related to human geography themes that you may have encountered when investigating examples.

Use Figure 1.17 to guide you through the steps of creating a sequence diagram.

Plan the size, design and type of diagram. You might be required to add some explanations to the actual diagram, elaborating on specific features, examples and processes, so make sure the diagram you are using is large and clear. If using one from the Internet, make sure it is free from already existing annotations.

Before going ahead with the diagram and its annotations, brainstorm or **research** as many key terms and concepts that apply to the theme or question.

If you are investigating causes and impacts for a geographical process or issue, make sure you classify the causes into physical and human and that you use the **S**ocial **E**conomic **E**nvironmental and **P**olitical (SEEP) approach for the impacts.

If you are exploring a system, your sequence diagram needs some inputs, processes and outputs. You will need to brainstorm these before starting the design.

If you are answering an '**explain**' question then make sure you think about sequencing your annotations too. Sequencing can be achieved by starting each annotation with a number so the processes or impacts are described and explained in the right order. Add the specific key terms to help focus your explanation.

Finally, make sure you use arrow heads that connect accurately to the features you **describe** or **explain**.

Figure 1.17 Planning for a diagram showing a sequence

Assessment opportunities

- This activity can be assessed using Criterion C: Communicating and Criterion D: Thinking critically.

Middle Years Programme

IB Skills

ALSO AVAILABLE FOR MYP YEARS 4 AND 5

IB Skills is a new series of resources for Years 4 and 5 students of the MYP and aims to:

- introduce students to key concepts and features of the MYP
- develop interdisciplinary and disciplinary skills
- help students to understand subject concepts and content.

The *IB Skills* books include a wide variety of interesting topics which allow students to practise the skills they will need to reach the highest level of the assessment achievement.

Agents and stockists

For information about international agents, stockists and local representatives check **www.hoddereducation.com/agents** for your local Hodder representative

Published in cooperation with

HODDER EDUCATION

www.hoddereducation.com/ibskills

International Baccalaureate®
Baccalauréat International
Bachillerato Internacional