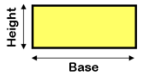
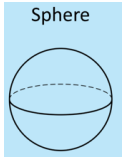
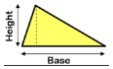
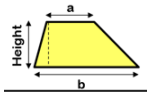
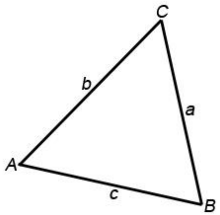
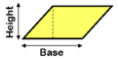
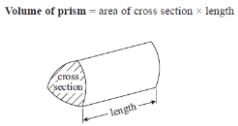
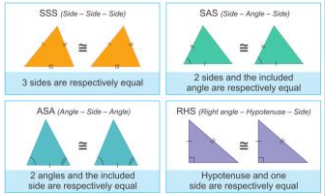
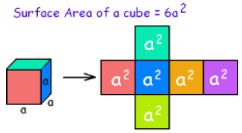
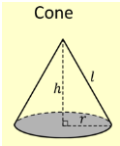
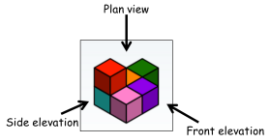
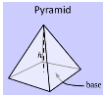
Year 10 – Maths - Volume, Surface Area, Similarity and Advanced Trig

1	Area of rectangle	Base x height		9	Volume of a Sphere	$\frac{4}{3}\pi r^3$	
2	Area of triangle	$\frac{(Base\ x\ height)}{2}$		10	Surface area of a sphere	$4\pi r^2$	
3	Area of a Trapezium	$\frac{1}{2}(a+b)x\ h$ "Half the sum of the parallel sides times the difference between them"		11	Cosine Rule	$a^2 = b^2 + c^2 - 2bc\ \cos A$.	
4	Area of a Parallelogram	Base x Perpendicular Height		12	Area formula	Area = $\frac{1}{2}$absinC	
5	A Prism	A 3D solid which has the same 2D shape running all the way through it		13	Sine Rule	$\frac{a}{sinA} = \frac{b}{sinB} = \frac{c}{sinC}$	
6	Volume of a prism	$Area\ of\ cross - section\ x\ length$		14	Congruent	Shapes that have exactly the same lengths and angles in any rotation	
7	Surface Area of a 3D solid	The sum of all the 2D faces		15	Congruency Tests for Triangles	SSS- Side, Side, Side ASA-Side, Angle, Side SAS-Side, Angle, Side RASH-Right angles, side, hypotenuse	
8	Volume of a cone	$\frac{1}{3}\pi r^2 h$		16	Similar	Shapes that have the same angles but are not the same size and whose lengths are in the same ratio.	
9	Surface Area of a Cone	$\pi rl + \pi r^2$		17	Plan View	The 2D outline of a shape from above	
10	Volume of a square based pyramid	$\frac{1}{3}x\ area\ of\ base\ x\ height$		18			

<u>The circle song:</u>
"Circumference is pi times diameter, pi times diameter, pi times diameter (repeat) and area is pi r squared"

Year 10 – Art - Term 3 + 4– Culture

1	**Different qualities of darkness and light.**	**Tone**	**16**	**A plastic mat that printing ink is spread onto.**	**Plate**
2	**The feel of a surface e.g. rough/ smooth.**	**Texture**	**17**	**A process where a print is added over the top of an existing print.**	**Over printing**
3	**A mark made by a point moving on a surface.**	**Line**	**18**	**Adding decorations to an existing object or artwork e.g. a print.**	**Embellishment**
6	**Different Hues caused by light refracting on a surface.**	**Colour**	**21**	**A surface decoration process where oil pastel is first put onto a page and then an ink wash is added over the top.**	**Batique**
7	**The space within a painting or sculpture that contains the important objects/ information.**	**Positive space**	**22**	**A surface decoration process where a thin watery layer of ink or paint is painted onto a page.**	**Wash**
8	**The space within a painting or sculpture that does not contain the important objects/ information.**	**Negative space**	**23**	**A surface decoration process where colured paint is gradually added to white to create a gradiated tone.**	**Tint**
9	**The arrangement of objects within an artwork.**	**Composition**	**24**	**A surface decoration technique where images/patterns are created using pieces of paper.**	**Collage**
10	**A design that has elements that are repeated.**	**Repeat Pattern**	**25**	**A surface decoration technique where ink is flicked onto a page using a brush.**	**Splatter**
11	**A soft plastic material used for lino cut relief printing.**	**Lino**	**26**	**A surface decoration technique where very strong powdered pigment is added to a wet page.**	**Brusho**
12	**A tool used to apply a thin, evenly layer of ink onto a surface.**	**Roller**	**27**	**A surface decoration technique where a wet material e.g. ink is added to an already wet surface.**	**Wet on Wet**

	1	2	3	4	5	6
	Poem	The poet explores …	More precisely…	The poet deliberately uses…	For example…	In other words…
A	Ozymandias by Percy Bysshe Shelley	Power	How all power is fleeting (doesn't last).	Oxymorons/ juxtaposition	"Nothing beside remains. Round the decay of that colossal wreck"	Aside from the ruins, nothing else is left of the statue's intimidating presence.
			The cruelty, oppression and corruption of those in power.	Imagery	"sneer of cold command"	The statue's facial expression is a scowl of superiority and unfeeling control – as if Ozymandias is scornful and disdainful of his subjects.
			The insignificance and impotence of humans in the face of nature/ time's power	The resolution	"Lone and level sands stretch far away"	All that is left is desert as far as the eye can see; nature has reduced the 'vast', 'colossal' statue to nothing but dust; nature and time are 'level[lers]' –they eventually reduce all things/ people to equal status.
		Pride.	The danger of pride and arrogance.	Symbolism	"My name is Ozymandias, King of Kings, Look on my works ye mighty and despair!"	Ozymandias's arrogant inscription upon his 'pedestal' taunts other rulers to give up, because his kingdom is so impressive they can never compete.
B	London by William Blake	Power	The cruelty, oppression and corruption by those in power.	Imagery	"blackning church appals" "hapless soldiers sigh runs in blood down Palace walls"	Blake points the finger of blame at the Church and the monarchy for the oppression and corruption in London.
			The potential power of individuals to overcome oppressive regimes.	metaphors	"the mind-forged manacles"	Blake portrays Londoners as carrying responsibility for limiting themselves; they have created restrictions in their own minds. He wanted Londoners to rise up against their oppressors.
		Conflict	Between an individual and 'the system'; the poem is a protest against injustice	Repetition/ juxtaposition	"I wander through each chartered street Near where the chartered Thames does flow,	As Blake walks, without purpose, through London's streets he can't help but notice how every part of the landscape is owned and controlled. Even the river itself is 'chartered'
		Loss of Innocence	The corruption of the innocent by those in power.	ambiguous words/	"youthful Harlots curse Blasts the new-born Infants tear"	On one level, a young prostitute swears at her crying baby. On another level, the prostitute passes on her STIs to her innocent child.
C	Storm on the Island by Seamus Heaney	Conflict	The conflict between man and the natural world	oxymoron	"exploding comfortably"	Although the sea is sometimes a 'comfortable' and friendly neighbour, at others it can suddenly and unexpectedly turn into a violent and aggressive force.
				simile	"spits like a tame cat turned savage"	
		Power	The insignificance and impotence of humans in the face of nature's power	metaphor	"We just sit tight while wind dives and strafes invisibly"	The speaker reveals the Islanders' powerlessness – they can only sit and endure the relentless attack of the intangible weather – which seems to bombard them like artillery fire.
		Appearance versus reality	At first the Islanders appear in control, only to reveal their inner fear and turmoil.		"We are prepared: we build our houses squat"	The poem opens with the stubborn and proud statement of the Islander's resilience to the weather – they are ready and they have adapted their environment to survive the hostile conditions. However, by the resolution, the speaker reveals their unsettled fear of the intangible force of nature.
					"Strange, it is a huge nothing we fear."	

	1		3	4	5	6
	Poem	The poet explores…	More precisely…	The poet deliberately uses…	For example…	In other words…
D	Extract from 'The Prelude' by William Wordsworth	Power	The insignificance and impotence of humans in the face of nature's power	Personification	"a huge peak, black and huge… upreared its head"	The speaker personifies the enormous mountaintop as looking like a monster, lifting up its head and beginning to chase him.
		Loss of Innocence	The loss of the naïve confidence of youth in the face of experience.	Contrast	"As I rose upon the stroke my boat went heaving through the water like a swan"	As the speaker rows out across the lake his movements are confident and graceful; like an elegant swan, he feels at one with nature.
					"With trembling oars I turned, and through the silent water stole my way"	As the speaker returns, his movements are nervous, scared and embarrassed, he has been humbled by nature; his confidence is lost.
		Conflict	The conflict between man and the natural world	imagery	"no familiar shapes remained, no pleasant images of trees, Of sea or sky"	After seeing the 'spectacle' the speaker's relationship with nature has changed; the pleasant imagery has gone from his mind and has been replaced by a realisation of nature's immense power over man.
		Memory	The memory of a traumatic experience haunts the speaker		"huge and mighty forms that do not live …were a trouble to my dreams"	The memory of his experience and the immensity of the natural world is causes the speaker to have nightmares and troubled sleep.
E	Checking Out Me History by John Agard	Power	The power of individual identity.	Resolution / metaphor	"Now I checking out me own history I carving out me identity"	Agard triumphantly claims that he is etching out/ crafting his own personal identity by researching his own Black History.
			The power of positive role models	Imagery	"A healing star / Among the wounded/ A yellow sunrise to the dying"	Using imagery of light and hope, Agard describes Mary Seacole's role in helping the wounded in the Crimean war. He too is shining a 'light' on black history.
			The power of language	dialect	"Dem tell me"	By using the Caribbean dialect and non-standard English, Agard reclaims power over history but also over language.
		Conflict	Between an individual and 'the system'; the poem is a protest against injustice	metaphor	"Dem tell me wha dem want to tell me/ Bandage up me eye with me own history"	The unspecified 'dem' (perhaps teachers or government) have only taught Agard white history – they have figuratively blinded him to his own personal identity by keeping him ignorant of inspirational black role models.
F	The Emigree by Carol Rumens	Conflict	The psychological effects of warfare	Ambiguous imagery	"my city comes to me in its own white plane"	The speaker has been forced to leave her homeland physically, but cannot leave it behind psychologically. Perhaps the 'white plane' is the paper on which she writes her memories. Or perhaps it's a 'plane' as in a dimension; a space within her mind.
		Memory	The power of positive memories	metaphors	"I am branded by an impression of sunlight"	The speaker is permanently (and violently) marked by a positive and hopeful image of her homeland; her childhood experiences will remain forever with her.
					My original view… the bright filled paperweight"	Despite her home country having been torn apart by conflict, the speaker's memory of it (as she knew it in childhood) remains solid, clear and unchangeable.
		Power	The power of Language	metaphors	"It may be a lie, banned by the state but I can't get it off my tongue. It tastes of sunlight"	Although her home language has been suppressed – speaking it and learning it still gives the speaker a feeling of hope and power.

	1		3	4	5	6
	Poem	The poet explores…	More precisely…	The poet deliberately uses…	For example…	In other words…
J	War Photographer by Carol Ann Duffy	Conflict	The psychological effects of warfare	metaphor	"his hands, which did not tremble then/ though seem to now"	Although the speaker was calm while taking the 'spools of suffering', the traumatic experience has caused his hands to shake while re-living those moments as he develops the photographs .
			The speaker's bitter resentment at society's indifference to the suffering.	bathos	"The reader's eyeballs prick with tears between the bath and pre-lunch beers"	The speaker bitterly describes the uncaring indifference of the reading public; the small amount of empathy they might feel will soon be forgotten in their ordinary, peaceful routines.
				The resolution	"He stares impassively at where he earns his living and they do not care"	As he surveys the landscape of 'rural England' from the aeroplane, there is a growing acceptance that, despite his best efforts, his photographs will ultimately make no real difference.
		Memory	The memory of a traumatic experience haunts the speaker	imagery	"A stranger's features faintly start to twist before his eyes, a half-formed ghost"	Literally - as the photograph develops, the subject of the picture becomes clearer. Figuratively the now dead man he photographed haunts the speaker's memory.
		Appearance versus reality	The speaker presents himself as calm and controlled, only to reveal his inner disturbance.	Juxtaposition.	"Spools of suffering set out in ordered rows"	The chaos of the war zone is contrasted to the order, calm and structure of the speaker's 'dark room'.
K	Remains by Simon Armitage	Conflict	The psychological effects of warfare	turning point	"End of story, except not really"	Although the speaker's anecdote ends there, this was not the end of the incident for the speaker; the trauma has affected him ever since.
		Memory	The memory of a traumatic experience haunts the speaker	metaphor	"He's here in my head when I close my eyes, dug in behind enemy lines"	The memory of the looter the soldiers killed **remains** in the speaker's head, it is as if the unwanted memory has snuck behind the speaker's conscious 'defences'. Behind enemy lines means into the speaker's subconscious mind.
		Power	The power of language	Casual / slang language	"One of my mates **tosses** his guts back into his body / then he's **carted** off in the back of a lorry"	In the first half of the poem, the speaker uses casual, anecdotal language to describe the gruesome experience as if it is an everyday occurrence – something the soldiers are used to.
		Appearance versus reality	The speaker presents himself as calm and controlled, only to reveal his inner disturbance.	repetition	"Probably armed, possibly not"	This line, spoken casually at the begging, and repeated with gravity at the end of the poem, reveals the source of the speaker's intense guilt - doubt as to whether the looter was innocent.
				Resolution/allusion	"his bloody life in my bloody hands	The speaker feels as though he has the looter's blood on his hands – a metaphor for the guilt he feels for the looter's death.
L	Kamikaze by Beatrice Garland	Conflict	The psychological effects of warfare	Narrative perspective	"Sometimes, she said, he must have wondered which had been the better way to die"	The pilot's wife wonders if the pilot ever considers whether his living death – being shunned by his family and friends – is worse than the Kamikaze death he avoided.
			Conflict within family relationships; a wife's rejection of her husband.	Narrative voice	"We too learned… to live as though he had never returned"	Even the pilot's grandchildren learn by the example of their elders – to shun and ignore their grandfather. Revealing how cultural norms spread across generations.
			The conflict between an individual and society's expectations	symbolism	"a shaven head full of powerful incantations." "enough fuel for a one-way journey into history"	The shaven head, Samurai sword and prayers all symbolise adherence to the strict Bushido honour code of death before defeat. Japanese Kamikaze pilots were expected to die in battle by crashing their planes into enemy ships.

	1	2	3	4	5	6
	Poem	The poet explores …	More precisely…	The poet deliberately uses…	For example…	In other words…
G	Exposure by Wilfred Owen	Conflict	Between an individual and the system; the poem is a protest against injustice	Question repetition	"What are we doing here?" + "but nothing happens"	Owen's speaker directly challenges and questions the government and authorities responsible for the soldier's predicament. Owen sought to expose the pity of war.
				imagery	"we cringe in holes"	The soldiers tremble helplessly like animals in holes – this image is the antithesis of glorifying war. Owen presents the soldiers as pathetic and hopeless.
			The insignificance and impotence of humans in the face of nature's power	Metaphors/ personification	"the merciless iced east winds that knive us"	The German army is absent from the poem, the only enemy attacking the soldiers is the weather – firstly the wind stabs them, and then dawn – usually associated with hope- brings nothing but waves of depressing grey rain.
					"dawn massing in the east her melancholy army… attacks once more in shivering ranks of grey"	
			The psychological effects of warfare	metaphor	"all their eyes are ice"	Literally - many soldiers have frozen to death from exposure to the freezing conditions. Metaphorically, the burying party's eyes are cold and unfeeling – perhaps to cope with the horrific act of burying their comrades.
					"we hear mad gusts tugging on the wire, like twitching agonies of men among its brambles"	The sound of wind pulling on the barbed wire reminds the soldiers of the dying moans of fallen soldiers –perhaps a sign of PTSD.
H	Bayonet Charge by Ted Hughes	Conflict	The visceral experience of fighting	Repetition/ imagery	"Raw in raw-seamed hot khaki"	The soldiers are both 'raw' recruits (new and inexperienced soldiers) and their skin is rubbed 'raw' (exposed like fresh meat) by the heavy and uncomfortable material of their 'khakis' (army uniform).
			The conflict between man and the natural world; in this poem it is man destroying nature.	imagery	"The shot-slashed furrows threw up a yellow hare"	The bullet ridden field figuratively vomits up a dead hare (large rabbit). It is as if nature itself is being attacked; nature suffers collateral damage from the war.
			The psychological effects of warfare	Simile/ bathos	"King, honour, Human dignity, etcetera dropped like luxuries"	The speaker's initial motivations for fighting: patriotism, glory and even a basic sense of self-worth all become irrelevant and inessential as he charges across no man's land; al that matters is staying alive.
		Loss of Innocence	The speaker's realisation of the cold indifference of those in charge	Metaphor/ question	"In what cold clockwork of the stars and the nations was he the hand pointing that second?"	The speaker questions which distant and unfeeling cogs of government and fate have led to him having to charge in that moment. In other words he questions why he is there.
I	Charge of the Light Brigade by Alfred Lord Tennyson	Power	Indifference of those in power to individual suffering		"the soldier knew someone had blundered"	This line is a reference to the commander who mistakenly gave the order to charge at the Russians – a suicide mission and the soldiers knew this.
				Rhyming couplets	"theirs not to reasons why/ Theirs but to do and die"	It was not the soldier's place to question the orders of their superior officers (even if they knew 'someone had blundered'). It was considered brave and honourable to unquestioningly follow orders.
		Conflict	The visceral experience of fighting	imagery	" flashed all their sabres bare, / Flashed as they turned in air"	Tennyson glorifies and glamorises the fighting of the Light Brigade in this image of their flashing swords and elegantly leaping horses.
			Glorifying and celebrating the bravery of the	repetition	"boldy they rode"" Noble six hundred!"	Tennyson glorifies, praises and celebrates the soldier's futile charge

	1		3	4	5	6
	Poem	The poet explores…	More precisely…	The poet deliberately uses…	For example…	In other words…
L	Poppies by Jane Weir	Conflict	The psychological effects of warfare *on the mother*	simile	"I traced the inscriptions on the war memorial, leaned against it like a wishbone"	The speaker touches the engraved names on the war memorial and leans against it – perhaps crying in grief at her son's death.
			Conflict within family relationships; a mother' s grief over her son growing independence (and death?).	metaphor	"Smoothed down your shirt's upturned collar, steeled the softening of my face."	The speaker remembers her son's first day of school, how she straightened his uniform and how she had to be strong and stop herself from crying.
		Memory	The memory of a traumatic experience haunts the speaker	ambiguity	"I listened, hoping to hear your playground voice catching on the wind"	In this ambiguous line perhaps the mother – in grief at her son's death – hopes to hear his voice in the wind. Or perhaps the mother haunts his school playground – her son now at school and no longer dependent on her.
N	Tissues by Imtiaz Dharker	Power	The power of material objects	simile	"fine slips from grocery shops…might fly our lives like paper kites"	Receipts for the things we buy seem to control our lives; we are too dependent on money and material objects.
			The power of language		"paper that lets the light shine through, this is what could alter things"	Thin and fragile paper can actually be very powerful – it can change the world.
			The insignificance and impotence of humans in the face of nature/ time's power	metaphor	"with living tissue, raise a structure never meant to last"	the structure made with 'living tissue' is of course he human body; although we convince ourselves it will last forever, we will all eventually die.
		Pride	The conflict between the individual human and society's values.	symbolism	"let the daylight break through capitals and monoliths, through shapes that pride can make"	Light here is hope; the poet challenges us to see past the structures the powerful and arrogant create to intimidate and control us– we should realise these too won't last.
O	My Last Duchess by Robert Browning	Conflict	Conflict within family relationships; A husband's obsessive, and murderous attempts to control his wife.		"Since none puts by the curtain… but I "	In other words although the Duke could not control his wife in life, he has finally gained control of her by sinisterly controlling access to her painting.
					"This grew; I gave commands; then all smiles stopped together."	His anger at the situation increased, and so he gave orders for her to be killed. And therefore she stopped smiling.
		Power	The Power of Language	caesuras	"She had a heart—how shall I say?— too soon made glad"	The Duke seems to stop and consider his wording, almost as if he is trying not to reveal too much. He seeks to control the impression he is making.
			The power of material objects	caesura	"I call That piece a wonder, now"	The telling pause reveals the Duke's materialistic opinion that his ex-wife is a 'wonder' only once she has become an object; he values her more as a painting than he did as a person.
		Appearance versus reality	The Duke' narrative reveals more about his motivations than he meant to present	ambiguity	""His fair daughter's self … is my object"	The Duke claims his 'objective' is to win the daughter of the Count as his new wife for her self, but his use of the word 'object' reveals his underlying motivations – to add a new possession to his collection.

PHYSICAL FIELDWORK: Is coastal engineering effective in managing erosion along the North Norfolk Coastline?'

WHERE WE WENT:
We visited three location along the North Norfolk coastline: Sheringham, Overstrand and Sea Palling. The county of Norfolk is located on the east coast of the UK, next to the North Sea.

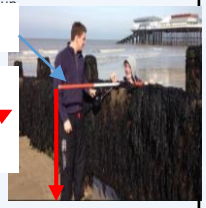
WHY WAS IT SUITABLE?

- The location was suitable as it is only a 3 hour drive from school, we were able to stay in residential centre that met our budget requirements.
- The centre provided us with expert guidance on locations in North Norfolk.
- There is evidence of erosion on the North Norfolk Coastline. The coastline here is at risk of erosion due to the geology – the underlying rock is clay, which is soft and erodes very quickly by the waves.
- The fetch is the distance the waves travel before they reach the coastline. In North Norfolk, the waves travel 4000 miles from the Arctic = very strong destructive waves are common here.
- In North Norfolk different strategies are used to prevent erosion along the coastline. It is an appropriate location because there are different types of strategies to protect the coastline in three different sites, this will allow us to compare the effectiveness of each different engineering strategy.

❖ RISK ASSESSMENT FOR THE THREE STUDY SITES

ACTIVITY	THE RISK	HOW CAN WE REDUCE THE RISK
Walking to each site where there are uneven and slippery surfaces	Slips, trips and falls	• Wear appropriate footwear • Avoid wet slippery rocks • Always follow footpaths, follow instructions of teachers and leaders.
Collecting data on the beach. Collecting data on the cliff tops.	Rising tides, drowning. Falling off the cliff top, slipping.	• Always stay 5 meters away from water's edge at all times • Group leaders check tide times • Group leaders have knowledge of where the safe areas are. • Group stays 5m away from edge of cliff
Being in the outdoors: cold, wet weather.	Colds, flu and hypothermia	• Check weather forecast before visit • Students have appropriate cold weather clothing • Students have breakfast lunch and dinner
Walking along busy [redacted]	Danger of traffic, crossing [redacted] busy r[redacted]	• Always stay on pavement • Use designated crossings [redacted] Wait f[redacted]n mar[redacted]s road[redacted]

❖ DATA COLLECTION METHODS

	Description and our methodology (how we collected the data)	Why it is appropriate?	Limitations and how we can improve
PRIMARY	**A field sketch** is a simple drawing or sketch of a site, showing its key features. Equipment – a pencil, rubber, clipboard and camera 1. I chose a location where I could see as many engineering structures as possible. 2. I decided the frame I wanted to draw. Where to start and stop drawing (e.g. *From the lighthouse to the sea wall).* 3. After I had drawn my field sketch of the coastal management structures, I annotated the drawing, describing in detail each feature I had drawn. 4. I also annotated the field sketch with the date, time, weather conditions and compass direction. We used **stratified sampling**. We collected one field sketch at each location we went.	**Advantages** Our field sketch showed the different sea defences at each site. It showed what was happening on the day we visited and we made sure it include all the relevant features for our study. We took photographs to improve the accuracy.	• If the weather is bad, it can prevent the ability to carry out a field sketch. • The conditions change constantly. The same site could look completely different within an hour of time or in the morning and afternoon. *e.g. in the morning the tide could be low and then in the afternoon, the tide could be high = different field sketch of the same site.* **Improvements** • Instead of drawing and annotating a field sketch I could take a photograph and annotate this on the day. This would improve the data collected as it doesn't rely on my ability to draw accurately. *We could also take a panoramic. photograph to show a larger area.* • On return to school further research can be done about each site to check annotations up to date.
	Wave counts are used to categorise the waves. Equipment- a stopwatch. 1. I selected a point in the sea where the wave were breaking (turns white) 2. I started the stop watch and counted the number of waves that broke at my chosen point within 60 seconds. 3. I decided if the wave were constructive or destructive using these categories. • *11-15 destructive waves break every minute* • *6-9 constructive waves break every minute.* 4. I repeated this process three times and worked out the average We also used **random sampling** as we selected a random point where they waves were breaking to start our counting.	**Advantages** This primary data method was carried out three times to work out an average = more reliable. The same person counted the number of waves each time so It effectively allows us to work out whether the waves are constructive or destructive at each site.	• Weather can influence the data. If there is a storm/strong winds it will make the waves look more destructive than they normally are. • The conditions could change throughout the day. Therefore a recording in the morning might be different than a recording in the afternoon. • The conditions could change at different points on the same beach. As a result, each group could record different wave counts during the same minute. **Improvements** • Repeating the wave count more than 3 times = more reliable. • Repeating the test at different sites along the beach = more accurate measure of wave type. *e.g. every 100metres along the beach.* • Repeating the test another day (*each month) will increase accuracy*.
	A groyne profile measures the build-up of sediment on either side of the groyne. Groynes trap sediment being transported by longshore drift. As a result sediment builds up on one side of the groyne, which means we can work out the direction of longshore drift. Equipment- two ranging poles, two measuring tapes. 1. In groups of 3 we stood by the groyne 5 metres from the sea edge. 2. We placed a 2 metre long ranging pole horizontally across the groyne at a right angle to the groyne. 1 metre was to the right of the groyne and 1 metre was to the left of the groyne.(see picture). 3. We used a tape measure to measure the distance from the end of the ranging pole to the beach floor (ground). We repeated this so that we measured the distance between the pole and the ground on either side of the groyne. This showed us the height of the sand on either side of the groyne. 4. We repeated this test, every 2 metres up the groyne until we had measured the distance to the sand the whole way along the groyne. We used **systematic sampling** as we used the ranging pole to measure every two metres up the beach.	**Advantages** This tells us the direction of longshore drift as the groynes prevent the transportation of sediment. Therefore the sediment builds up  	• Human error: some people might stretch the tape measure tighter than others others may have the tape very lose or twisted = different measurements recorded. • Water and rock pools often build up at the base of groynes, this can prevent people from being able to take a measurements. • The tide times must also be taken into consideration, we can not measure the sediment if the sea is covering it. **Improvements** • Repeating the same measurements all the way along the beach at different groynes will increase reliability of the data. • Using an electronic measuring tape or laser will improve accuracy as it will reduce the likelihood of human error. • Repeating the measurements over time will increase the reliability of the data. (e.g Every week or month)
SECONDARY	Maps: ➢ **GEOLOGY MAPS** were used to show us the rock type = clay. ➢ **OS MAPS** were used to help us locate where to collect the data. ➢ **HISTORICAL MAPS** were used to show the historical rate of cliff retreat. To see how much land has been lost to erosion over time.	**LIMITATIONS** • No map is entirely accurate, they are most accurate if they are showing a small area. **IMPROVEMENTS** • We must know how to read a map to ensure we are in the correct location. • If we used a map on a phone/Ipad, we would be able to use GPS location to more accurately check our location.	

	❖ DATA PRESENTATION	❖ ANALYSIS
FIELDSKETCH & PHOTOGRAPHS	Annotated drawings.	**Field sketch at Sheringham:** • Sea defences include: flat sea wall (concrete), rock armour (granite), groynes (wooden and rock), beach nourishment (stones). **Field sketch at Sea Palling:** • Sea defences include: curved sea wall (concrete), rock armour (granite), 9 offshore breakwaters. • Beach getting larger towards each offshore breakwater. **Field sketch at Overstrand:** • Sea defences include: wooden groynes, gabions, curved sea wall (concrete) • Evidence of mass movement on cliffs behind beach
WAVE COUNT	To present our data we used a proportional circle map, which uses circles to show data. The size of the circle indicates the value of data it is representing. *e.g. the bigger the circle, the more waves per minute.* It is appropriate because the data is visible at each different location. This is much easier to see and analyse than using a bar chart.	**Wave count at Sheringham shown in the proportional circle map:** • Number of waves recorded : 13, 13, 14 = average of 13 waves per minute = destructive waves. **Wave count at Sea Palling shown in the proportional circle map:** • Number of waves recorded : 7, 8, 8 = average of 8 waves per minute = constructive waves. **Wave count at Overstrand shown in the proportional circle map:** • Number of waves recorded : 10, 11, 12 = average of 11 waves per minute = destructive waves.
GROYNE PROFILE	You need to show the different sediment build up on each side of the groyne. A bar chart with EAST and WEST data shown next to each other is best to show the sediment build up on either side of the groyne. The bars are inverted (turned upside down) to show the measurement we completed.	**Groyne profile at Sheringham** • The bars are shorter on the east side of the groyne. This shows the groyne is effective at trapping sediment being transported by longshore drift. *e.g. at 13 metres from the sea, the distance from the top of the groyne to the sediment on the east side of the groyne is 1.01m, whereas on the west side, it is 1.33m. Therefore there is more sediment on the east side than the west side of the groyne.* • There is an anomaly at 9 metres away from the sea, where the bar is longer on the east side of the groyne. The distance to sediment is 0.97m on the east side and 0.95m on the west side. **Groyne profile at Overstrand** • The bars are shorter on the west side of the groyne. This shows the groyne is effective at trapping sediment being transported by longshore drift. Having said this, the difference in sediment build up on either side of the groyne at Overstrand is very small = only a little bit effective. *e.g. at 15 meres from the sea, the distance from the top of the groyne to the sediment on the west side of the groyne is 1.2m, whereas on the east side it is 1.3m. Therefore there is more sediment on the west side than the east side of the groyne.* • There is an anomaly at 13m from the sea where there is more sediment on the east side of the groyne, but the difference is only 4cm.
MAPS	The historic maps from 1886 (125 years ago) are placed next to OS maps from 2016 to easily see the differences.	• **Historical maps and OS maps** at all locations show there has been erosion along the coastline in North Norfolk at all three sites. There is less evidence of erosion in Sheringham, than Overstrand and Sea Palling. In both historical maps of Sea Palling and Overstrand, there is no evidence of historic coastal defences. • **Geology maps** shows that the entire North Norfolk coastline is a clay rock type = soft.

❖ CONCLUSIONS

Our results show that coastal engineering is effective at all three sites, however is it more effective at Sheringham and Sea Palling than Overstrand.

➢ **Coastal engineering is effective at Sea Palling**. The field sketch shows the beach is getting larger. More specifically deposition is occurring towards the 9 offshore breakwaters. Additionally, while the waves at Sheringham and Overstrand are destructive, the wave count at Sea Palling showed the waves there are constructive. This is due to the offshore breakwaters, shown on the field sketch and OS map. These are large boulders in the sea, that run parallel to the coastline and absorb the wave's energy. These are an effective coastal engineering structure as they reduce the energy of the waves, turning them from destructive to constructive. The constructive waves deposit material which is making the beach larger.

➢ **Coastal engineering is effective at Sheringham.** Sheringham is at risk of erosion due to the destructive waves (shown by the wave count) and the soft rock (shown by the geology maps). Having said this, comparing the historical and OS maps, there is less evidence of erosion in Sheringham than Sea Palling and Overstrand. This is due to the large number of coastal defence structures at Sheringham, as shown in the field sketch. Additionally, the groyne profile shows there is a build up of sediment on the east side of the groyne. This is, therefore, evidence that the groyne is effective at preventing the transportation of sediment by longshore drift = a larger beach = provide a natural barrier between the destructive waves and the settlement.

➢ **Coastal engineering is partially effective at Overstrand**. Overstrand is at risk of erosion due to the destructive waves (shown by the wave count) and the soft rock (shown by the geology maps). The historical and OS maps show evidence of cliff retreat. Additionally, the field sketch shows evidence of mass movement (slumping) on the slope at the back of the beach. This is due to the lack of coastal defences at Overstrand = higher risk of erosion. Additionally, the groyne profile shows only a very small difference in sediment height on either side of the groyne. This is evidence that the groyne is not as effective as the groynes at Sheringham.

OUR CONCLUSIONS ARE RELIABLE / UNRELIABLE because…

Wave Counts

✓ Each measurement was only slightly different from the data collected by each member of the group, as well as by the other groups collecting data at the same time.

✓ We repeated our wave count three times at each site and took an average.

✓ The same method was used at each site to compete the measurements at Sea Palling, Sheringham and Overstrand. The wave count was always completed 5 metres away from the sea, for 1 minute and repeated three times..

χ *The wave count was only repeated three times. Our results would be more reliable if we did the test more than three times or completed the test on multiple days.*

χ *Human error: the number of waves could be miscounted. Our data would be more reliable if we filmed the test or repeated the test many times.*

Groyne Profile

✓ The same method was always used to complete the data collection at each 2 metre point along the groyne.

✓ Data was collected using an accurate measuring tape. Additionally, the measuring tape was always kept tight when measuring the distance.

✓ Only two anomalies were recorded (data that does not fit the pattern). These were recorded at 9m from the sea at Sheringham and 13m from the sea at Overstrand.

✓ Each measurement is only slightly different from the previous data collected at the same location by a different group. There were four groups completing a groyne profile in the same location and their results were very similar to ours.

χ *Human error – some people might pull the tape measure tighter than another person = different results. Our results would be more reliable if we made sure the same person collected the data each time. Alternatively we could use an electronic measuring tape.*

χ *Rock pools next to the groyne sometimes meant that measurements could not be taken.*

Field Sketches

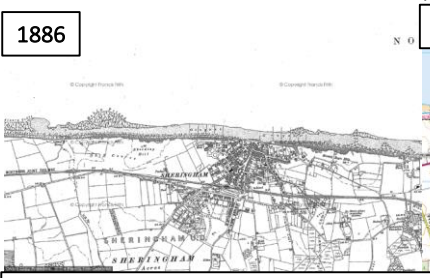
✓ We completed a field sketch of locations that had specific coastal management techniques in view. At all sites we made sure we could see as many different defences as possible.

χ *Field sketches are affected by the weather and tides. A beach can look very different at different times of the day or during different weather conditions. Additionally the whole landscape cannot be assessed as we cannot see behind the person drawing, this could be different to the environment seen in the sketch. This means that conclusions have been drawn on limited evidence, meaning our conclusions could be invalid.*

χ *Field sketches depend on your ability to draw. Therefore a field sketch of a location by one person can look very different to a field sketch of the same area drawn by another person. To overcome these limitations you could take a photograph and annotate it with its key features.*

Historical maps and OS maps today

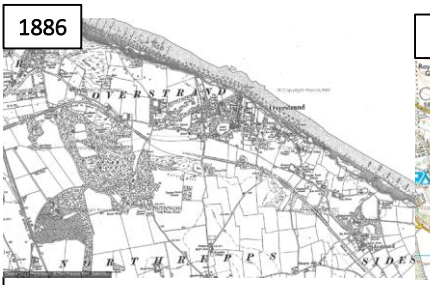
1886



2016

Using the main road as a locational focus between the two images , in **Sheringham** we can see there has not been significant retreat of the coastline.

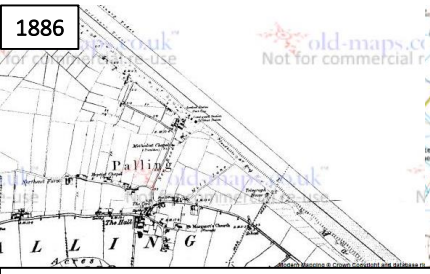
1886



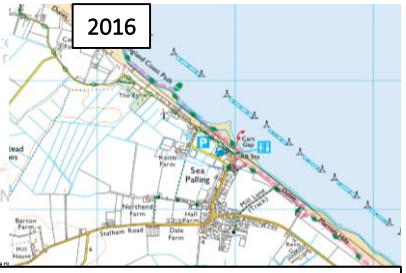
2016

Using the two maps, we can see that in **Overstrand** there is evidence of cliff retreat. Therefore there is evidence that erosion has occurred.

1886

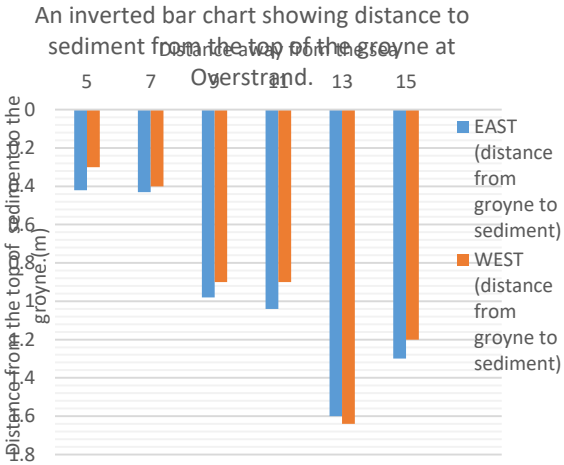


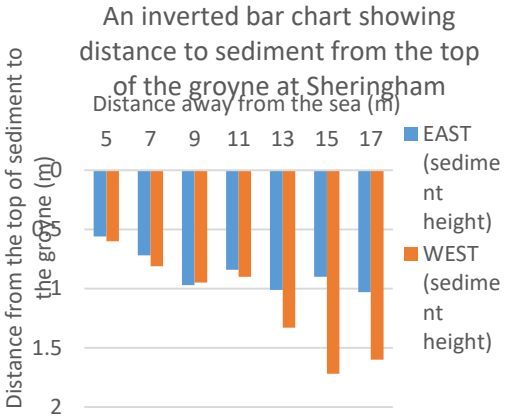
2016



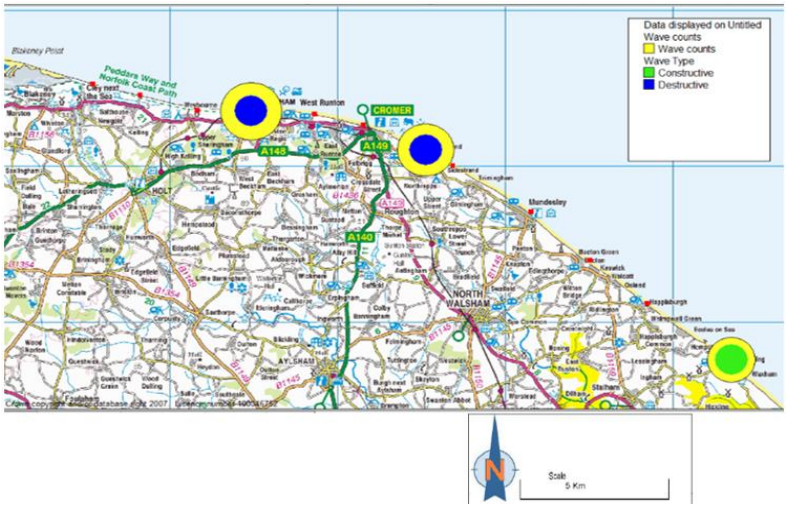
The cliff line in **Sea Palling** in the recent OS map is further inland than the cliff line in the historical map = evidence of erosion. There is a similar distance of retreat to Happiburgh. This could be an indication of why offshore breakwaters were built in 1995.

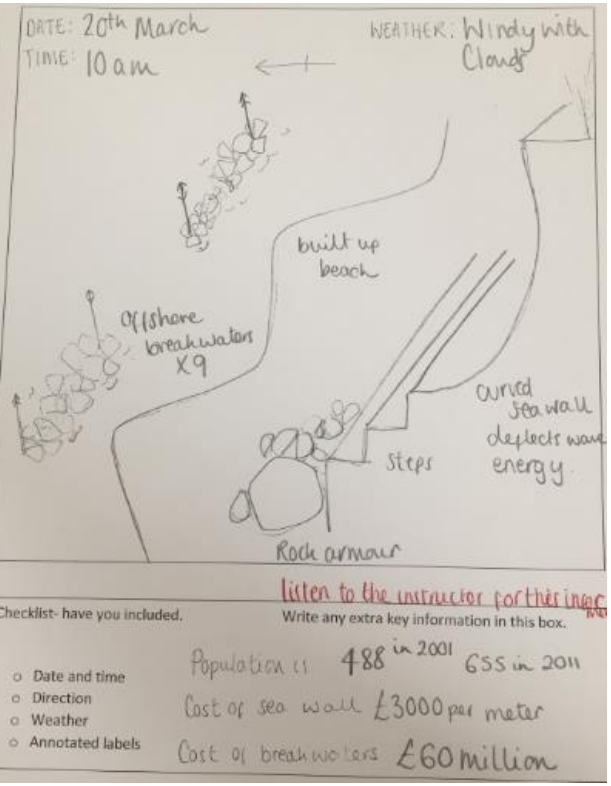
An inverted bar chart to show the data from the groyne profile test at Sheringham and Overstrand





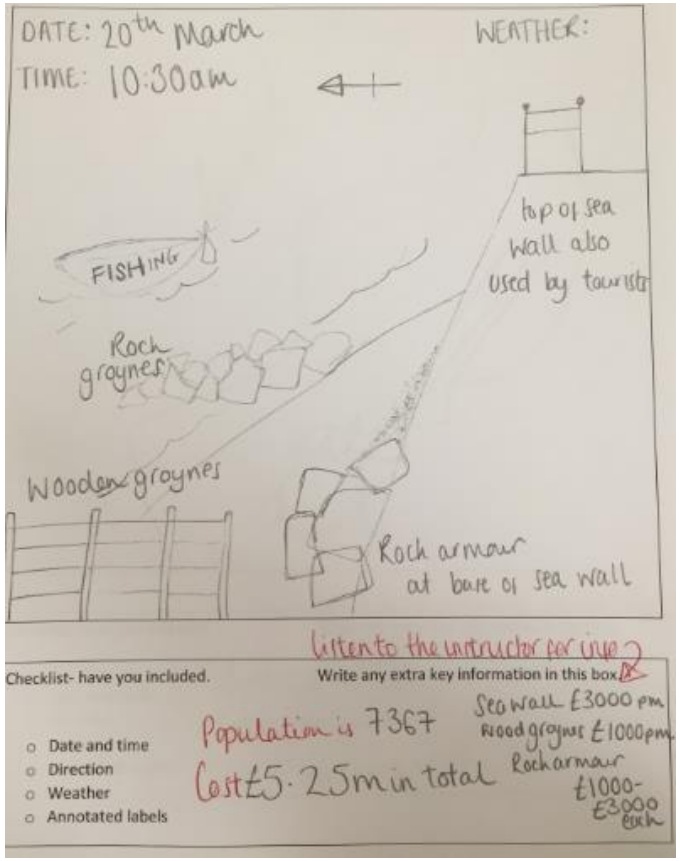
A proportional circle map showing the data from the wave count

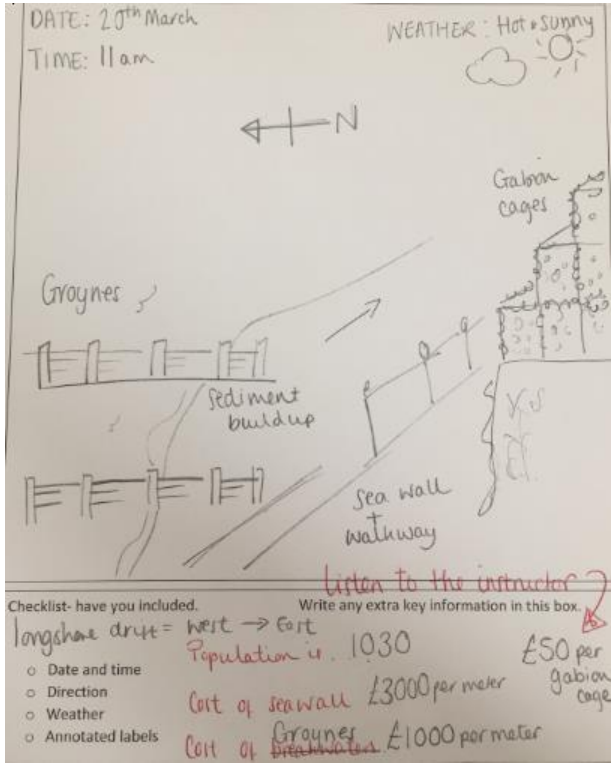




Sea Palling

Sheringham





Overstrand

HUMAN FIELDWORK: How is housing inequality evident in North Norfolk?

WHERE WE WENT:
We visited three location along the North Norfolk coastline: Sheringham, Happisburgh and Sea Palling. The county of Norfolk is located on the east coast of the UK, next to the North Sea.

WHY WAS IT SUITABLE?
- There are three contrasting urban areas with all within proximity of each other. Each site has a different: size of settlement, impact of coastal erosion, access to services and quality housing.
- The location was suitable as it is only a three hour drive from school, we were able to stay in residential centre that met our budget requirements.
- The centre provided us with expert guidance on locations in North Norfolk and all students were able to stay on site.

BACKGROUND THEORY
Urban deprivation is a standard of living that is below that of the average. Places suffering from urban deprivation have visible differences in housing and economic opportunities.

Despite the large wealth found in parts of North Norfolk, many areas suffer from both urban decline and the people suffer from deprivation. It is particularly hard for the poorest people to have a decent standard of living because the prices of many things are more expensive, especially rents which account for a huge proportion of peoples incomes.

Characteristics of Urban Deprivation:
- Poor quality housing - outside toilets, overcrowding, lack of services (hot water/central heating)
- Poor building maintenance = leaking roofs, broken windows or walls.
- Many empty buildings, and these have the potential to be vandalised.
- High levels of air, noise, land and water pollution
- Social characteristics of urban decay include high unemployment rates and high crime rates.

❖ **RISK ASSESSMENT FOR THE THREE STUDY SITES**

ACTIVITY	THE RISK	HOW CAN WE REDUCE THE RISK
Walking to locations- uneven, unsteady surfaces	Slips, trips and falls	• Wear appropriate footwear • Avoid wet slippery rocks • Always follow footpaths, follow instructions of teachers and leaders.
Collecting data in a public place	Danger of interacting with strangers	• Always remain in a group • Having a designated meeting area • Always keep an adult or teacher in sight.
Walking along busy roads	Danger of traffic, crossing busy roads	• Always stay on pavement • Use designated crossings • Wait for green man to cross road

❖ DATA COLLECTION METHODS

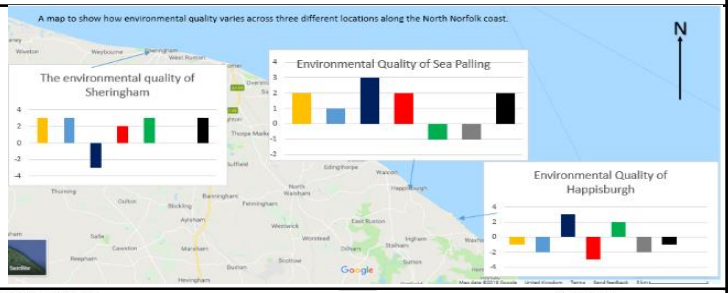
	Description and our methodology (how we collected the data)	Why it is appropriate?	Limitations and how we can improve
PRIMARY	**Bi-Polar Environmental Quality Survey** I completed a bi-polar survey at each site, to assess and compare the quality of the environment and housing to identify how it changes throughout North Norfolk. 1. I randomly selected locations in each urban site visited. 2. I judged the housing and environment using a bi-polar scale (-5 to 5+) on different criteria such as amount of dereliction, quality of building materials, evidence of green space and vegetation and overall feel of a residential area. *Sample size – a random location was chosen at each urban settlement. We used random sampling to avoid bias and because the area was quite large.*	**Advantages** This method makes it simple to judge the quality of an area and compare this with another area. This will help me identify the differences in several aspects of housing and the environment between the three locations in North Norfolk, and identify any inequalities that exists.	**Limitations** • It is subjective and can be biased as based on opinion. • Only assesses on a limited amount of criteria (housing, graffiti, litter…etc.). Certain aspects of the environment may be missed. • On different days the location might look different **Improvements** • Complete the bi-polar EQS at different sites within one area to gain a better overall picture of the area. Also comparing scores between groups to reduce subjectivity and bias.
	Photographs I took two photographs of the housing in each settlement visited (Sea Palling, Happisburgh and Sheringham). It gave us clear and precise evidence to help us identify differences in the quality of environment and housing between the locations in North Norfolk. *Sample – random. We randomly took 2 photographs of housing at each location, to avoid bias and capture a representation of large area.*	**Advantages** Photos give evidence to visually see the differences in quality of housing, between the 3 sites in North Norfolk and identify any inequality that exists.	**Limitations** • Only captures one particular moment in time, environments can change due to weather or at different times of the year. • Cannot see behind the photographer. As a result, the whole landscape and environment cannot be captured **Improvements** • Take more photographs so the 'whole environment' is covered. • Take pictures on different days and at different times to give a broader view of the environment.
	Land Value Survey was used to measure the value of the land in a certain area. 1. I counted every house for 200m along chosen streets. 2. I then estimated the amount of bedrooms each house had. 3. I then used secondary data to work out the average cost of each sized property 4. Calculated total cost of the land along each street by multiplying the number of each property type with its average cost. *Sample Size – stratified. This was to generate results which are more representative of the whole population It is very flexible and applicable to many geographical enquiries.*	**Advantages** Clear and simple evidence Effective in terms of meeting our hypothesis, as it will show the differences in land value between the three locations and help identify any inequalities that exist.	**Limitations** • Subject to personal opinion, because sometimes it is difficult to know exactly how many houses are in an area. • There could be two different land uses in the same block of land (e.g. flat above a shop). It can therefore be difficult to categorise as a whole. **Improvements** • When completing the land value survey we could use more categories to categorise types of building. Also using secondary data and asking residents and homeowners specific information about the size or cost of property rather than estimating.
SECONDARY	**Census Data shown on a choropleth map** Census data provides data on people and households in the UK (e.g. age, gender or employment) Mapping census data allows us to see the population's characteristics in a visual way and makes it easier to identify a settlements characteristics. *Why use it?* We can compare different geographical locations to compare information on all aspects of the population. For example, we can compare the populations in our three locations in terms of housing, income and other socio-economic differences.	**Advantages** It is the most accurate data available on the whole population of an area. It can be used to compare a wide variety of data and characteristics of a population (e.g. income, housing)	**Limitations** • It is only ever done every 10 years, which allows for high levels of change (for example areas could be effected significantly by migration over a decade). • It takes months to collect, during this interval data is subject to change. • Households can give false information accidently through incorrectly filling in forms especially, or indeed give misleading information about their household. **Improvements** • Use alternative secondary data sources – e.g. Crime data present on maps to show spatial variations and differences.

❖ DATA PRESENTATION

Bar charts shown over a map were used to show data from the Bi-Polar Environmental Quality Survey

✓ Good visual representation of data.

Alternatively a CHOROPLETH MAP could be used to simplify the data but still show the spatial variation.

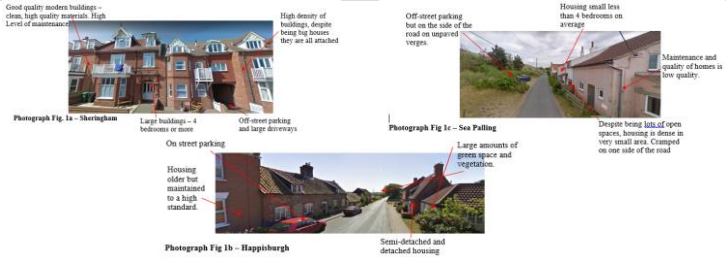


Annotated photographs

✓ Good memory tool, especially if accompanied with detailed annotations.

X Only show one view, at one point in time. Therefore may not be an accurate representation of the area

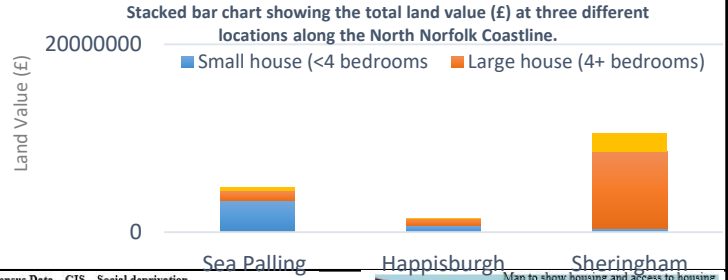
Alternatively we could have used FIELD SKETCHES. These would mean we could have focused on the features of the environmental and housing relevant to our hypothesis.



A stacked bar chart was used to show land value data.

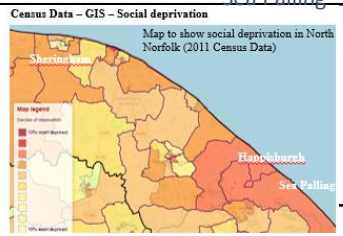
✓ Useful for comparing total values, as well as seeing the types of buildings found at each site.

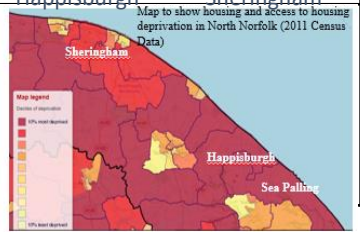
Alternatively we could have used PIE CHARTS to represent our data. It would show the percentage of each type of land use as each segment.



Census Data was shown on a choropleth map.

✓ Clear and visual to show data and identify differences.





❖ ANALYSIS

- The quality of the environment and housing in Sheringham was better than Sea Palling and Happisburgh, with Sea Palling having the worst quality environment and housing.
- For example, in Sheringham *building condition* scored +3 on the bi-polar scale, whereas in Happisburgh it scored +2 and in Sea Palling -1. This clearly shows a difference in the quality of housing and environment over the 3 locations.
- Despite this, in Sheringham the density of buildings was higher than both Sea Palling and Happisburgh, scoring -3 in comparison to +3 in Sea Palling. This is how close the buildings are to one another.

- In the photographs, I can clearly see the differences in quality of housing between the three different locations in North Norfolk. In Sheringham, houses are much larger, newer and are maintained to a better standard than Sea Palling. In SP, houses are older and poorly maintained.
- In Happisburgh, while houses are older they are of a good quality. Yet parking is located on the street unlike in Sheringham, which has some private driveways.
- In Sheringham the housing is closer together in comparison to both Sea Palling and Happisburgh where there is more open and green space.

- Overall the land value of Sheringham is the highest, calculated overall at £10,270,000, with £8,200,000 coming from 4+ Bedroom houses and £1,850,000 from services or other land uses.
- In comparison, Happisburgh has a land value of only £1,480,000, with the majority coming from houses with less than 4 bedrooms.
- Finally Sea Palling has an overall land value of £5,000,000 with £3,360,000 coming from smaller properties. However, one anomaly is that the overall land value in Happisburgh is significantly lower than of Sea Palling.
- This is not supported in the EQS or photos.

- In the census data choropleth maps, Sheringham is shown to have less social deprivation than Happisburgh and Sea Palling.
- Sea Palling and Happisburgh are in the 10% most deprived areas for social deprivation and housing deprivation within the UK.
- This is supported by the bi-polar environmental quality survey as the environment of Sheringham was better than both Sea Palling and Happisburgh.

❖ Conclusion and Evaluation

Our results show there is a housing inequality within North Norfolk. The quality of housing and environment differs significantly between Sheringham, Sea Palling and Happisburgh.

- This is supported by the land value of each location. Sheringham has greater land value than the other two locations combined. This is because the quality and size of the properties are much greater than both Sea Palling and Happisburgh. Our secondary census data supports, with Sea Palling and Happisburgh being recorded within the 10% of the most deprived areas in the UK. On the other hand, census data shows that Sheringham is recorded as being in the 50% of the most deprived areas and therefore is far less deprived than Sea Palling and Happisburgh. Clearly identifying there is evidence of housing inequality in North Norfolk.
- However, there is also a slight housing inequality between Sea Palling and Happisburgh. Environmental quality survey data and annotated photographs, show that housing in Happisburgh is much better maintained and is of better quality in comparison to Sea Palling, where houses are kept and maintained to a lower standard, cramped together with evidence of significant dereliction.

OUR CONCLUSIONS ARE RELIABLE because…

- Our results are reliable as data was collected at appropriate locations and is focused at contrasting locations across North Norfolk.
- Our results were also reliable as groups in our class had only slightly different results and judgements and they all collected that data at slightly different times.
- There were few anomalies in the data.

OUR CONCLUSIONS ARE NOT RELIABLE because of problems with data collection methods and impact on data and conclusions

Bi-Polar EQS

× These judgements area subjective and therefore could be biased.
× The survey was carried out in only a few locations and so large parts of the settlement were not recorded.
× Only seven categories were used which means not all parts of the environment and quality of housing were assessed. Therefore they do not give a true overall quality of the environment.

Photographs

× Taking photographs are evidence of a certain place at a certain time. The landscape could change significantly in different times of the day or year.
× The whole landscape cannot be assessed as we cannot see behind the camera.

Land Value Survey

× Only a limited area of each settlement was recorded = large areas of the settlements were missed = inaccurate value of the total land area.
× The value of land was also based on averages and not true land values.
× The size of properties was based on an estimate, not a true definitive fact.

This means that conclusions could have been made using limited and subjective evidence. This means the data could be biased or inaccurate, which would lead us to incorrectly conclude on true difference of housing between the locations. This would mean we have incorrectly answered our research question.

Improvements

Bi-Polar EQS – A larger sample size could be used for a greater understanding of the environment at each location. Also the data could be taken and discussed by more than one person to avoid bias.
Photographs – More photos giving a360 degrees view and larger sample size means there is evidence of the whole landscape, environment and overall housing quality.
Land-value – Use more categories to categorise all types of building. Use secondary data, or ask specific home owners specific information about the size of coast of their property

Year 10 - History Paper 2 –- Elizabeth Topic 3: Golden Age and Virginia

Timeline

1	**1541**	The closure of the monasteries-
2	**1550s**	Decline of the Cloth Trade.
3	**1558**	start of rapid population increase. During Elizabeth's reign the population of England increased by 25%
4	**1560s**	bad harvests led to food shortages and food price rises throughout the decade
5	**1567**	Thomas Harman publishes his pamphlet 'A Warning for Vagabonds'.
6	**1570s**	harvests led to food shortages and food price rises throughout the decade
7	**1572**	Vagabonds Act
8	**1576**	Act for the Relief of the Poor
9	**1577**	Francis Drake begins his circumnavigation of the globe.
10	**1579**	Drake captures the Cacafuego
11	**1583**	Elizabeth paid to set up her own company of actors – 'The Queen's Men'.
12	**1585**	First Expedition to America; Colony of Virginia founded at Roanoke
13	**1587**	Rose Theatre was built (10 years before The Globe.)
14	**1587**	Second Expedition to America.

Elizabeth's Protestant Advisors

16	Robert Dudley, The Earl of Leicester	Elizabeth's favourite
17	Sir Francis Walsingham	Elizabeth's spymaster
18	William Cecil	Elizabeth's chief advisor
19	Sir Francis Drake	First Englishman to circumnavigate the world by ship. Regarded by the Spanish as a pirate.

Elizabeth Topic 3: Golden Age and Virginia

19	Why was there an increase in poverty in this period?	1. **Closure of the Monasteries**: monasteries had provided food and shelter to the unemployed, sick and homeless. Henry VIII had closed the monasteries down by the late 1530s. 2. **Decline of the Cloth trade**: meant thousands of spinners and weaver were unemployed. 3. **Bad harvests**: were bad harvests in the 1560s and 1570s. Led to inflation (food prices increased) 4. **Population increase**: population of England increased by more than a quarter. Food was more expensive and there were not enough jobs.
20	Why was there a fear about a 'rascally raballage' of vagabonds?	1. **Thomas Harman ' A Warning for Vagabonds'**: focussed on the threat from vagabonds. These pamphlets are cheap and widely read. People often panic when they read about the problem. 2. **Puritan beliefs**: Puritan ideas stress the importance of hard work. Vagabonds were seen as lazy and immoral. 3. **Disease**: There were outbreaks of plague in 1563, 1578 and 1582. Vagabonds were blamed. 4. **Criminals**: Harman said vagabonds had their own secret criminal language. Some vagabonds were criminals e.g. the Counterfeit Crank, Angler and Tom O'Bedlam.
21	Why do some historians argue there was an Elizabethan 'Golden Age?	1. **Culture**: The Rose Theatre. The galleries had seat where wealthier audience members sat. 'the pit' at the front of the stage is where the poorer people stood. Only cost 1p and were very popular. 2. **Education**: Demand for grammar schools had increased during Elizabeth's reign and there was a all social classes wanted to try to educate their children as much as possible. The number of students going to Oxford and Cambridge universities rose under Elizabeth 3. **Luxuries**: Some of the poorest people in England could still afford luxuries such as tobacco and ale.
22	Why do some historians argue there was not an Elizabethan 'Golden Age?	1. **Culture**: Puritans protested outside theatres and pubs, which they saw as immoral. 2. **Education**: Most Englishmen were unable to read, depend on signs with pictures to identify the different inns, stores and other businesses they come across. Most education was still only for the rich, had private tutors who taught them maths, geometry, astronomy, Latin, French and at times Greek. 3. **Rural life**: Changed little. Life was about hard work and poverty, not theatre and education.
23	Why did the first expedition to America fail 1585?	1. **Lack of supplies from England**: Main cargo ship, 'The Tiger' was battered by waves and seawater flooded into the hold, ruining nearly all of the supplies and seeds (for growing crops) that the colonists had brought with them. 2. **Poor relations with Native Americans:** Ship captain Sir Richard Grenville executed an Indian he accused of stealing his silver drinking cup. Set fire to several villages and cops. Ralph Lane executed Chief Wingina 3. **Lack of food**: colonists struggled to grow food. Because of poor leadership they the Indians refused to help. 4. **Poor leadership**: Grenville and Lane's actions ruined the relationship with Indians.
24	Why did the second expedition to America fail 1587?	1. **Lack of supplies from England**: Spanish Armada meant no ships could be spared to send supplies. 2. **Poor relations with Native Americans**: Croatan tribe promised to help the colonists. However, the colonists mistook them for Chief Wingina's tribe and killed large numbers of them which stopped cooperation. 3. **Lack of food**: The colonists arrived too late I the year to plant crops. Indians refused to help with food. 4. **Poor leadership**: Colony governor John White originally wanted to set up a new base away from Roanoke and Chief Wininga's tribe. The captain of the ships refused to do so. Wingina's tribe attacked and killed many colonists.

Year 10 – French – Knowledge - My Town

1	la boucherie	butcher's shop	18	le risque	risk
2	la boulangerie	bakery	19	la sécurité	safety
3	la charcuterie	delicatessen	20	la campagne	countryside
4	le marché	market	21	la montagne	mountain
5	la pâtisserie	cake shop	22	la colline	hill
6	la vitrine	shop window	23	la grande-ville	city
7	la station-service	service station	24	animé	lively
8	la bijouterie	jeweller's shop	25	le bruit	noise
9	le centre commercial	shopping centre	26	bruyant	noisy
10	les commerces [m]	shops	27	calme	quiet
11	le grand magasin	department store	28	célèbre	famous
12	la librairie	bookshop	29	démodé	old-fashioned
13	le tabac	newsagent's	30	pauvre	poor
14	la bibliothèque	library	31	propre	clean; tidy
15	le commissariat	police station	32	sale	dirty
16	la gare	railway station	33	la maison	house
17	la zone piétonne	pedestrian zone	34	la maison individuelle	detached house

35	la cave	cellar			
36	la cuisine	kitchen			
37	la salle à manger	dining room			
38	habiter	To live			
39	Il y a	There is			
40	Il y avait	There was			
41	le bâtiment	building			
42	l'immeuble [m]	block of flats			
43	l'usine [f]	factory			
44	la ville	town			
45	la ferme	farm			
46	les gens [m]	people			
47	l'habitant [m]	inhabitant			
48	se trouver	to be situated			
49	la circulation	traffic			
50	la maison jumelée	semi-detached house			

Year 10 – Spring Term (2) – Computer Science – Networks, Internet, Wired and Wireless

1	Scareware	A type of malware that creates false messages to trick the user into following malicious links.	13	Brute force attack	A network attack which uses software to crack security passwords through trial and error.
2	Ransomware	A type of malware that uses encryption to lock a user out of their file.	14	Bus topology	A network topology in which all devices are connected to a single backbone cable.
3	LAN	Local Area Network	15	Censorship	The control (usually by the government or organization) of what information other people can access.
4	WAN	Wide Area Network	16	Channel (Wi-Fi)	A small range of Wi-Fi frequencies.
5	WAP	Wireless Access Point	17	Client-server network	A type of network managed by a server, which takes requests from client devices.
6	Hotspot	Locations where you can connect to a WAP.	18	Denial-of-service-attack	A network attack which stops users from accessing a part of a network or website.
7	Algorithmic Thinking	Coming up with an algorithm to solve a problem	19	Encryption	Coding (‘encrypting’)data so that it can only be decoded (‘decrypted’) with the correct key.
8	Anti-malware software	Software designed to stop malware from damaging a computer or a network.	20	Fibre-optic Cable	High performance cable that uses light to carry data.
9	Bandwidth	The amount of data that can be transferred on a network in a given time.	21	Insider attacks	A network attack where someone within an organisation exploits their network access to steal information.
10	Malware	Malicious software created to damage or gain illegal access to compute systems.	22	Lawful interception	Checking data on a network for cyber security purposes.
11	Passive attack (network)	Where a hacker monitorsdata travelling on a network.	23	Peer-to-peer network (P2P)	Network in which all devices are equal and connected to each other.
12	Pentesting (penetration testing)	The process of simulating attacks on a network to identify weaknesses.	24	Protocols	A set of rules for how devices communicate over a network.

Year 10 – Art - Term 3 + 4– Culture					
1	Different qualities of darkness and light.	Tone	16	'The Snail'	One of Matisse's last works. This is a large paper cut out that contains several coloured shapes that loosely resemble a snail.
2	The feel of a surface e.g. rough/ smooth.	Texture	17	Positive Space	The area in an artwork that contains the important imagery/ information.
3	A mark made by a point moving on a surface.	Line	18	Negative Space	The are in an artwork that does not contain the important imagery/ information.
4	The three dimensional quality of an object.	Form	19	Wet on Wet	A mark making technique where one wet material is added to a surface that already contains a wet material.
5	The outline of an object.	Shape	20	Brusho	A very strong pigment powder that can be added to a wet surface to create beautiful swirling designs.
6	Different Hues caused by light refracting on a surface.	Colour	21	Wax Resist	A mark making technique where wax crayon or oils pastel is placed on a surface. When coloured in k is added the crayon/ pastel resists the ink and creates an interesting two coloured image.
7	A mark making technique where a darker material is placed over a layer of lighter material and then scratched away.	Sgrafitto	22	Assessment Objective 1	**Researching the and writing about the work of other artists and designers.**
8	A type of printing meaning 'one print'. Ink or another material is placed on a sheet of paper. This sheet is placed on another sheet and drawn on. The ink/ material is pushed onto the blank paper making a print.	Mono Printing	23	Assessment Objective 2	**Improving your work** **Experimenting with different materials and techniques**
9	Any artwork that uses one (mono) colour (chrome).	Monochrome	24	Assessment Objective 3	**Taking high quality photographs** **Annotating your work** **Making high quality drawings, sculptures and paintings.**
10	A Chinese 'Folk Art' tradition where decorative and intricate designs are cut into paper.	Chinese Paper Cut Outs	25	Assessment Objective 4	**Creating a high quality final piece that links to your preparatory work**
11	A Chinese 'Mexican' tradition where decorative and intricate designs are cut into paper.	Papel Picado	26	Hatching	A shading technique using one directional lines to add tone.
12	A French artist who is often considered the 'master of colour'. His work became more and more colourful and simple as he got older.	Henri Matisse	27	Cross Hatching	A shading technique using two directional criss crossed designs to add tone.

Year 10 – Art - Term 3 + 4– Culture					
1	Different qualities of darkness and light.	Tone	16	‘Dexter Dalwood	An English printmaker. He is most famous for designing the album covers for the band Radiohead.
2	The feel of a surface e.g. rough/ smooth.	Texture	17	Sally Hands	A British printmaker who creates wood cut prints.
3	A mark made by a point moving on a surface.	Line	18	Angie Lewin	An English printmaker whose work is concerned with nature.
4	The three dimensional quality of an object.	Form	19	Water resistant Ink	A coloured ink that can be used for both drawing and painting.
5	The outline of an object.	Shape	20	Water Colour	A paint that is mixed with water.
6	Different Hues caused by light refracting on a surface.	Colour	21	Gouache	A paint that can be mixed with water (like watercolour) but is opaque (like acrylic). It is good for blending colours and showing fine detail.
7	An African American Printmaker whose work was concerned with issues of racial equality and the civil rights movement.	Elizabeth Catlett	22	Assessment Objective 1	**Researching the and writing about the work of other artists and designers.**
8	Civil rights movements are a worldwide series of political movements for equality between all people, that peaked in the 1960s.	The Civil Rights Movement	23	Assessment Objective 2	**Improving your work** **Experimenting with different materials and techniques**
9	A soft plastic material used for lino cut relief printing.	Lino	24	Assessment Objective 3	**Taking high quality photographs** **Annotating your work** **Making high quality drawings, sculptures and paintings.**
10	A tool used to cut away lino in order to create a relief printing block.	Lino Cutter	25	Assessment Objective 4	**Creating a high quality final piece that links to your preparatory work**
11	A tool used to apply a thin, evenly layer of ink onto a surface.	Roller	26	Cutting Mat	A thick rubber mat that is used to cut materials on.
12	A small bladed tool that can be used to cut materials.	Scalpel	27	Fixative	A spray that can be sprayed onto materials to stop them from smudging.