TUXFORD ACADEMY

Geography Bridging Unit

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Geography Bridging Unit

The following activities in this booklet are aimed to give you a taster of A Level Geography content, whilst developing crucial skills and knowledge in readiness for starting the course in September.

If you find any of the activities challenging and would like some guidance, please contact a Geographer:

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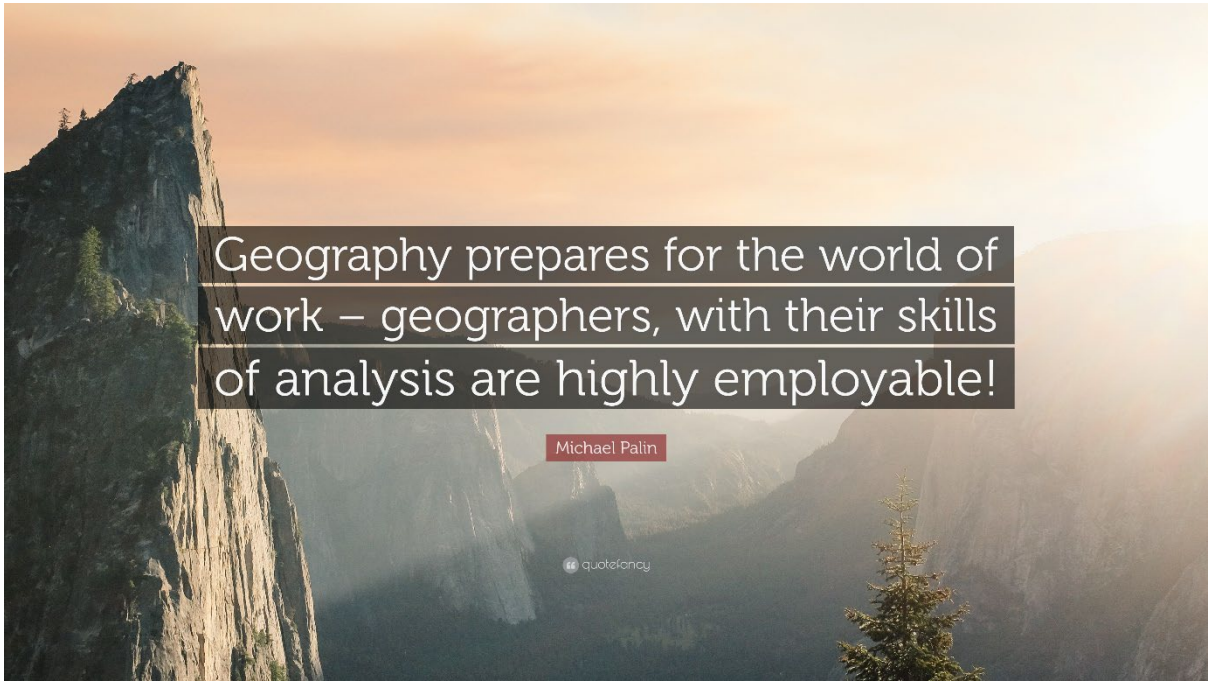
When you have completed your bridging unit, please email the document to jnewsum-smith@tuxford-ac.org.uk by 20th July 2020. This should include photos of any activities you have completed on paper.



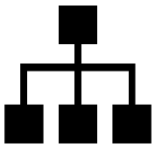
Essential A Level Skills

Many of the skills you will practise during these activities are transferable to other A Level subject areas. Even if you decide not to take Geography further the skills will still be useful to you at A Level and beyond.

1. **Notetaking** **(Contemporary Urban Environments)**

It is important to be able to collate large volumes of notes from textbooks, articles and video sources in order to research the geographical theory underpinning each topic you will study. Therefore having a technique that allows you to organise your notes clearly, will help you to review and revise them for assessments. You will be learning the **Cornell method of notetaking** in this section.

2. **Classifying, categorising and visualising information** **(Hazards)**



As a geographer you will need to sort the information you collate in your research into manageable chunks, so that you can remember a wide range of facts about places you will study in depth. Choosing the most effective way to present information to compare, contrast and make links between information will help you to analyse what is happening and allow you to apply the relevant knowledge to questions. You will be learning to master **dual coding** in this section.

3. **Source Analysis** **(Coastal systems and landscapes)**

Geographers learn a great deal from observing the human and physical world around them. This allows you to understand patterns, processes, place and space whilst studying how people and environments interact with one another. This is key to decision making, therefore being able to describe, explain and suggest what you are observing provides a geographical context for the world we live in. You will be learning how to **successfully annotate photographs** in this section.

4. **Critical analysis and evaluation** **(Global systems and Governance)**

Once a geographer has all of their research on a topic, they need to be able to reach a valid conclusion to the question they were investigating. This is done through making critical judgements (opinions) about the information. Often this means creating a persuasive yet factual argument through extended writing. In this section you will practise the **PeEeEeEL & JEON techniques**.

5. **Independent investigation** **(Changing Places; Water & Carbon cycles)**

You will be required to create your own investigation into a geographical area of interest linked to the exam specification. This involves hypothesising a question, researching the theory, selecting appropriate methods to collect data, choosing relevant presentation techniques (maps & graphs), completing descriptive and statistical analysis (maths), critically concluding and evaluating the study. In this section you will follow **a human and a physical investigation** through these steps to familiarise you with the different stages in preparation for the A Level course.

1. The Cornell method of notetaking

a) **Start by watching** the youtube clip about how the Cornell Method works (She is an American Biology Teacher, but stick with it – its relevant)
https://www.youtube.com/watch?v=WtW9IyE04OQ&list=PLpmiWNoiQk68K3-aW2PYDFs6PDub9pmtW&index=1
You could even start practising the technique whilst watching this clip.

Figure 1: Cornell note taking template

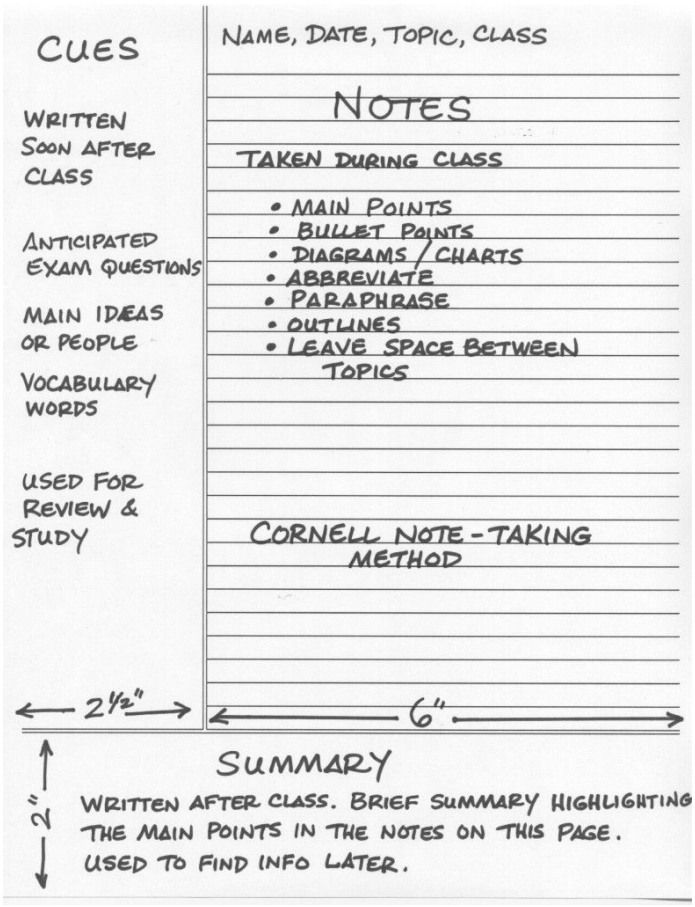


Figure 2: An example of the strategy in use

b) **Watch the video clip** from the Geographical Association about urbanisation to introduce you to the Contemporary Urban Environments topic.

https://vimeo.com/151492843

Take notes using the Cornell method you learnt about above.
You can also choose to type on the template that follows or hand write your notes. If you choose the latter please include a photo of your notes on by replacing the template on the following page.

Complete Cornell notes on Urbanisation here or insert a photo	

2. Dual coding to classify, categorise and visualise information

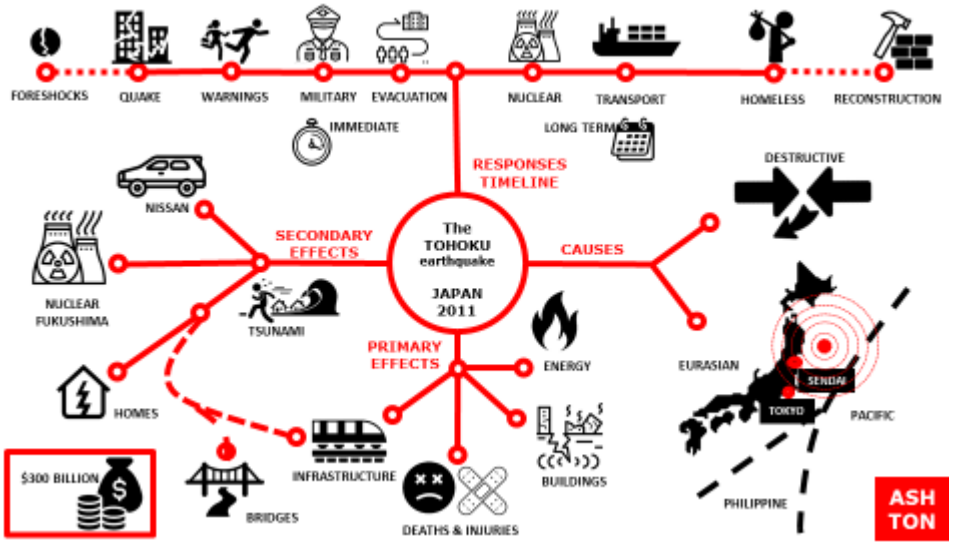
a) You are going to **investigate the 2010 eruption of Eyjafjalljokull volcano in Iceland**. Firstly you will need to research the eruption to find out what happened.
Watch the video clip and make notes using the **Cornell method** as good practice.

https://vimeo.com/280686404

See if you can add more facts to your notes by researching the eruption (Google)

b) Now you have all the facts you need to **create a one page visual display** of the information. The starting point should always be to think about what categories and classifications we use in Geography to sort information. Look at the Figure 3 on the following page to help you.

Here are **some examples** to help you think about layout, links between information and categories you may wish to use.



c) Once you have organised your layout the **next step is to add icons**. You can either draw these if doing it by hand or you can search for icons, such as those in the examples using:

https://thenounproject.com/

d) **Insert** your case study into the document.

e) **Talk someone else** through your case study using your notes to give them lots of extra facts.

f) Now without looking try to **redraw** your visual from memory. When you have finished **evaluate your success with a WWW and EBI.**

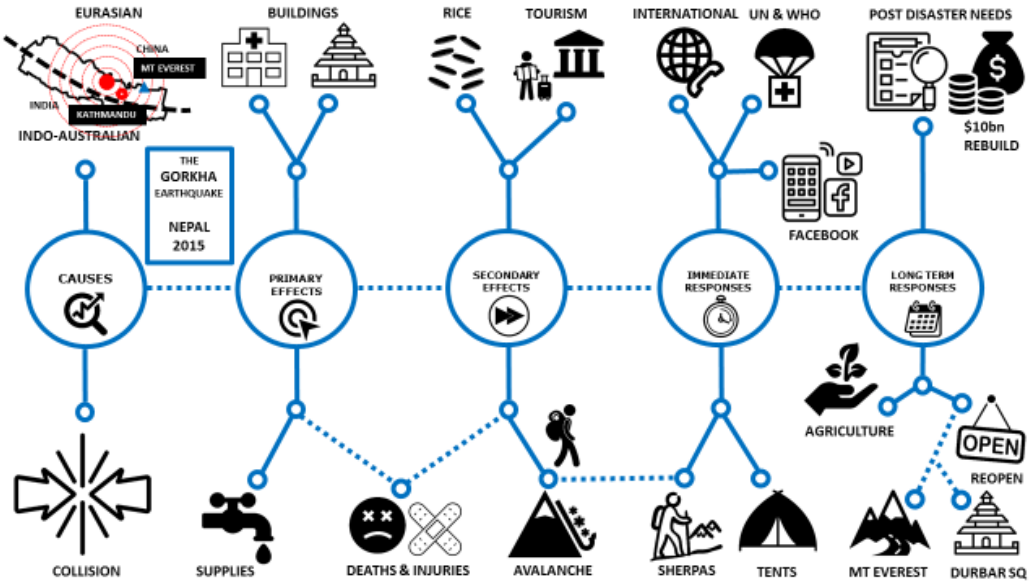
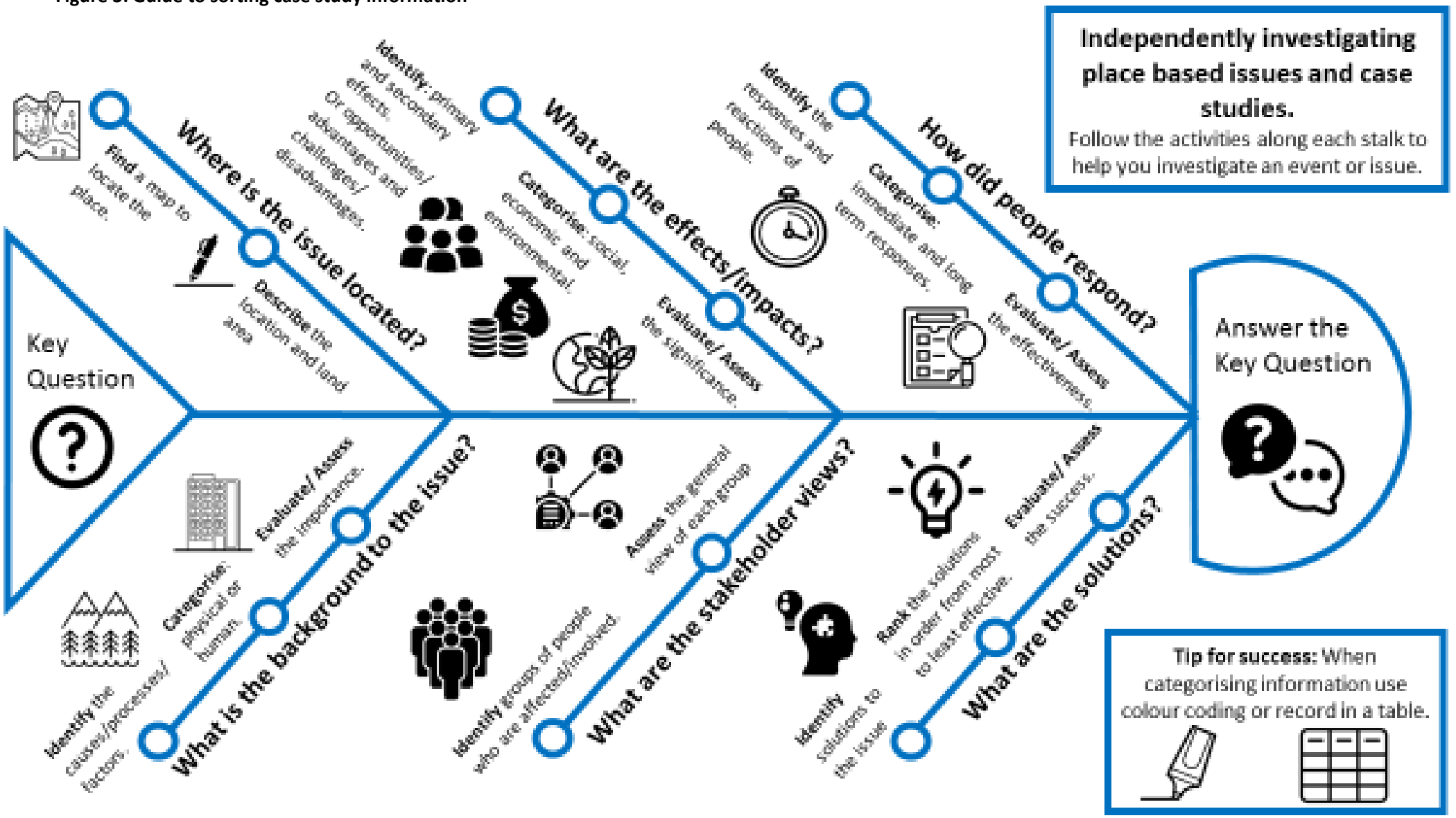
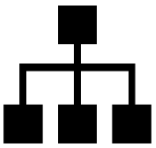
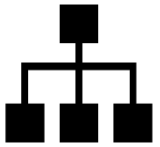


Figure 3: Guide to sorting case study information

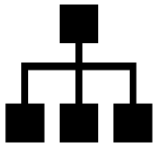




Eyjafjallajokull Cornell Notes (insert below)



Eyjafjallajokull dual coded visual display. (Insert below)



Insert your drawing from memory with a WWW and EBI

3. Annotating photographs to analyse a source

a) **Study** the examples below. Figure 4 shows a labelled photo, whereas Figure 5 shows an annotated photo. **What is the difference?**

_____
_____
_____
_____

Figure 4: Labelled Photo of High Stacks at Flamborough Head

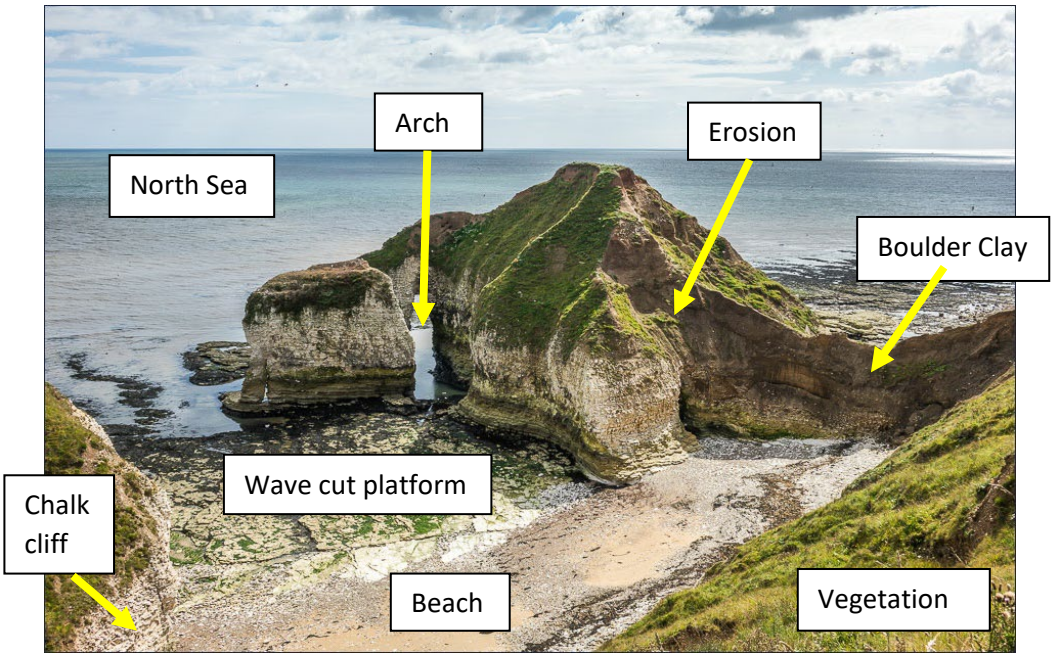
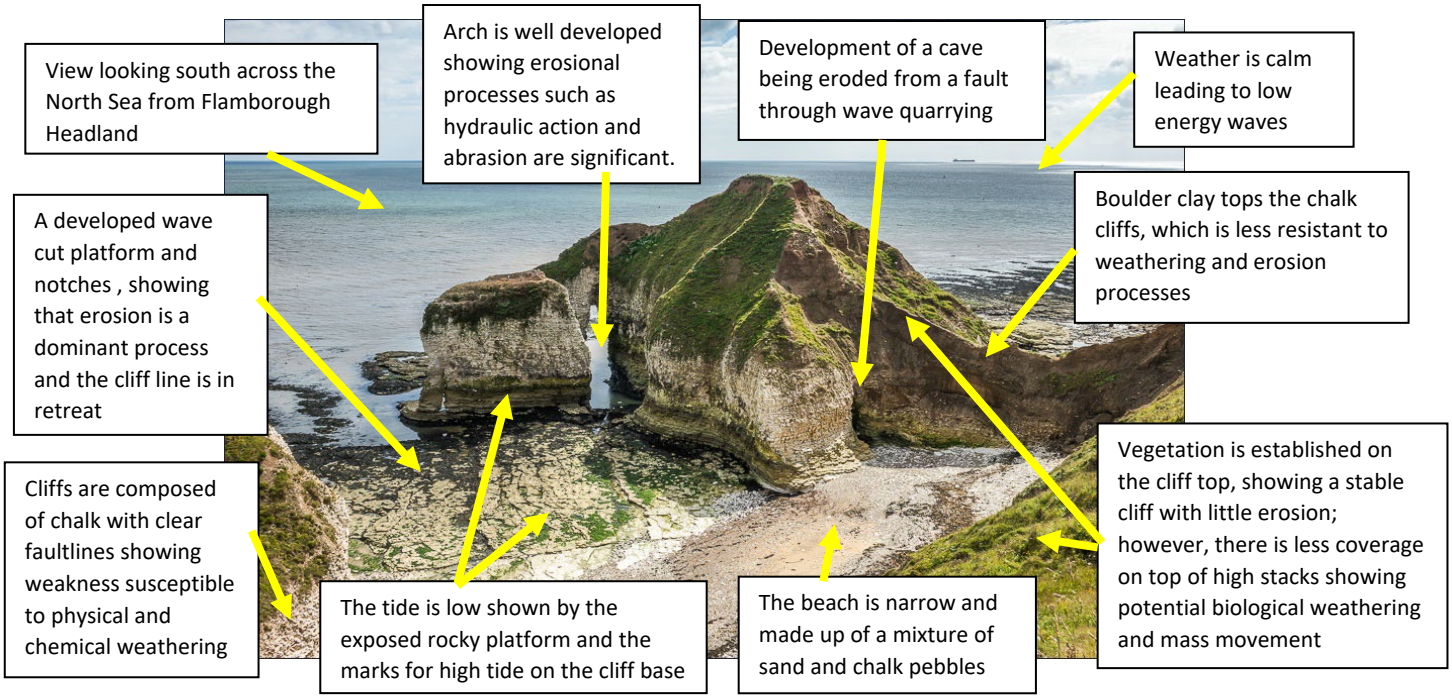


Figure 5: Annotated Photo of High Stacks at Flamborough Head



b) Now it is your turn to **annotate the photograph below**.

The photo shows **the sea defences at Hornsea**.

Use your prior knowledge and any further research to annotate the photo to show **how Hornsea is being defended and evidence of its success.**

4. **Critical analysis and evaluation of the Shrinking World**

The economic world is constantly changing as technological advances continue to aid develop around the globe leading to the virtual shrinking of world in which we live.

a) Study the information from geography Review magazine about how our world is shrinking.

Key terms

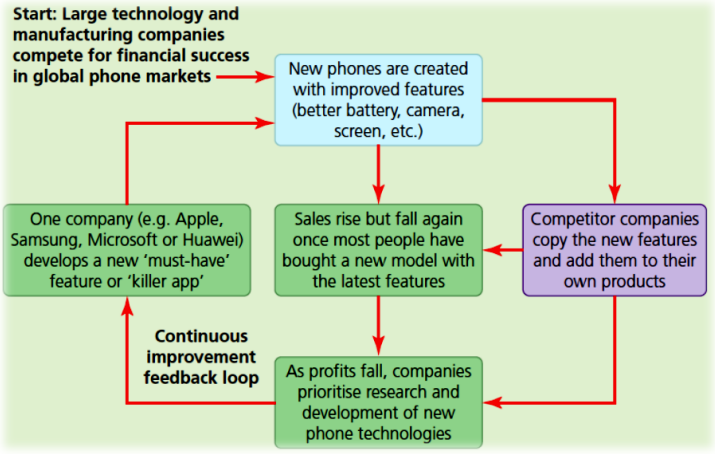
Geography review

The shrinking world effect	Changes in people's perception of 'near' or 'far' places. In the UK in the twenty-first century, what feels like a 'near' or 'far' place is very different from the way the world was experienced by most Victorians, for example. Even in the mid-1800s, ordinary people knew little of the world beyond their immediate neighbourhood or city. Now, distant places feel nearer.
Time-space compression	Technological changes have helped overcome potential barriers to flows of people, goods, money and information. As travel times sbrink due to new inventions, different places approach each other in 'space-time': they feel closer together than in the past. This idea is central to geographer David Harvey's work.
Digital divide	When some people and places become 'switched-on' to digital networks and services but others are left behind (or 'switched-off').

Why does the world *keep* shrinking?

Geography review

- Large **technology transnational corporations (TNCs)** keep creating ever-faster and more powerful digital technologies, including phones.
- The cause of this constant innovation is a **feedback loop** driven by markets.
- Each 'round' of new innovation helps deliver an even more intense 'shrinking world' **place perception**.



The world is still shrinking

Geography review

5G is the 'next generation' mobile internet service. By 2020, it should be available in most UK urban areas, replacing existing 4G networks.
Benefits of 5G include browsing and download speeds which are ten times faster than most people were using in 2018.

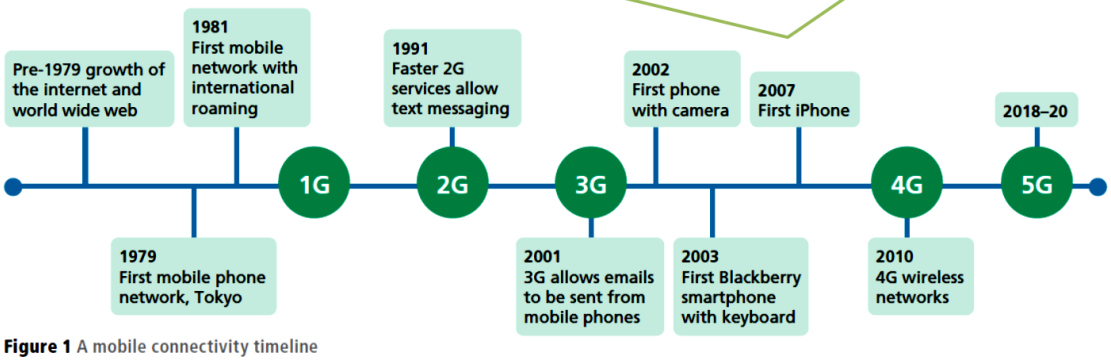


Figure 1 A mobile connectivity timeline

The 5G experience

Geography review

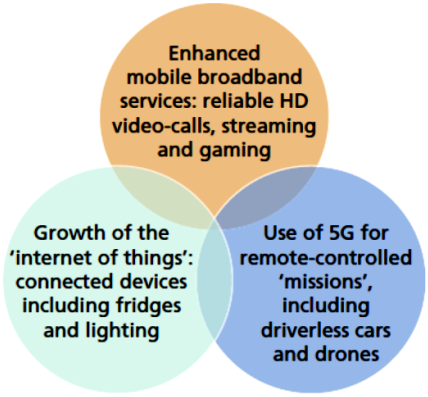


Figure 2 Three ways in which 5G networks will help shape society and places in the future

5G may further change people's perceptions and feelings about place identity (Figure 2 shows areas of everyday life which may be 're-shaped' by the new technology).

5G connectivity is forecast to deliver:

- fast high-volume information flows with zero latency (no perceived delay when making a video call or gaming, and a truly 'instantaneous' virtual experience)
- 'always-on' connectivity for 'digital citizens' living in urban places
- the most immersive and powerful shrinking-world experience yet (thanks to 'seamless' high-definition video streaming)

5G in the news

Geography review

There are ongoing concerns over the role played by Chinese TNC Huawei in rolling out 5G.

- Huawei is a major 5G player that many Western companies, such as BT, would like to partner with.
- However, there is an argument that Huawei could be compelled to share the data that flow through its systems with the Chinese government (under China's 2017 Intelligence Law).
- Could 5G systems part-built by Huawei be used by the Chinese government to spy on foreign governments and citizens? Many politicians in G7 nations believe so.
- Australia and New Zealand have excluded Huawei from involvement with their own 5G networks.
- The US government has taken a strong stance against Huawei as part of a broader set of measures designed to curb Chinese influence.

b) You are going to answer the following question:

To what extent are technological advances having a positive impact on people globally?

- **First** you should **identify 3 pieces of evidence** that show how technology has been **positive.**
- **Secondly** you should **identify 3 pieces of evidence** that show how technology may **not be positive.**

You can then create 2 PeEeEeEL paragraphs to create the persuasive sides of the argument.

P = Technological advancements has had a significant positive impact on people's ;lives.

e = For example… (Put your first piece of positive evidence here)

E = This has meant that… (explain the evidence further)

e = Another example is… (second piece of evidence)

E = This has led to… (explain further)

e = A final example is… (third piece of evidence)

E = This shows that… (explain further)

L = Therefore this shows that technology has been economically/socially positive because…

Use the above writing frame to help you with **the second paragraph** about the negative side of technology.

c) Finally you should **reach a conclusion** to show how positive or negative you think technological advancements have been.

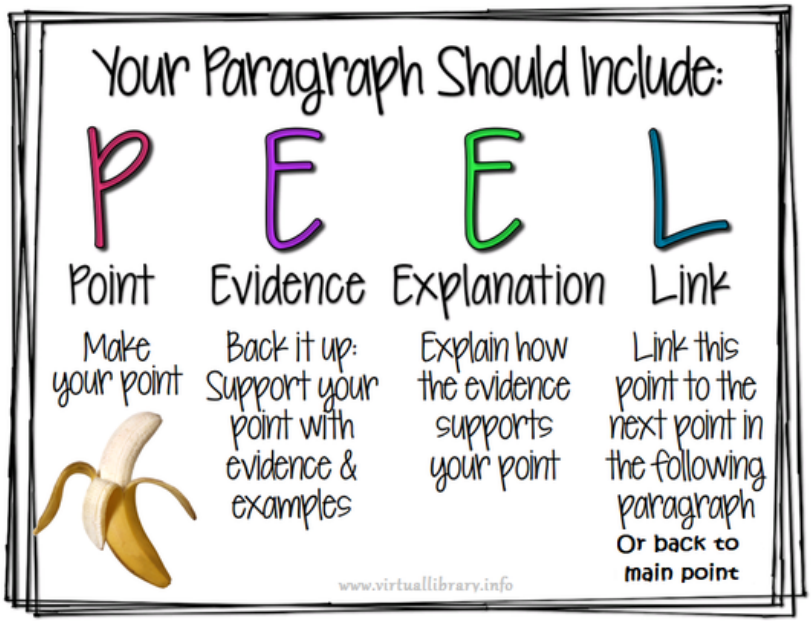
J = In conclusion technological advancements have had a positive impact to _____ extent.

E = This is because..

O = On the other hand…

N = Nevertheless…

Extra TIPS: When writing a link or conclusion do consider **the big geography concepts** such as physical vs human; economic, social and environmental; LICs vs HICs; Local Vs Global; Short vs Long term; Rural vs Urban. These concepts will help you to conclude generally.



To what extent are technological advances having a positive impact on people globally?

Space for answer

5. Independent investigation:

You are going to follow two lines of enquiry. You will complete the pre learning activities below followed by completing your fieldwork methods via watching a "live" lesson from the Field Studies Council.

Investigating Place: Human Geography: Pre Live Lesson Learning

a) **What is Place?**

This concept is complex and contested by geographers but some definitions include…

"Place, at a basic level, is space invested with meaning" (Cresswell, 2004)

Place is defined as a location with meaning. The meaning could come from personal experience or a wider, social or cultural meaning. Defining place can be thought of with 3 academic approaches. These are listed and described below. Thinking of a familiar place, e.g. your school or town, can you give some of your own examples of each type of approach to place and factors that might influence it?

Descriptive approach	Social-constructivist approach	Phenomenological approach
This means when a place is defined by measurable characteristics	This means when a place is defined by or given a meaning by wider society	This means when a place is defined by a person's experience (real or imagined)
e.g. a school's number of pupils	e.g. Manchester seen as busy, hard-working, industrial from its bee emblem	e.g. exciting (tourist in New York), peaceful (an elderly person in their town park)

Key terms hint: we call factors that shape a place endogenous factors (factors within a place that shape it, e.g. the demographic structure) and exogenous factors (factors from outside, e.g. inward investment from a Transnational Corporation).

b) **Exploring a place**

Now we know what we mean by the idea of Place, we can start looking at this in context, as geographers using the three approaches. Our investigation aim is:

Investigate how a location is experienced and perceived by different people.

To start investigating a place, we need to research using some background information about a place.

Using the ArcGIS Storymap https://bit.ly/fieldworklivePlace , we are going to explore Dedham**. Click through the Story Map, completing tasks as you go**. We will think about why we have chosen Dedham shortly, but as you go, take notice of the sources of data we are using to explore a place. This could be useful in your future studies!

(i) Using facts from the different map data layers, select and describe 3 characteristics to describe Dedham

_____
_____
_____
_____
_____

(ii) Select one of John Constable's paintings of the area from the Storymap. Fill in this Image Analysis template to define how this famous representation of Dedham might shape people's perceptions of it.

Painting chosen:_____

Identify a main feature of the image	**What perception might people have of Dedham, looking at this image? Explain this if you can and link to your wider geographical knowledge.**
e.g. Rural/ farm workers	Agriculture is a primary industry. On the Clark-Fisher model, a reliance on primary industries, which is all that is shown in the painting, suggests a preindustrial, more basic way of life. This might make people think of Dedham as a traditional area.

(iii) Gilbert's 8 way thinking helps us to explore different ways of understanding and experiencing place. On the Storymap, there are a number of views of the village. Select one and, using any 3 of Gilbert's 8 'intelligences' (ways of thinking), describe Dedham as a place from your perception:

Intelligence	**Your description of Dedham**
Linguistic intelligence – words and language. Adjectives, adverbs, similes to describe Dedham?	
Logical-mathematical intelligence – numbers and logic. Can you describe this place with any numbers? E.g. number of cars/people? Percentage of green space?	
Spatial intelligence – images and space. What are the key things you can see? What stands out?	
Bodily-kinaesthetic intelligence – body movement, control. What types of actions can you see here? Could be done here?	
Musical intelligence – music, sound, rhythm. What might you hear in this space? Are sounds loud, quiet? Would they have a positive or a negative impact?	

Interpersonal intelligence – other people's feelings/ what people are doing/ how they're interacting?	
Intrapersonal intelligence – self-awareness. How would you feel here?	
Naturalist intelligence – natural environment. What signs of nature are there? Habitats? Green spaces to use? Impacts of climate change?	

c) Why do you think Dedham might be a good place to study this investigation aim?

_____
_____
_____
_____
_____
_____
_____
_____
_____

Watch the Live Lesson and complete the following activities.
https://www.youtube.com/watch?v=2DW3WOt7lvE

d) Fieldwork Method 1: Non-participant observation of interactions and use of space
This method involves the researcher making qualitative observations of people using and experiencing a place. The researcher does not participate in the activities going on but observes behaviour passively.

People's use and experiences of Place	Description of features	Your observations of fieldwork site
Appearance, clothing, age, gender, physical appearance of users of area	Note down anything that might indicate membership of a group such as profession, social status, socioeconomic class, religion or ethnicity	

Physical behaviour and gestures	What are people doing? Running, walking? Body language, are they looking around the space or looking down? Behaviour and gestures towards other	
Interactions with each other (verbal/ non-verbal)	Are people communicating with each other? Who does what, who interacts with whom, who is not interacting? What is the manner of communication?	
Use of space	How are people interacting in the space? What are they doing? Where do they go? Which service do they use? Which routes do they take? Is this a transient place or do people congregate?	
People who stand out	Does anyone stand out in the environment? How and why? What are their characteristics? What are they doing?	

Evaluation of Non-participant observation method: note here any pros or cons we identify	

Fieldwork Method 2: Place check

This method involves observing the features and characteristics of the place around you. Guided by 'What makes this place...' column, record your qualitative observations to define the range of ways that people's experiences and perception of a place might be shaped.

METHOD HINT: Try to consider the questions from a range of users' viewpoints e.g. over 70s, families etc. How might this improve or detract from our data?

What makes this place…	Your notes/evidence
... a special place? • What makes this place special or unique? • Why does it look the way it does? • What local activities/events have shaped its look? • Why do we like this place? • What can we make more of? • What potential is there to enhance the place?	
... a well-connected, accessible and welcoming place? • How accessible is it? What limits connectivity? • How welcoming is it here? Is anything confusing? • How well does parking work? • How can it be made more welcoming and accessible?	
... a safe and pleasant place? • What makes the streets/public space here safe? • What detracts from the safety and pleasantness? • How safe are the pavements/ road? • How can safety and pleasantness be improved? • How do people enjoy nature? What is missing?	
... a planet-friendly place? • What makes this place planetfriendly? • What resources are wasted? • How does movement use resources? • How is waste handled? • How is energy used in buildings? • How adaptable/resilient is this place? • How could this place make better use of resources?	

Evaluation of Placecheck method: note here any pros or cons we identify	

Fieldwork Method 3: Emotion mapping

For various sites around a Place, use the mood record sheet (on the next page) to pick a colour and number for the mood you feel in that place as a measure of your perception. Record your number (1-7) and colour (as r, g, b or y) in the exact point where you feel it. For example, if you feel relaxed in that place, put 'g 5'.

Your results	**Colour**	**'Strength'**
Emotion for Fieldwork Live site		
Emotion for your Dedham site (viewed on Google Street View or the Storymap)		

Evaluation of Emotion mapping method: note here any pros or cons we identify	

Now try submitting some further observations for the place you are working from now. We will use Survey 123 to do this, follow this link https://bit.ly/fieldworklivePlaceData . This will help us capture an extensive big-dataset for how people feel about their place right

This is a method created by Yale University, USA. Researchers categorised all feelings into 64 descriptive words and organised them using two scales based on Energy and Positivity. This is now the most popular method of categorising feelings in science world wide

Investigating Flooding: Physical Geography

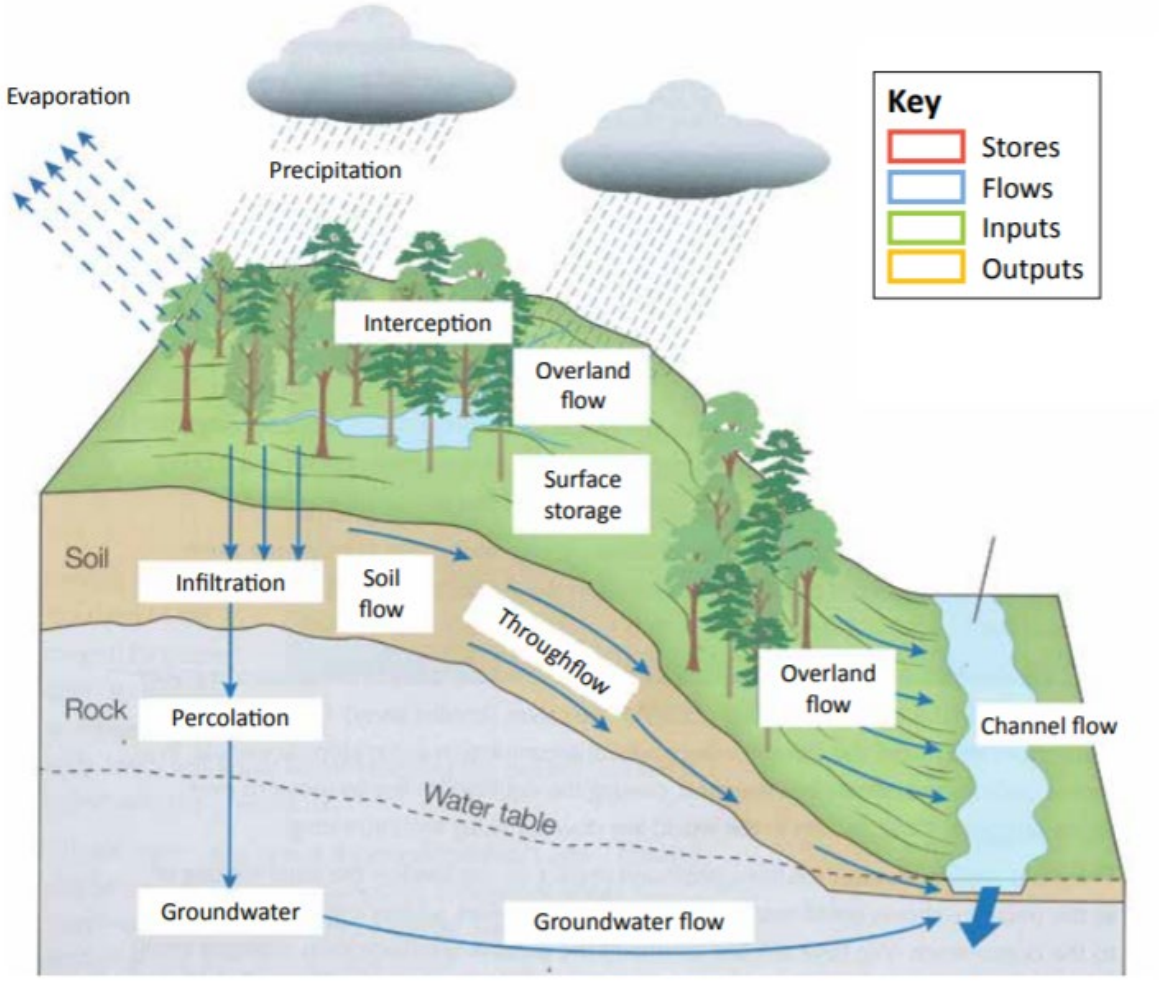
Pre Live Lesson Learning

A drainage basin is an open system, with water (matter and energy) able to enter and leave (inputs and outputs) across the catchment watershed (boundary between systems). Geographers use a 'systems approach' to simplify these complicated processes.

a) The hydrological cycle within the drainage basin

Watch the drainage basin hydrological cycle learning video. Take note of how 'stores', 'flows' 'inputs' and 'outputs' are defined within a drainage basin
www.youtube.com/watch?v=8GOJ3S5jKSI

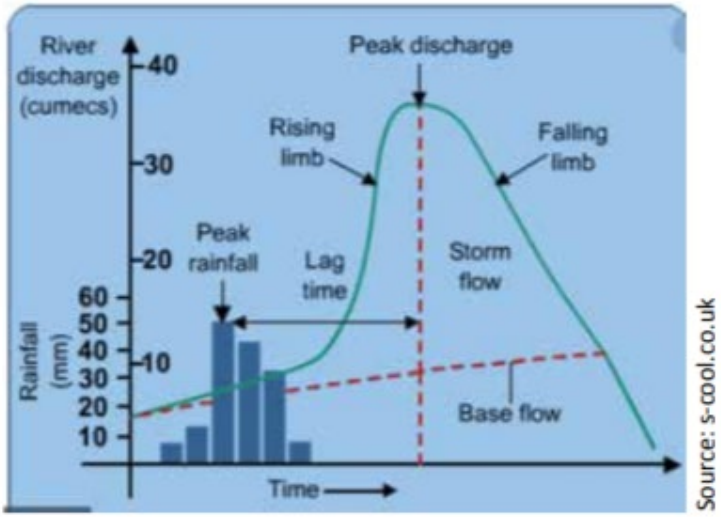
Using the key words on the diagram, classify them as stores, flows, inputs or outputs. If you are unsure, or any terms are unfamiliar, star them and come back to them at the end.



b) The flood hydrograph

The characteristics of any drainage basin and the climate will affect the likelihood and severity of flood events. A flood hydrograph is a graph that shows how a river responds to a period of rain.

Using your prior knowledge from GCSE, can you explain how the following characteristics will affect the hydrograph? (As an example one has been done for you.)



Antecedent conditions	The conditions occurring before (7-10 days prior). After heavy rain, for example, the soil becomes saturated: water will be unable to infiltrate and will flow into the river more quickly as surface run off. Lag time of the flood hydrograph will be reduced, the rising limb of the hydrograph will be steeper, peak discharge will occur sooner.
Geology (permeability of rock	
Precipitation	
Soil type	
Elevation and Topography	

Drainage basin density	
Land use	

c) Interrogation of research location

Now we know the theory of how catchment characteristics might affect flood risk, we need to apply that knowledge to the study location for the investigation.

Use the information in the Story Map to help you identify and explain how the characteristics of the Upper Aire catchment might influence flood risk there.
https://bit.ly/fieldworkliveHydrology

Elevation & Topography	**Land Cover**
Rainfall	**Geology**

How have these secondary data sources been useful in the investigation planning process?

_____
_____
_____
_____
_____

Are there any limits to the reliability, precision or validity of the secondary data affecting the accuracy of our research?

_____
_____
_____
_____
_____

What makes the Upper Aire catchment a suitable place to investigate the hydrological cycle?

_____
_____
_____
_____
_____

d) Developing geographical Enquiry Skills

Climate change has caused an increase in major flood events on both a global and national scale in recent years, therefore the importance of investigating the hydrological cycle has never been greater.

Yorkshire Dales hit by flooding following heavy rain
https://www.bbc.co.uk/news/uk-england-york-north-yorkshire-51597105

The fieldwork investigation is set within the Upper Aire catchment. The water from the catchment flows into the Malham Beck and the River Aire. Using ideas from the Storymap, photos and the article above, explore why flooding might be a risk in the area and why understanding the water cycle system helps to manage it. This will give geographical justification to our study.

What can we investigate about this place and why?	
What flows and stores of water are there in this landscape?	
What features of this landscape would affect flood risk?	
To investigate our aim, what quantitative data could you collect here?	
And what qualitative data could you collect here?	
How might investigating the catchment help manage future flood risk?	
Any questions for the Live Lesson?	

Watch the Live Lesson and complete the following activities.
https://www.youtube.com/watch?v=l-nlhvX98ls

e) Storm simulation measurements

We will see the impact of different land uses on surface run off as a process within the hydrological cycle and apply this to the drainage basin.
As we look through the storm simulation method, note any limitations and justifications of the method below.

Validity	Reliability
Precision	**Representativeness**
Overall, is this an accurate data set?	

f) Storm simulation predictions

If we consider this in the context of the drainage basin, **can you annotate the photos below** with ideas of how surface runoff might vary in different areas? How will this, in turn, affect the likelihood of flooding?

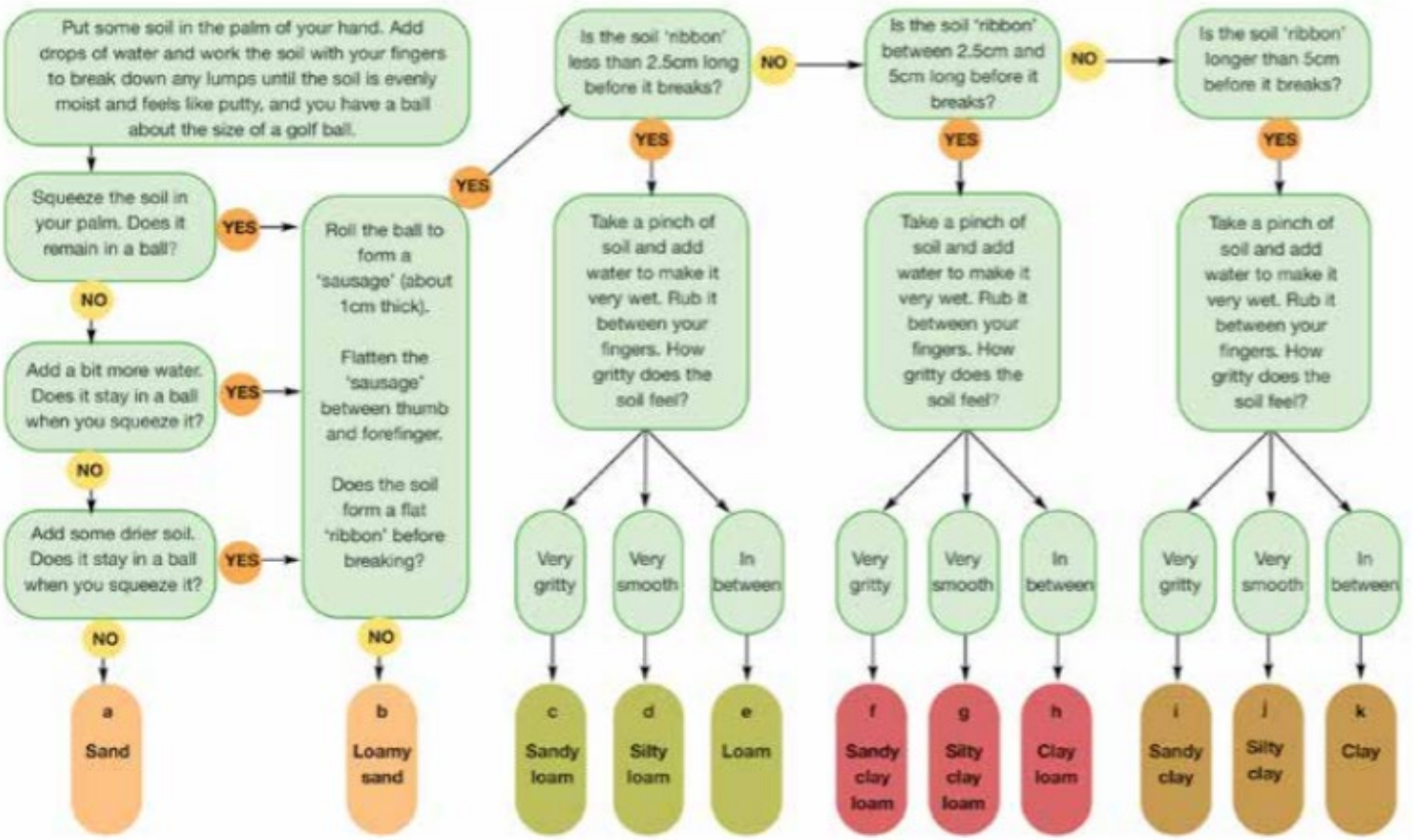
Command word advice: When you are asked to annotate a resource, you are being asked not just to label it but to expend your label into **a description and explanation** of that feature. Look at the one done for you as an example.

During winter, there is often snow and ice. If the ground is frozen, infiltration will not occur so surface run off rates will be fast. It might be similar to urban areas as the soil surface is impermeable if frozen.

If there were heavy rain or snow melt while the soil is frozen, flooding would be more likely.

e) Determining soil texture

Take a sample of soil and use this key to determine the soil texture.



Soil texture observation notes for your location

What does it tell you? (validity)	Justify the method: Reliability? Precision? Representativeness?	Any limitations to the accuracy of the results?

How could you measure infiltration?

1. Make sure you have the correct equipment: a piece of tube or piping, a 30cm ruler, a mallet, a block of wood, and some water.
2. Place a piece of wood over the black tube and carefully hammer it into the ground up to a set depth (eg. 5cm).
3. Remove the wood and place the 30cm ruler inside the black tube.
4. Fill the black tube with water up to a set depth (eg. 20cm).
5. Write down the water level within the black tube then start a timer after the first. Record the water level every 30 seconds for 15 minutes.
6. If the water in the tube drops below a set depth (eg. 10cm) – mark the minute when this happened and then fill up the black tube without removing it from the soil.
   You should make a note of when this is done, so that it can be taken it into account when you are calculating the infiltration rate.

f) Recording the infiltration measurements

Record the findings in the table below

Time (minutes)	Water level on ruler (mm)	Drop (mm)	Infiltration rate (mm / hr)
0			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
Mean infiltration rate =			

Calculating your Infiltration rate

- Work out the drop (mm) each minute from the difference in each reading
- Multiply your drop 60 (mins to hours) to work out the infiltration rate (mm/hr)

Why is infiltration rate a valid measurement for our investigation?

_____
_____
_____
_____
_____

Why are we measuring in mm and not cm

_____
_____
_____
_____
_____

Can you identify any other justifications or limitations of our method?

_____
_____
_____
_____
_____

How might these impact on the quality of our data and our conclusions?

_____
_____
_____

_____
_____

This recording has been taken in one location, can you suggest another location where the rate might be different and explain why?

_____
_____
_____
_____
_____

What sort of sampling strategy could be useful in getting a representative sample based on your last answer?

_____
_____
_____
_____
_____

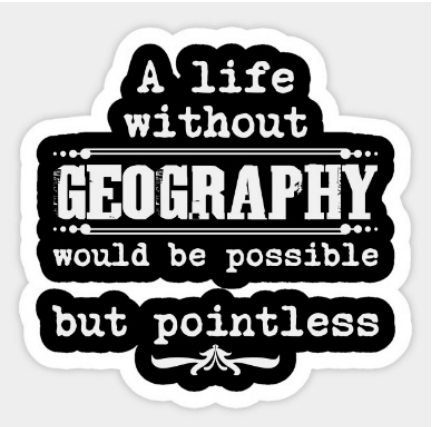
Use this link https://bit.ly/fieldworkliveHydrologyData to add your soil texture and soil infiltration rate (mm/hr) data from your own experiments. We are using the Survey 123 app to collect a geo-located big data set.

Why might it be useful to create a large geolocated dataset for soil type and soil infiltration?

_____
_____
_____
_____
_____

What further investigations could be done with this big dataset?

_____
_____
_____
_____
_____



BONUS EXTRA: If you have enjoyed learning about Geographical Skills then check out https://www.geography-fieldwork.org/a-level/#primary-nav
You could even **design your own mini study on your local area** using the resources as a guide.

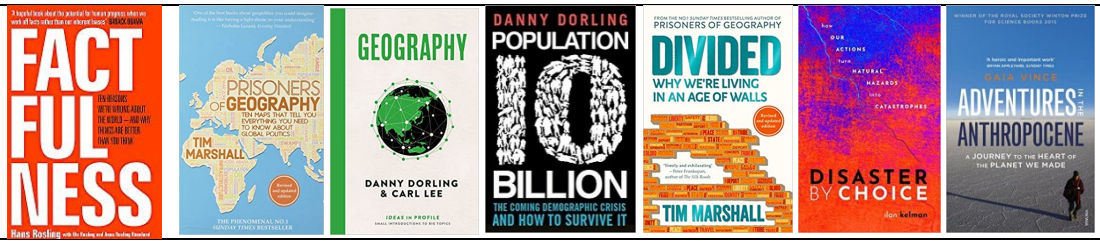
Congratulations you have completed your A Level Geography Bridging Unit.

ONCE A GEOGRAPHER, ALWAYS A GEOGRAPHER!

The geography department would love for you to continue to stay cognitively engaged over the coming weeks and months. The following are suggestions, they are not compulsory, but we would love for you to engage in any that you find interesting.

Press Ctrl + click on the link to access these suggestions.

BOOKS



JOURNAL ARTICLES

FILMS

PODCASTS

Overheard – National Geographic Podcast	Planet Money – The economy explained
Science Weekly – The Guardian Podcast	RGS Online Lectures
Ask the geographer Podcasts	BBC Costing the Earth
The Development Podcast – World Bank	BBC The Documentary Podcast
The World Economic Forum Podcasts	Living Planet Podcast

TELEVISION

World economic forum videos	iPlayer Earth from Space
Royal Geographical Society Youtube	iPlayer Stacey Dooley on BBC Three
iPlayer Science and Nature Playlist	iPlayer Race Across the World
iPlayer Climate Change Playlist	iPlayer Africa with Ade Adepitan
BBC Earth	iPlayer Fashion Conscious

You might want to enter the
RGS - Young Geographer of the year competition 2021
'Remapping our lives'