



**Woldgate  
School**

Of great merit, character & value

Part of the Family



**Wonder**  
Learning Partnership  
Educate | Empower | Engage | Enrich

# Knowledge Book 2024-25

**Name:**

**Form:**

**YEAR**

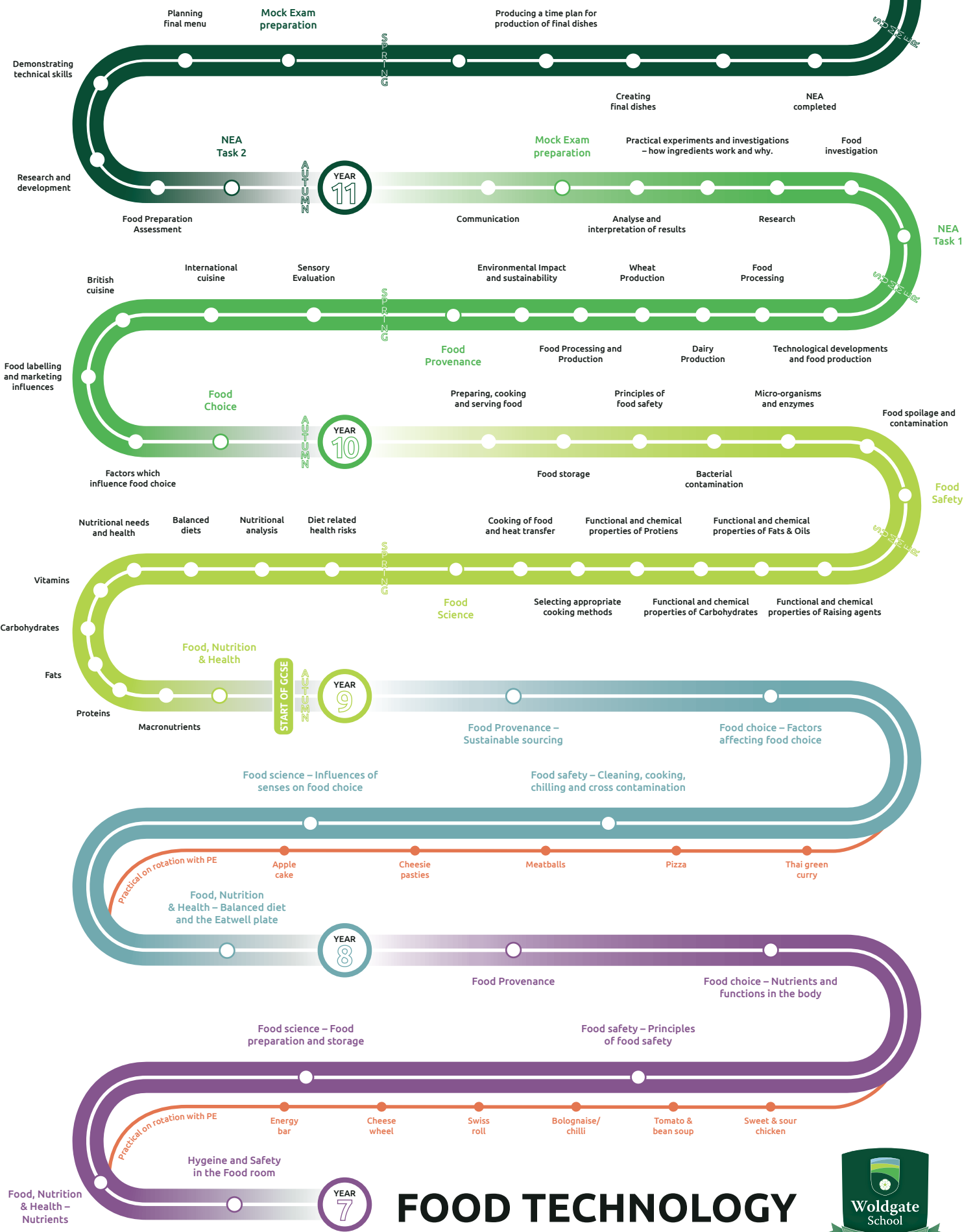
**7**



**GCSE EXAMINATIONS**

1x GCSE Examination Paper

Revision of Key Topics



**FOOD TECHNOLOGY**



# Knowledge Organiser – Year 7 Food Preparation & Nutrition

## Practical



**H** - Tie back long hair and wash your hands



**A** - Put on your apron



**T** - Wipe down your table



**T** - Collect your cutlery tray



**I** - Gather ingredients



**E** - Collect and prepare any equipment you need

### Preparation

#### Skills:

- Knife skills
- Whisking
- Rubbing-in
- Grating
- Creaming

### Cooking Methods:

- Baking
- Frying
- Boiling
- Simmering (reduction)

### Measurements:

- g = gram
- kg = kilogram
- tsp = teaspoon (5g)
- tbsp = tablespoon (15g)
- ml = millilitre
- °C = Celsius

<p><b>PINCH GRIP</b> 1. Thumb and index finger grip blade. 2. Use the rest of your fingers to grip the handle.</p>	<p><b>HANDLE GRIP</b> With all fingers and thumb opposite, grip handle firmly.</p>	<p><b>CARRYING A KNIFE</b> Carry a knife with the blade pointing downward, close by your side.</p>
<p><b>CUTTING METHODS</b> 1. <b>'PLANK'</b>: With a firm hand, push top of knife down with palm of hand, fingers away from blade. 2. <b>'BRIDGE'</b>: Place your hand over top of knife holding food securely, use knife to saw food item.</p>	<p><b>'CLAW'</b>: Fingers tucked under with knife blade resting up against knuckles.</p>	

**Nutrition:** The study of food and diet

**Balanced diet:** food eaten in the correct amounts and proportions for your age and activity level.

**Nutrient:** the components that make up food

**Macronutrient:** the nutrients you need large quantities of

**Carbohydrate:** the macronutrient that is our primary source of energy

**Fat:** the macronutrient that keeps us warm, protects organs and provides essential components. Also a secondary source of energy

**Protein:** the macronutrient that supports the body to grow, maintain and repair. Also a secondary source of energy

**Micronutrient:** the nutrients you need small quantities of

**Vitamins & Minerals:** essential nutrients that support the body to be healthy

**Seasonality:** consuming foods at the time of year they are at their best and in abundance

**Sensory Analysis:** judging the characteristics of the food

## Theory



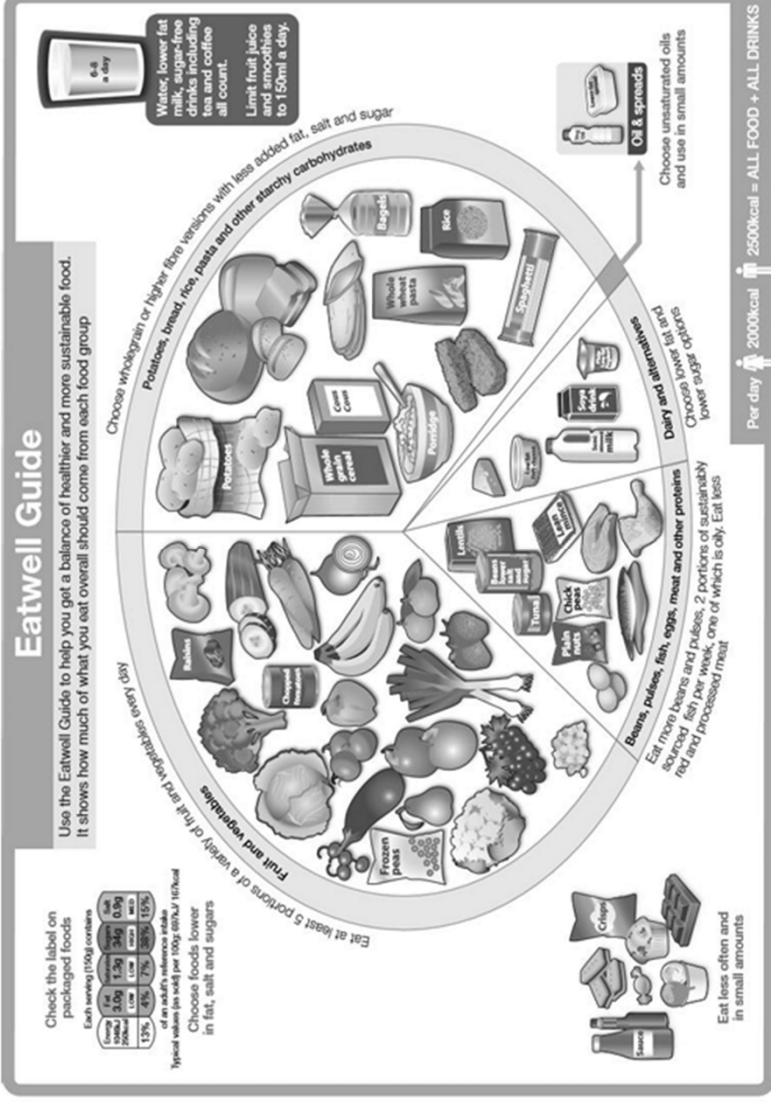
Suitable for coeliacs (gluten-free)



Suitable for people with dairy intolerance (lactose-free)

14

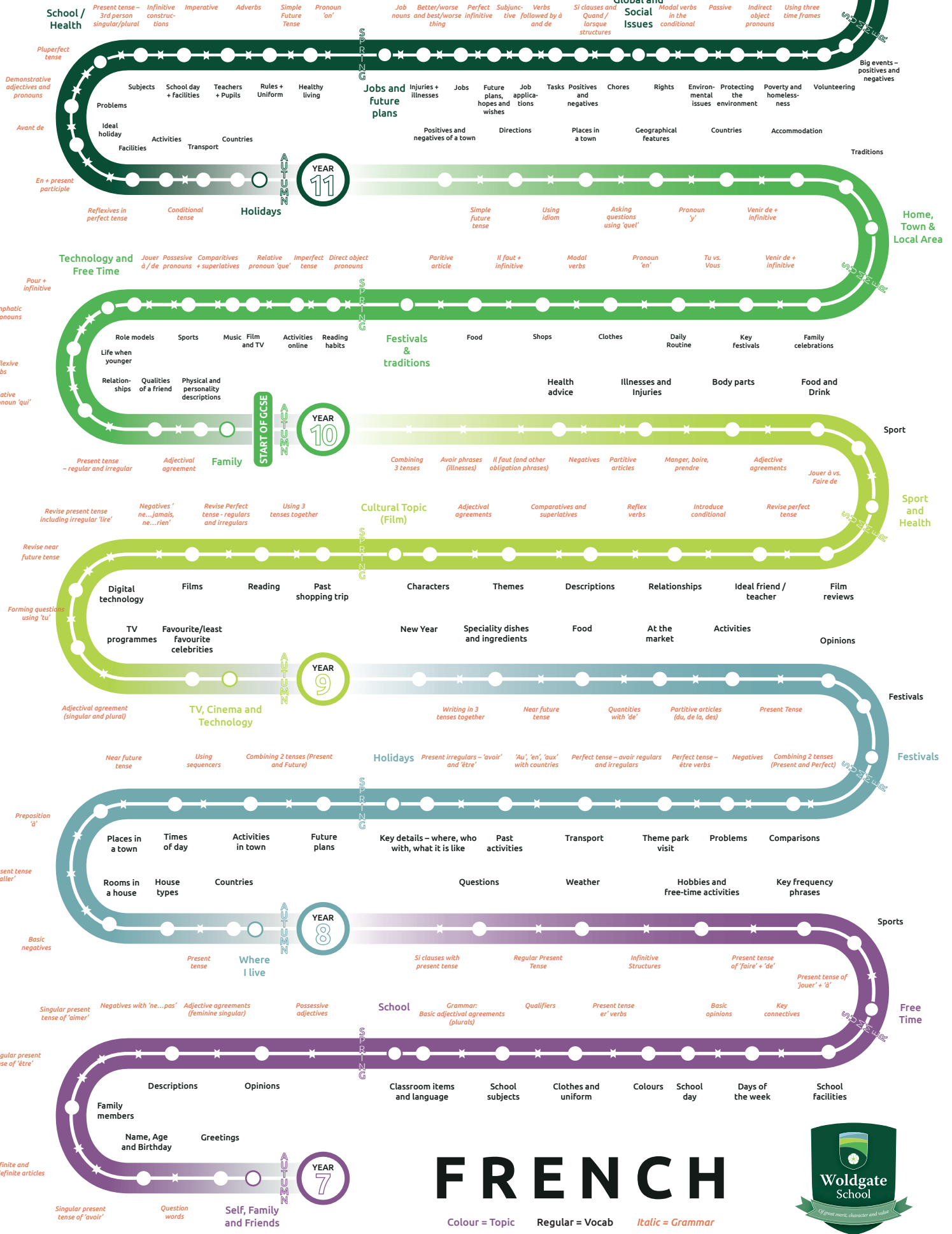
allergens





**GCSE EXAMINATIONS**

Reading (25%)  
Listening (25%)  
Writing (25%)  
Speaking (25%)



**FRENCH**

Colour = Topic    Regular = Vocab    *Italic = Grammar*





Qu'est-ce qu'il y a dans ta salle de classe? –  
*What is there in your classroom?*

<b>Il y a...</b> There is/are...	un tableau (noir / blanc)	a (white/black) board
	un poster	a poster
	un/une prof (professeur)	a teacher
	un écran	a screen
	un ordinateur	a computer
	une porte	a door
	une fenêtre	a window
	une tablette	a tablet
	des tables	some tables
	des chaises	some chairs
des élèves	some pupils	

In French, all nouns are either **masculine** or **feminine**. The indefinite article ('a' / 'an') and the definite article ('the') change according to the gender and number (singular / plural) of the noun they come before.

	indefinite article ( 'a' / 'an' )	definite article ( 'the' )
<b>masculine singular</b>	<i>un</i> poster (a poster)	<i>le</i> poster (the poster)
<b>feminine singular</b>	<i>une</i> porte (a door)	<i>la</i> porte (the door)
<b>plural</b>	<i>des</i> chaises (some chairs)	<i>les</i> chaises (the chairs)

Shorten **le** and **la** to **l'** in front of a vowel or silent **h**.  
*l'ordinateur* (the computer), *l'araignée* (the spider)

Les matières - *Subjects*

Opinion	Noun (Subject)	Connective	Verb	Intensifier	Adjective
<b>J'aime (assez)</b> <i>I (quite) like</i>	<b>le français</b> <i>French</i>	<b>parce que</b>  <b>car</b>  <i>because</i>	<b>c'est</b> <i>it is</i>	<b>trop</b> <i>too</i>	<b>facile</b> <i>easy</i>
<b>Je n'aime pas</b> <i>I don't like</i>	<b>le théâtre</b> <i>Drama</i>				<b>difficile</b> <i>difficult</i>
<b>J'adore</b> <i>I love</i>	<b>la technologie</b> <i>Technology</i>				<b>intéressant</b> <i>Interesting</i>
<b>Je déteste</b> <i>I hate</i>	<b>la musique</b> <i>Music</i>				<b>ennuyeux</b> <i>boring</i>
<b>Je préfère</b> <i>I prefer</i>	<b>l'anglais</b> <i>English</i>				<b>amusant</b> <i>fun</i>
<b>Ma matière préférée, c'est</b> <i>My favourite subject is</i>	<b>l'EPS</b> <i>PE</i>				<b>créatif</b> <i>creative</i>
	<b>l'informatique</b> <i>ICT</i>		<b>nul</b> <i>rubbish</i>		
	<b>l'histoire</b> <i>History</i>		<b>le/la prof est</b> <i>the teacher is</i>	<b>assez</b> <i>quite</i>	<b>sympa</b> <i>nice</i>
	<b>les maths</b> <i>Maths</i>			<b>un peu</b> <i>a bit</i>	<b>sévère</b> <i>strict</i>
	<b>les sciences</b> <i>Science</i>				
	<b>les arts plastiques</b> <i>Art</i>				

When you are giving opinions:

- join your sentences using **et**, **mais** and **parce que**
- use qualifiers such as **très** (very), **vraiment** (really) and **trop** (too) before adjectives
- start your sentences with **Personnellement** ... or **Moi perso** ... (Personally ...).





# L'uniforme et les vêtements – Uniform and clothes

Je porte I wear

<b>un</b>	pantalon / pull / sweat / polo	noir / bleu / vert / gris / blanc / violet / rouge / rose / jaune
	pair of trousers / jumper / sweater / polo shirt	
<b>une</b>	jupe / veste / chemise / cravate	noire / bleue / verte / grise / blanche / violette / rouge / rose / jaune
	skirt / jacket / shirt / tie	
<b>des</b>	chaussettes / chaussures / baskets	noires / bleues / vertes / grises / blanches / violettes / rouges / roses / jaunes
some	socks / shoes / trainers	

Je pense que c'est chic / confortable / pratique / facile / démodé / ennuyeux.

I think that it is trendy/comfortable/practical/easy/old-fashioned/boring.

<b>un chapeau</b>	a hat
<b>une robe</b>	a dress / gown
<b>un short</b>	shorts
<b>un foulard de tête</b>	a head scarf
<b>des tongs</b>	flip-flops

Remember, **-s** at the end of words is silent, so **noir** and **noirs** both sound the same.

The colours **vert** and **gris** sound different in the feminine form.

un polo vert → une jupe verte  
un polo gris → une jupe grise

## Quelle heure est-il? What time is it?



**Quelle heure est-il?** What time is it?  
**Il est neuf heures.** It is nine o'clock.  
**à neuf heures** at nine o'clock

Make sure you pronounce **heure(s)** correctly.



**h** at the start of a word is usually silent so you don't pronounce it. Remember, **-s** on the end of a word is silent too.

## Les numéros 31-60 – Numbers 31-60

30 trente	40 quarante	50 cinquante	60 soixante
31 trente-et-un	41 quarante-et-un	51 cinquante-et-un	
32 trente-deux	42 quarante-deux	52 cinquante-deux	
33 trente-trois	43 quarante-trois	53 cinquante-trois	
34 trente-quatre	44 quarante-quatre	54 cinquante-quatre	
35 trente-cinq	45 quarante-cinq	55 cinquante-cinq	
36 trente-six	46 quarante-six	56 cinquante-six	
37 trente-sept	47 quarante-sept	57 cinquante-sept	
38 trente-huit	48 quarante-huit	58 cinquante-huit	
39 trente-neuf	49 quarante-neuf	59 cinquante-neuf	

## Au collège – At school

Verb	Detail
<b>Je quitte</b> <i>I leave</i>	<b>la maison</b> <i>the house</i>
<b>J'arrive</b> <i>I arrive</i>	<b>au collège/à l'école</b> <i>at school</i>
<b>Je retrouve</b> <i>I meet</i>	<b>mes amis / mes copains</b> <i>my friends</i>
<b>On commence</b> <i>We start</i>	<b>les cours</b> <i>lessons</i>
<b>On recommence</b> <i>We restart</i>	
<b>Je mange</b> <i>I eat</i>	<b>à la cantine</b> <i>In the canteen</i>
<b>Je chante</b> <i>I sing</i>	<b>dans la chorale</b> <i>in the choir</i>
<b>Je joue</b> <i>I play</i>	<b>dehors</b> <i>outside</i> <b>au foot/rugby/tennis</b> <i>football/rugby/tennis</i>
<b>Je rentre</b> <i>I return/go back</i>	<b>à la maison</b> <i>home</i>

In the present tense, take *-er* off the infinitive and add these endings:

<b>chanter</b>	<b>to sing</b>
<i>je chante</i>	<i>I sing</i>
<i>tu chantes</i>	<i>you sing</i>
<i>il/elle/on chante</i>	<i>he/she sings / we sing</i>
<i>nous chantons</i>	<i>we sing</i>
<i>vous chantez</i>	<i>you (plural or formal) sing</i>
<i>ils/elles chantent</i>	<i>they sing</i>

*Je chante* means 'I **sing**' or 'I **am singing**'.

Extend your writing by including expressions of time (sequencers):

<b>d'abord</b>	<i>first of all</i>
<b>ensuite / puis</b>	<i>then</i>
<b>après</b>	<i>afterwards</i>



Dans mon collège, il y a...  
*In my school, there is/are...*

<p>Au collège (at school)          Dans mon collège (in my school)</p>	<p>il y a (there is/are)</p>	<p>un gymnase (a sports all)          un terrain de sports (a sports field)          un terrain de foot (a football pitch)          un terrain de basket (a basketball court)          un hall (an assembly hall)</p> <p>une piscine (a swimming-pool)          une bibliothèque (a library)          une cour de récréation (a playground)          une salle d'ordinateur (a computer room)          une salle de sport (a gym)</p> <p>des laboratoires (labs)          des salles de classe (classrooms)          des vestiaires (changing rooms)          des toilettes (toilets)</p> <p>du harcèlement (bullying)          des bons profs (good teachers)          trois cents élèves (300 pupils)          cinquante professeurs (50 teachers)          quatre cours par jour (4 lessons a day)          une récréation (a recess)          une pause-déjeuner (a lunch break)</p>	<p>mais (but)          cependant (however)          par contre (to the contrary)</p>	<p>il n'y a pas de (there isn't/aren't any)</p>	<p>gymnase (sports all)          terrain de sports (field)          terrain de foot (football pitch)          terrain de basket (basketball pitch)          hall (assembly hall)          piscine (swimming-pool)          bibliothèque (library)          cour de récréation (playground)          salle d'ordinateur (computer room)          salle de sport (gym)          laboratoires (labs)          salles de classe (classrooms)          vestiaires (changing rooms)          toilettes (toilets)          harcèlement (bullying)          bons profs (good teachers)          récréation (recess)          pause-déjeuner (lunch break)</p>
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Quel temps fait-il? – What is the weather like?

When	Weather		I + Verb
<b>Quand</b> <i>When</i>  <b>Si / S'</b> <i>If</i>	<b>il y a</b> <i>It is</i>	<b>du soleil</b> <i>sunny</i>	<b>je joue...</b> <i>I play...</i> <b>je danse...</b> <i>I dance...</i> <b>je chante...</b> <i>I sing...</i> <b>je tchatte...</b> <i>I chat...</i> <b>je nage...</b> <i>I swim...</i> <b>je reste...</b> <i>I stay...</i> <b>je porte...</b> <i>I wear...</i>
		<b>du vent</b> <i>windy</i>	
		<b>du brouillard</b> <i>foggy</i>	
		<b>des orages</b> <i>stormy</i>	
	<b>il fait</b> <i>It is</i>	<b>beau</b> <i>nice weather</i> <b>mauvais</b> <i>bad weather</i> <b>chaud</b> <i>hot</i> <b>froid</b> <i>cold</i>	
	<b>il pleut</b> <i>it's raining</i>		
	<b>il neige</b> <i>it's snowing</i>		

au printemps	<i>in spring</i>
en été	<i>in summer</i>
en automne	<i>in autumn</i>
en hiver	<i>in winter</i>

Tu es sportif / sportive? – Are you sporty?

Verb	Sport/Hobby 1	Connective	Sport/Hobby 2
<b>Je joue</b> <i>I play</i>  <b>Tu joues</b> <i>You play</i>  <b>Il/Elle joue</b> <i>He/She plays</i>  <b>On joue / Nous jouons</b> <i>We play</i>  <b>Vous jouez</b> <i>You (pl) play</i>  <b>Ils/Elles jouent</b> <i>They play</i>	<b>au basket</b> <i>basketball</i> <b>au billard</b> <i>snooker</i> <b>au foot</b> <i>football</i> <b>au hockey</b> <b>au rugby</b> <b>au tennis</b> <b>au volleyball</b> <b>à la pétanque/</b> <b>aux boules</b> <i>boules</i> <b>aux cartes</b> <i>cards</i> <b>aux échecs</b> <i>chess</i>	<b>et</b>	<b>au basket</b> <b>au billard</b> <b>au foot</b> <b>au hockey</b> <b>au rugby</b> <b>au tennis</b> <b>au volleyball</b> <b>à la pétanque/</b> <b>aux boules</b> <b>aux cartes</b> <b>aux échecs</b>

Use **jouer à** to say what sports you play.

à + **le** → **au**

à + **la** → **à la**

à + **les** → **aux**

**le** basket → Je joue **au** basket.

**la** pétanque → Il joue **à la** pétanque.

**les** cartes → Tu joues **aux** cartes?



Tu fais ... ? / Je fais ... (Do you do...? / I do...)

<b>du</b> skate (skating)	<b>de la</b> cuisine (cooking)
<b>du</b> patin à glace (ice-skating)	<b>de la</b> danse (dance)
<b>du</b> théâtre (drama)	<b>de la</b> gymnastique (gymnastics)
<b>du</b> vélo (cycling)	<b>de la</b> natation (swimming)
<b>du</b> ski (skiing)	
<b>du</b> judo (judo)	
<b>de l'</b> athlétisme (athletics)	<b>des</b> randonnées (walking/hiking)
<b>de l'</b> équitation (horse-riding)	

**faire** is an irregular verb. It often translates as 'to do'.



<b>je fais</b>	I do
<b>tu fais</b>	you (singular) do
<b>il/elle/on fait</b>	he/she does / we do
<b>nous faisons</b>	we do
<b>vous faites</b>	you (plural or polite) do
<b>ils/elles font</b>	they do

You also use *faire* to describe the weather.  
Il fait beau / chaud / froid.

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Use **faire de** to talk about some sports and other activities. **de** changes according to the noun that follows it.



<b>de + le</b> → <b>du</b>	<b>le</b> vélo	→ Je fais <b>du</b> vélo.
<b>de + la</b> → <b>de la</b>	<b>la</b> cuisine	→ Tu fais <b>de la</b> cuisine.
<b>de + l'</b> → <b>de l'</b>	<b>l'</b> équitation	→ Il fait <b>de l'</b> équitation.
<b>de + les</b> → <b>des</b>	<b>les</b> randonnées	→ Elle fait <b>des</b> randonnées.

In the negative, just use **de** (or **d'** before a vowel).  
Je ne fais pas **de** natation. / Je ne fais pas **d'**athlétisme.

Est-ce que tu fais souvent (du vélo)?  
Je fais (du vélo) ...

parfois / souvent / tout le temps  
tous les jours / tous les weekends  
tous les lundis / mardis / ...  
quand il pleut / il fait chaud / ...

Do you often (cycle)?

I do (cycling)...

Sometimes / often / all the time

Every day / every weekend

Every Monday / Tuesday / ...

When it rains / it's hot / ...

Verb	Intensifier	Adjective
<b>Je suis</b> <i>I am</i> <b>Il est</b> <i>He is</i> <b>Elle est</b> <i>She is</i>	<b>un peu</b> <i>a bit</i> <b>assez</b> <i>quite</i> <b>très</b> <i>very</i>	<b>sportif (m) / sportive (f)</b> <i>sporty</i>
<b>Je ne suis pas</b> <i>I am not</i> <b>Il n'est pas</b> <i>He is not</i> <b>Elle n'est pas</b> <i>She is not</i>	<b>très</b>	

## Les activités - Activities

✓✓ j'adore

✓ j'aime

✗ je n'aime pas

✗✗ je déteste

- 1 bloguer
- 2 écouter de la musique
- 3 envoyer des SMS
- 4 prendre des selfies
- 5 partager des photos et des vidéos
- 6 regarder des films
- 7 tchatter avec mes copains/copines
- 8 télécharger des chansons

1. Blogging
2. Listening to music
3. Sending text messages
4. Taking selfies
5. Sharing photos and videos
6. Watching films
7. Chatting with my friends
8. Downloading songs

Remember, the infinitive is the form of the verb which means 'to' do something.

*regarder* (to watch)

*prendre* (to take)

Many (but not all) infinitives end in **-er**.



Use **aimer** (to like), **adorer** (to love) and **détester** (to hate), plus the **infinitive** of another verb, to say what you like or don't like doing.

When used after these verbs, the infinitive translates as 'doing something'.

J'aime *regarder* ...

J'adore *télécharger* ...

Je n'aime pas *prendre* ...

Je déteste *faire* ...

J'aime **écouter** de la musique. I like **listening** to music.

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## Present Tense – Regular -IR and -RE verbs

	<b>Finir</b> – To finish	<b>Rendre visite à</b> – to visit
<b>Je</b> (I)	fin <u>is</u>	rend <u>s</u> visite à
<b>Tu</b> (You singular)	fin <u>is</u>	rend <u>s</u> visite à
<b>Il / Elle / On</b> (He / She / We)	fin <u>it</u>	rend <u>_</u> visite à
<b>Nous</b> (We)	fin <u>issons</u>	rend <u>ons</u> visite à
<b>Vous</b> (You plural)	fin <u>issez</u>	rend <u>ez</u> visite à
<b>Ils / Elles</b> (They)	fin <u>issent</u>	rend <u>ent</u> visite à



## Les questions - Questions

**Est-ce que tu ...?** means '**Do** you ...?'

**Est-ce que tu aimes faire du judo?**

(Do you like doing judo?)

**Qu'est-ce que tu ...?** means '**What do** you ...?'

**Qu'est-ce que tu aimes faire sur ton portable?**

(What do you like doing on your phone?)

Remember, **est-ce que tu ...?** means 'do you ...?', so start your answer with **oui** or **non**.

Don't forget to change the pronoun and verb form in your answer.

**Est-ce que tu aimes faire ...?** →

Oui, **j'aime** faire ... / Non, **je n'aime pas** faire ...

You can often use part of a question to form your answer, but remember to change the pronoun and the verb form from **tu** to **je**.

**Est-ce que tu aimes faire de la gymnastique?** → Oui, **j'aime** faire de la gymnastique.

**comment ...?** .....how ... ? (also used to

ask what someone or something is like)

**quand ...?** .....when ... ?

**quel(le/s) ...?** .....which/what ... ?





Revision

UK in the 21st century

Physical Geography of the UK  
London's booming population  
The UK's global role and our influence in conflicts, media and food

Resources & shortages  
Food, Water and Energy security  
Food security

Development case study

Human Geography of the UK  
The UK's ageing population  
The UK's changing economy and post-industrial UK

Resource reliance  
Farming & fishing for food  
Theories on the future  
Fieldwork

Barriers to development

Dynamic development

Cities case study  
Urban population explosion and growth of slums  
Super-sized cities in an urban world  
Human impacts on the TRF  
Polar environments  
Characteristics and value of a tropical rainforest  
Distributions of biomes & their climate, flora and fauna

Uneven development

YEAR 11

The global development divide and measuring development  
Defining development  
Urban trends in the UK  
How cities began and grew  
Urban futures  
Characteristics of polar regions  
Human Impacts on a tropical rainforest  
Ecosystems and interdependence

Ecosystems and interdependence

Sustaining ecosystems

Tropical storms, drought & El Nino

Contrasting case studies of natural weather  
Plate boundaries and tectonic cases studies

Distinctive Landscapes  
The physical and human landscape of the UK  
Coastal erosional and depositional landforms  
Rivers  
Fieldwork

Extreme weather conditions

Structure of the Earth  
Mitigation of tectonic hazards

What makes a distinctive landscape  
Geomorphic processes  
River landforms  
Coasts case study

Global hazards

UK impacts of climate change  
Greenhouse effect  
Natural causes of climate change  
Patterns of climate change

Changing Climates

Extreme weather conditions

Global circulation system and climate zones

Global impacts of climate change  
Human causes of climate change  
Evidence of climate change

YEAR 10

Transition to GCSE

Glaciation

Movement  
Evidence of glaciation in the Lake district  
Glacier formation

Russia – What are the opportunities and challenges facing Russia?  
Biomes  
Human Issues  
Middle East – Why is the Middle East an important region?  
Biomes  
Human Issues

Loss of Culture

Clone Towns  
Changing glaciers

Location  
Skills  
Physical Issues  
Location  
Skills  
Physical Issues

Globalisation

Physical Issues  
Skills  
Location  
Flood hazards and management  
Fluvial process including weathering

BREXIT

UK's place in the wider world  
Going global

YEAR 9

Water cycle

Tectonic Hazards – Why do people remain at risk?  
Plate margins & movement  
Earthquake processes

Rocks  
Biosphere  
Natural resources for energy  
Changing Economies – How have shifting economies impacted cities across the globe?  
Sectors of industry  
Industrialisation of NEEs

Hydrology – Why are rivers important?

Addressing inequality

Earth structure  
Volcano processes  
Tsunami

Resource risk – Are we running out of natural resources?  
Soils  
Hydrosphere  
Sustainability  
Urban problems  
Deindustrialisation

Sustainable development

Poverty

Development – Why are some places more developed than others?

Human Issues  
Biomes  
Africa – What are the opportunities and challenges facing Africa?  
Migration  
Population distribution and settlement factors

Change over time

Measuring development  
Distribution of Wealth

YEAR 8

Population change

Difference between weather and climate

Extreme weather  
Beast from the East

Coasts – Should we defend our coastlines?  
Landforms  
Coastal case study  
Rainforests  
Tourism

Population – Can we solve the problem of overpopulation?

Weird Weather – Is Weather becoming more extreme?

How do Geographers think?

Coastal processes  
Coastal management  
Economy Vs Environment – Are we risking our natural world in order to make money?  
Antarctica  
Hydrocarbons

Map skills

What is a geographer?

YEAR 7

Locational knowledge

# GEOGRAPHY



## Types of Erosion

<b>The break down and transport of rocks – smooth, round and sorted.</b>	
<b>Attrition</b>	Rocks that bash together to become smooth/smaller.
<b>Solution</b>	A chemical reaction that dissolves rocks.
<b>Abrasion</b>	Rocks hurled at the base of a cliff to break pieces apart.
<b>Hydraulic Action</b>	Water enters cracks in the cliff, air compresses, causing the crack to expand.

## Types of Transportation

<b>A natural process by which eroded material is carried/transported.</b>	
<b>Solution</b>	Minerals dissolve in water and are carried along.
<b>Suspension</b>	Sediment is carried along in the flow of the water.
<b>Saltation</b>	Pebbles that bounce along the sea/river bed.
<b>Traction</b>	Boulders that roll along a river/sea bed by the force of the flowing water.

## Stage One

Water seeps into cracks and fractures in the rock.



## Stage Two

When the water freezes, it expands about 9%. This wedges apart the rock.



## Stage Three

With repeated freeze-thaw cycles, the rock breaks off.



## What is Deposition?

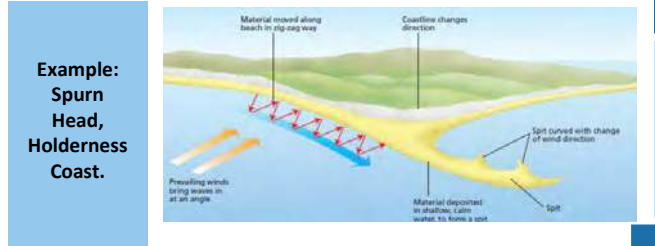
When the sea loses energy, it drops the sand, rock particles and pebbles it has been carrying. This is called deposition.

## Types of Weathering

**Weathering is the breakdown of rocks where they are.**

<b>Biological</b>	Breakdown of rocks via plants and animals
<b>Chemical</b>	Breakdown of rock without changing its chemical composition.

## Formation of Coastal Spits - Deposition

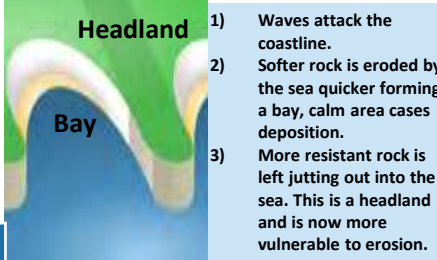


- Example: Spurn Head, Holderness Coast.**
- 1) Swash moves up the beach at the angle of the prevailing wind.
  - 2) Backwash moves down the beach at 90° to coastline, due to gravity.
  - 3) Zigzag movement (Longshore Drift) transports material along beach.
  - 4) Deposition causes beach to extend, until reaching a river estuary.
  - 5) Change in prevailing wind direction forms a hook.
  - 6) Sheltered area behind spit encourages deposition, salt marsh forms.

## How do waves form?

Waves are created by wind blowing over the surface of the sea. As the wind blows over the sea, friction is created - producing a swell in the water.

## Formation of Bays and Headlands



- 1) Waves attack the coastline.
- 2) Softer rock is eroded by the sea quicker forming a bay, calm area causes deposition.
- 3) More resistant rock is left jutting out into the sea. This is a headland and is now more vulnerable to erosion.

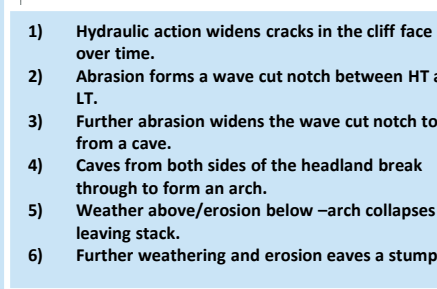
## Holderness Coast

The problem is caused by:

- The cliffs which are made of a soft boulder clay, and will therefore erode quickly, especially when saturated.
- Powerful waves - waves at Holderness travel long distances over the North Sea (so have a long fetch)

**Impacts:**  
 About 1.8m of land is lost to the sea every year. Farms, businesses and homes have already been lost. At Great Cowden, 100 chalets have been lost to the sea at the Golden Sands Holiday Park. 80000m<sup>2</sup> of farmland is lost each year 200 homes and several roads will fall into the sea by 2100. 30 Villages have already been lost to the sea since Roman times

## Formation of Coastal Stack



- 1) Hydraulic action widens cracks in the cliff face over time.
- 2) Abrasion forms a wave cut notch between HT and LT.
- 3) Further abrasion widens the wave cut notch to form a cave.
- 4) Caves from both sides of the headland break through to form an arch.
- 5) Weather above/erosion below - arch collapses leaving stack.
- 6) Further weathering and erosion leaves a stump.

## Coastal Defences

### Hard Engineering Defences

<b>Groynes</b>	Wood barriers prevent longshore drift, so the beach can build up.	<ul style="list-style-type: none"> <li>✓ Beach still accessible.</li> <li>✗ No deposition further down coast = erodes faster.</li> </ul>
<b>Sea Walls</b>	Concrete walls break up the energy of the wave. Has a lip to stop waves going over.	<ul style="list-style-type: none"> <li>✓ Long life span</li> <li>✓ Protects from flooding</li> <li>✗ Curved shape encourages erosion of beach deposits.</li> </ul>
<b>Gabions or Rip Rap</b>	Cages of rocks/boulders absorb the waves energy, protecting the cliff behind.	<ul style="list-style-type: none"> <li>✓ Cheap</li> <li>✓ Local material can be used to look less strange.</li> <li>✗ Will need replacing.</li> </ul>

### Soft Engineering Defences

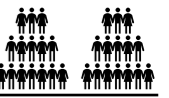
<b>Beach Nourishment</b>	Beaches built up with sand, so waves have to travel further before eroding cliffs.	<ul style="list-style-type: none"> <li>✓ Cheap</li> <li>✓ Beach for tourists.</li> <li>✗ Storms = need replacing.</li> <li>✗ Offshore dredging damages seabed.</li> </ul>
<b>Managed Retreat</b>	Low value areas of the coast are left to flood & erode.	<ul style="list-style-type: none"> <li>✓ Reduce flood risk</li> <li>✓ Creates wildlife habitats.</li> <li>✗ Compensation for land.</li> </ul>

## Size of waves

Size of waves	Types of Waves	
	Constructive Waves	Destructive Waves
<ul style="list-style-type: none"> <li>• Fetch how far the wave has travelled</li> <li>• Strength of the wind.</li> <li>• How long the wind has been blowing for.</li> </ul>	This wave has a swash that is stronger than the backwash. This therefore builds up the coast.	This wave has a backwash that is stronger than the swash. This therefore erodes the coast.

# POPULATION PROBLEM

## KNOWLEDGE ORGANISER

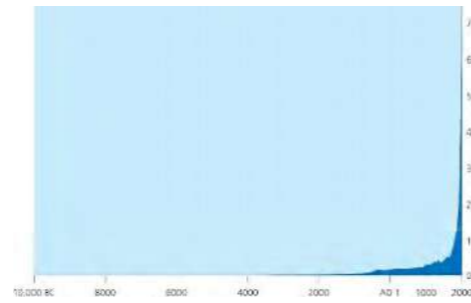


### KEY WORDS

<b>Population</b>	The number of people living in a particular place
<b>Population Density</b>	The average number of people per unit of land
<b>Densely Populated</b>	Places with a high population density, that contain lots of people
<b>Sparsely Populated</b>	Places with a low population density, that contain few people
<b>Population Distribution</b>	The pattern of where people live
<b>Census</b>	A survey used by the government to understand the makeup of the population
<b>Migration</b>	The movement of people from one area to another
<b>Immigration</b>	The migration of people into an area from a different country
<b>Illegal immigration</b>	The migration of people into an area from a different country without permission
<b>Rural area</b>	The countryside
<b>Urban area</b>	Towns and cities
<b>Rural to Urban Migration</b>	The movement of people from the countryside to towns and cities
<b>Urbanisation</b>	The increase in the proportion (number) of people living in towns and cities
<b>Megacity</b>	A city with a population of over 10 million – e.g. Mumbai
<b>Push Factor</b>	Things that make people want to leave – they are ‘pushed’ out of a place
<b>Pull Factor</b>	Things that attract people to a place – they are ‘pulled’ towards it
<b>Overpopulation</b>	When there are too many people to be supported to a good standard of living by the resources of a region or country
<b>Shanty Town</b>	An informal settlement with houses often made of wood, plastic and sheet metal

### POPULATION OVER TIME

- \* The current world population (to the nearest billion) is 8 billion people
- \* For most of history, the world’s population growth has been slow
- \* In 1800, it reached 1 billion for the first time
- \* Since then, the population has ‘exploded’, with rapid growth
- \* This is because of an increase in better paid jobs and education, which meant people could access more food, water, healthcare, and live safer lives. Life expectancy has increased as a result.



### SETTLEMENT FACTORS

- \* The world’s population is not evenly distributed – some places have lots of people, others do not
- \* Historically, settlements have been built in places with natural resources such as water, soil, good climates, and access to good jobs etc.
- \* There are positive factors (things that would lead to a densely populated area) and negative factors (things that would lead to a sparsely populated area). For example:

Positive Factors	Negative Factors
Lots of raw materials (e.g. coal) for industry, reliable water supply, fertile soil that is good for farming, flat land that is easier for farming and transport, a pleasant climate, lots of jobs	Steep land that is bad for building and farming, too hot and dry for crops to grow, poor water supply, dense forest that makes communication difficult, too cold for crops to grow, few raw materials for industry, few jobs available

### URBANISATION

Push Factors	Pull Factors
<ul style="list-style-type: none"> <li>* Unemployment</li> <li>* Lower wages</li> <li>* Crop failure</li> <li>* Poor living conditions</li> <li>* Poor education and healthcare</li> <li>* Few facilities</li> <li>* Natural disasters and civil war</li> </ul>	<ul style="list-style-type: none"> <li>* More jobs</li> <li>* Higher wages</li> <li>* Better education and healthcare</li> <li>* Better living conditions</li> <li>* Better facilities</li> <li>* Less chance of natural disasters</li> </ul>

- \* When people move from rural areas to urban ones, this is known as **urbanisation**
- \* There are many push and pull factors which can cause this
- \* This can lead to megacities (with over 10 million people), such as Tokyo and Delhi

### CAUSES OF OVERPOPULATION IN MUMBAI

- \* 38% of people moving to Mumbai are from Maharashtra state (the state that Mumbai is in)
- \* There are a number of push and pull factors that are specific to Mumbai. For example:
- \* **Push Factors:** Poor farming – machines have replaced people; droughts ruin crops; and small farms are being sold to large land owners
- \* **Pull Factors:** In Mumbai, there are more jobs with higher wages; more schools, healthcare and entertainment; and people in Mumbai are more likely to be able to access electricity, water and sanitation

### IMPACTS OF OVERPOPULATION IN MUMBAI

- \* **Shanty towns:** Poorly constructed buildings that are overcrowded – e.g. Dharavi
- \* **Water and sanitation:** 60% rely on communal taps, factories pollute the river, open sewers pose a health risk
- \* **Health and education:** Hospitals and schools can’t cope with demand, children drop out of school to earn money
- \* **Unemployment:** Not enough jobs for the number of people, people are paid less than they should be and work in poor conditions
- \* **Transport and air pollution:** Water pipes run close to sewers, leading to leaks which cause disease. High levels of air pollution from cars, mopeds and factories. Overcrowded public transport

### SHANTY TOWNS OF MUMBAI

- \* Shanty towns have developed due to a lack of permanent and affordable housing, due to a rapid increase in population
- \* Conditions in shanty towns are poor – many people live in small houses with lots of people. There are open sewers. Disease spreads quickly. Freshwater comes from communal pumps which are only turned on for a few hours a day. There is an average of 1 toilet per 1,450 people. Many people have informal jobs – such as collecting rubbish and sorting it
- \* **Improving shanty towns:**
  - \* Slum sanitation project – 30 community toilet blocks with over 5100 toilets being built
  - \* Mumbai slum resettlement scheme – residents moved into new homes, made from bricks and water
  - \* Slum electrification project – 210,000 residents provided with electricity to replace bottled gas
  - \* Incremental housing strategies – Families are allowed to buy the land, then redesign and rebuild their homes

### MIGRATION FROM MEXICO TO THE USA

- \* Every year, over one million Mexicans migrate to the USA – the main reason is an improved quality of life
- \* There are a number of push and pull factors that encourage people to cross the Mexico-USA border:
- \* **Push Factors:** Unemployment and poverty are major problems in Mexico and have increased in recent years. 40% of the population of Mexico are unemployed, and many rely on farming in rural areas where the climate makes it difficult to farm successfully
- \* **Pull Factors:** In the USA, 99% of the population can read and write (compared to 86% in Mexico) and the life expectancy in the USA (80) is 8 years longer than that in Mexico

### IMPACTS OF MIGRATION ON MEXICO AND THE USA

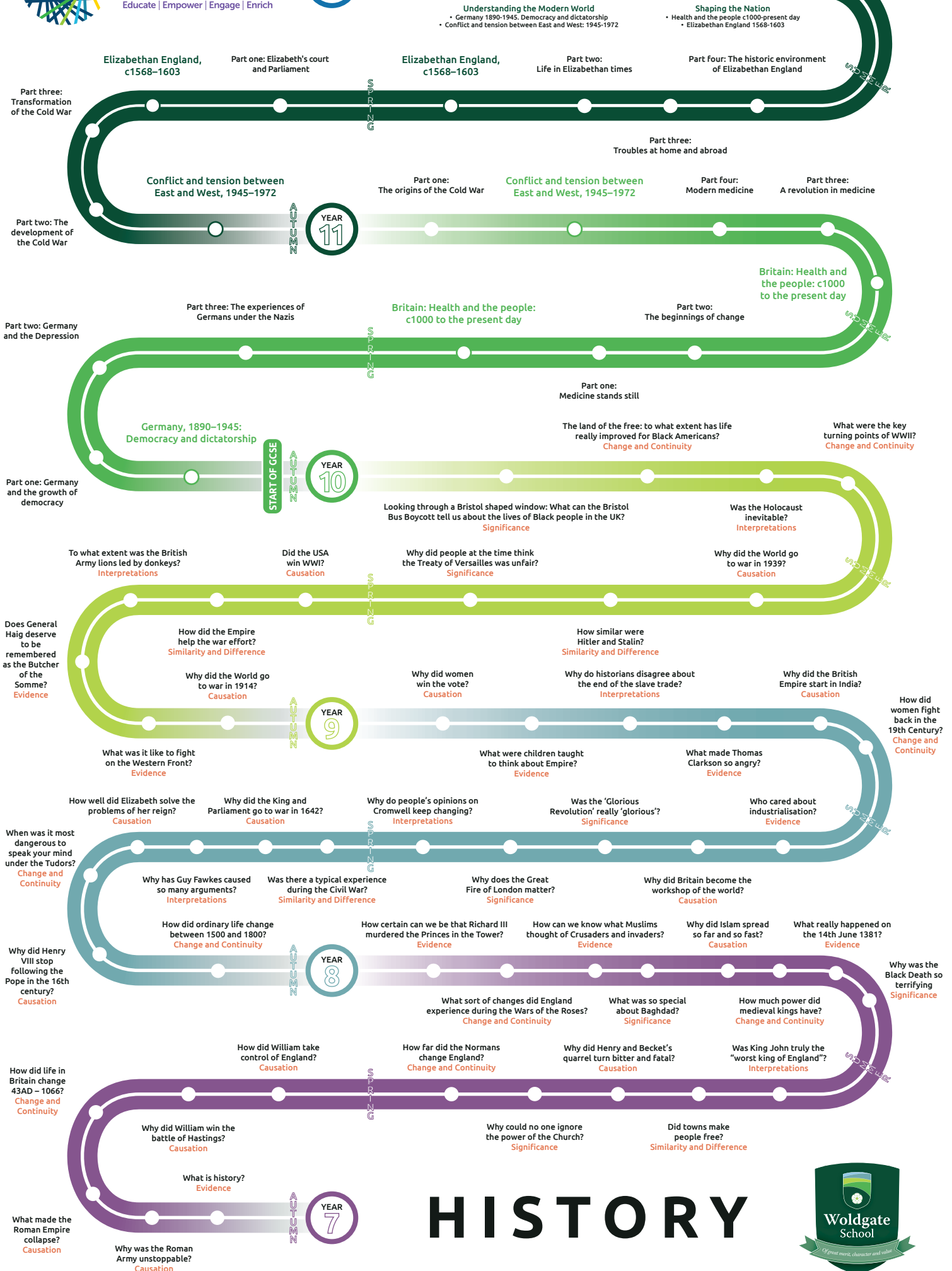
- \* Migration has impacts not only on the country people are migrating to, but the country they have left
- \* These impacts can be both positive and negative – migration can be a controversial topic
- \* **The USA:** Unskilled American workers might find it harder to get a job, as migrant populations are often willing to do the work that many Americans don’t want to do and for less money. This can sometimes lead to cultural and racial tension. However, the USA has benefitted from Mexican culture such as food, language, and music
- \* **Mexico:** Workers moving to the USA can lead to less competition for jobs in Mexico, reducing unemployment. Those who have migrated to the USA often send money home to their relatives in Mexico which can help with healthcare and education, but it does mean that their families are split up. Migration has also led to depopulation (reduced population) in some Mexican towns and villages

### SOLVING THE PROBLEM OF OVERPOPULATION

- \* Two main approaches:
  - \* **Controlling the population** to reduce overpopulation – introducing laws or policies to limit the number of babies born, e.g. China 1979-2016, family planning and contraception. China introduced its One Child Policy as the population of China was predicted to reach 1.8 billion by 2025 and there wouldn’t have been enough food to go around
  - \* **Solving overpopulation** when it has already happened – trying to limit the impacts of overpopulation, e.g. through campaigning for gender equality, increased funding, and government schemes



**GCSE EXAMINATIONS**



**HISTORY**





# THE NORMANS

## KNOWLEDGE ORGANISER



### KEY WORDS

<b>Medieval</b>	A period of history between 1066 and 1500
<b>Monarch</b>	A person who reigns over a kingdom or empire
<b>Heir</b>	Someone who is next-in-line to the throne
<b>Feudal System</b>	Social structure of people used to control the people of England
<b>Domesday Book</b>	A survey of the land and wealth in England
<b>Anglo Saxons</b>	People who lived in England before the Normans
<b>Normans</b>	People who came from the Normandy region of France
<b>Vikings</b>	People who invaded from Scandinavia from 800
<b>Tax</b>	Compulsory money paid to a government or king
<b>Earls</b>	Powerful nobles who controlled a large area of land
<b>Peasants</b>	Poor people who paid taxes and worked the land
<b>Witan</b>	Name of the council which advised the King
<b>Housecarls</b>	Anglo-Saxon warriors who fought with double-headed axes

### WHO SHOULD HAVE BEEN KING?

#### Harold Godwinson, Earl of Wessex

- \* Edward's brother-in-law
- \* Earl of Wessex, he had already been running some of the country
- \* Claimed Edward promised him



#### William, Duke of Normandy:

- \* Claimed both Edward and Harold promised him the throne
- \* Ambitious and powerful leader
- \* Cousin of Edward



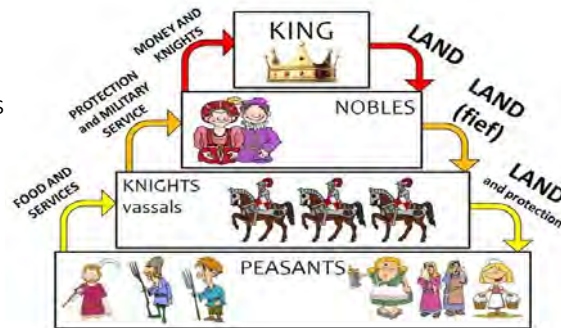
#### Harald Hardrada, King of Norway:

- \* No direct blood ties to the English Royal Family
- \* Claim rooted in the earlier Anglo-Danish kingdom
- \* Famous and skilled Viking warrior



### FEUDAL SYSTEM

- \* Used by William to control England.
- \* William gave land to Lords and Barons
- \* In return, they provided the King with knights for his army.
- \* The Knights shared the land out to peasants.
- \* Peasants worked the land and did the hard labour.



### DOMESDAY BOOK

- \* Lists all of the land and wealth throughout England.
- \* Used to find out how much William could raise in taxes and how many people he had to fight in his army.

### TIME PERIODS

<b>Iron Age</b>	Up to 43AD
<b>Romans</b>	43AD-410AD
<b>Anglo-Saxons</b>	450AD-1066AD
<b>Normans</b>	From 1066AD

### WHY DID WILLIAM WIN?

Reason	Examples
<b>William's Luck</b>	<ul style="list-style-type: none"> <li>* Some of Harold's best soldiers had been killed at Stamford Bridge</li> <li>* The wind changed at just the right time for William</li> </ul>
<b>William's Skill</b>	<ul style="list-style-type: none"> <li>* William was very brave – he took his helmet off in Battle to show he was not dead</li> <li>* William used a large force of Knights on horses</li> </ul>
<b>Harold's Mistakes</b>	<ul style="list-style-type: none"> <li>* Harold did not rest his troops at Hastings before the Battle began</li> <li>* Harold's men were exhausted when they reached Hastings. They had marched south in 9 days</li> </ul>

### CASTLES

William built castles in strategic positions, such as London, Exeter, York and Norwich. Motte and Bailey castles were built from wood to begin with, but were later made from stone as they were harder to attack.



### TIMELINE OF THE NORMAN CONQUEST

5th January 1066  
Edward the Confessor dies

6th January 1066  
Harold Godwinson is crowned King of England

20th September 1066  
Harald Hardrada invades Yorkshire. Defeats Earls at Battle of Fuford

25th September  
Harold Godwinson defeats Harald Hardrada at the Battle of Stamford Bridge

27th September 1066  
William, Duke of Normandy sets sail and lands in Pevensy

14th October 1066  
Battle of Hastings begin. Harold Godwinson is killed

25th December 1066  
William is crowned King of England on Christmas Day

# THE CHURCH, THE KING AND THE PEOPLE

# KNOWLEDGE ORGANISER

## KEY WORDS

<b>Monastery</b>	Holy buildings where monks lived and worshiped God
<b>The Pope</b>	God's representative on Earth and the leader of the Church
<b>Archbishop of Canterbury</b>	In charge of the Church in England and would crown new Kings
<b>Tithe</b>	A tax paid to the church
<b>Excommunicate</b>	When the Pope banned someone from the church and damned them to hell
<b>Interdict</b>	Churches were locked and no one could go to church
<b>Purgatory</b>	A place where people who have sinned are purified in a 'cleansing fire', and are then accepted into Heaven
<b>Guilds</b>	Made rules in towns on who could practice a trade
<b>Town Council</b>	Made up of the most important men in the town who passed laws
<b>Baron</b>	Senior important noblemen who offered their loyalty to the king in exchange for land
<b>Lord</b>	Lived in manor houses and controlled villages
<b>Villein</b>	Little more than slaves who worked the land of the Lord
<b>Freemen</b>	Poor farmers who controlled small portions of land

## MURDER OF THOMAS BECKET

- \* Henry II and Archbishop of Canterbury Thomas Becket disagreed on the power of the church. Henry wanted to reduce to power of Church courts, but Beckett disagreed
- \* Becket excommunicated three Bishops who crowned Henry's son King
- \* Becket was murdered after some knights overheard Henry II say "wont someone rid me of this troublesome priest?"

## KING JOHN

- \* King John had his nephew executed for fighting against him
- \* John took the lands of several monasteries to punish Pope Innocent III. The Pope placed England under interdict
- \* King John raised taxes to pay for the war with France. This angered his barons. They marched to London to force King John to sign a list of demands.

## THE POWER OF THE CHURCH

Everyone believed in heaven and hell. They had to obey the teachings of the Church to get to heaven.

People paid a tax to the Church as well as to the King. This paid for new churches and monasteries to be built.

Priests and monks were tried in Church courts if they broke got into trouble and were more likely to be let off.

The Pope was God's representative on Earth. No one could tell God what to do, not even a King.

Archbishops were rich and powerful. They advised the King and owned a lot of land.

It was still less than 100 years since the Norman Conquest. Henry II needed to assert his power.

## MEDIEVAL TOWNS

Lords could stop their villeins from leaving a village. Towns were much freer and were not controlled by powerful Lords.

Towns were controlled by Guilds, who made rules on who was allowed to practice a trade and to what standard. To learn a craft, it took 7 years as an apprentice, 7 years as a journeyman and then after that you could become a master.

As towns grew richer, the chief townsmen would buy a charter to free them from the Lord's control. They could then buy and sell land and elect a Town Council.

Many outsiders were encouraged into towns to become free people. However, anyone who was strange or different was to be kept out.

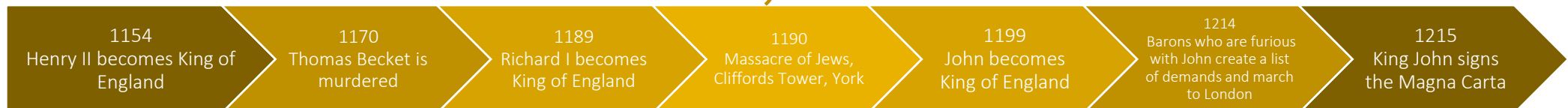
## MAGNA CARTA

A Royal Charter signed in 1215 by King John made from a list of demands drawn up by Barons. It stopped him collecting taxes whenever he wanted and put other limits on his power. It also protected the rights of the church.

## THE CHURCH



## TIMELINE OF THE CHURCH, THE KING AND THE PEOPLE



# THE BLACK DEATH AND PEASANTS' REVOLT

## KEY WORDS

<b>Epidemic</b>	A widespread occurrence of an infectious disease within a community
<b>Pandemic</b>	An infectious disease occurring across a whole country or world
<b>Bubo</b>	A large black swollen lymph node in the armpit or groin
<b>Flagellation</b>	Whipping or beating yourself or another person to show remorse to God
<b>Infectious</b>	A disease likely to spread to other people
<b>Repentance</b>	The act of showing that you are sorry to God
<b>Revolt</b>	Violent action against a government or King
<b>Statute of Labourers 1351</b>	A law which cut the pay of peasants, made them pay wages back and stopped them from leaving their town
<b>Poll Tax</b>	Money paid to the government, but everyone pays the same amount regardless of how much they earn, which was unfair

## RESPONSES TO THE BLACK DEATH

- \* Many people believed the Black Death was caused by bad air, so they avoided bad smells and burned sweet-smelling herbs in their homes
- \* In London and some other town, flagellants walked the streets whipping themselves
- \* Towns often locked their gates to stop travellers bringing the disease in
- \* Some Church leaders said the Black Death was punishment for people's sins
- \* Some medieval doctors believed the disease was caused by an imbalance of fluids
- \* King Edward III believed filth from houses was getting into the air and infecting

## WHAT CAUSED THE BLACK DEATH?

The Black Death germs came to Europe on fleas, who lived on rats, which got onto ships.	When the rats died, the fleas needed a new home, so they jumped to people.	If an infected flea bit a person, they would become infected with the Black Death.
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# KNOWLEDGE ORGANISER

## SYMPTOMS OF THE BLACK DEATH

Day	Symptom
1	Painful swellings called buboes appeared in the victim's armpits and groin. They were usually the size of an egg, but sometimes as big as an apple.
2	The victim vomited and developed a fever. This was in addition to the painful swellings.
3	Bleeding under the skin caused dark blotches all over the body, in places such as the arms and thighs.
4	The disease attacked the nervous system. This caused the victim to suffer spasms. The victim was in terrible pain.
5	Sometimes the buboes burst and a foul-smelling black liquid came out. When this happened the victim usually lived. However, in most cases the victim suffered a painful death

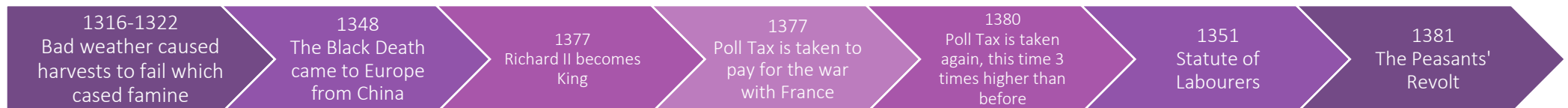
## WHY DID PEOPLE REVOLT?

<b>Statute of Labourers 1351</b>	A law which was supposed to keep the wages of peasants as low as they were in 1347
<b>Poll Tax 1377</b>	Britain was at war with France. King Richard II decided to raise money for the war through a poll tax
<b>Poll Tax 1380</b>	The poll tax was collected again in 1379. When it was collected in 1380, it was three times higher than in 1377
<b>Missing Taxpayers</b>	Many peasants hid from the tax collectors. 500,000 less people paid in 1381 than in 1377. More collectors were sent out and people were punished for avoiding them

## EVENTS OF 1381

- \* Revolts began in Essex and Kent, and peasants marched to London with demands
- \* 14<sup>th</sup> June 1381 - the peasants and the King met at Mile End, where Richard II agreed to meet their demands and asked them to return home peacefully
- \* 15<sup>th</sup> June 1381 - Richard II met their leader, Wat Tyler at Smithfield. Tyler acted rudely in front to the King, and the meeting ended with Wat Tyler being killed
- \* It is disputed as to how Tyler died. Some say Walworth, the Mayor of London, stabbed him, others say it was an advisor who didn't let him to leave alive

## TIMELINE OF THE BLACK DEATH AND PEASANTS' REVOLT



# ISLAMIC WORLD

# KNOWLEDGE ORGANISER

## THE SPREAD OF ISLAM



### KEY WORDS

Caliphs	Leader of the Muslim world
Mosque	House of worship for Muslims
Holy Land	Sacred land, with Jerusalem at its heart
Kaaba	Square temple in Makkah, with 300 holy objects around it
Bedouin	A tribe who would foster children from the Quraysh tribe
Pilgrimage	Journey of religious significance
Fasting	Go without food at certain times
Crusade	Religious wars to capture the Holy Land
Franks	European Christians
Seljuks	Turkish Muslims

### MUHAMMAD'S EARLY LIFE

The daughter-in-law (Aminah) of a rich merchant who was the elderly leader of the Quraysh tribe, gave birth to Muhammad. He was fostered by Halimah

Muhammad lived in the desert with his foster mother. He lived as a nomad, with hardly any personal possessions. He lived in one of the clan's tents, learning about hospitality, helping the poor and sick, listening to poems about love, war and history

Muhammad returned to his mother when he was 6. She died shortly after, and he was then looked after by his uncle, Abu Talib, who was a merchant. His uncle taught him trades, how to care for sheep and goats, and then camels

### THE ARABS OF MAKKAH

- \* There were no kings in Arabia. About 100 families made up a clan, and clans belonged to a tribe. Loyalty to your clan was very important
- \* There were many Jewish and Christian preachers in Arabia.
- \* Makkah was a holy place, more than just a stopping point for the camel caravans

### MUHAMMAD'S MESSAGE

- \* Muhammad said everyone should submit and give thanks to Allah, by bowing (not by blood sacrifice), care for the poor and weak, praying and fasting
- \* When his uncle, Abu Talib died, Muhammad no longer had protection. Pilgrims from Yathrib offered protection and they and Muhammad made their way to Medina

### Reasons for the spread of Islam

Other empires were weak  
Many saw the Muslims as liberators  
To the Arabs, fighting wars was a chance to get rich from war booty  
Arabs were skilled fighters

### Timeline of Movement:

700: African coast  
705: Afghanistan  
711: Invasion of Spain  
711: North India and central Asia  
732: Battle of Poitiers, France



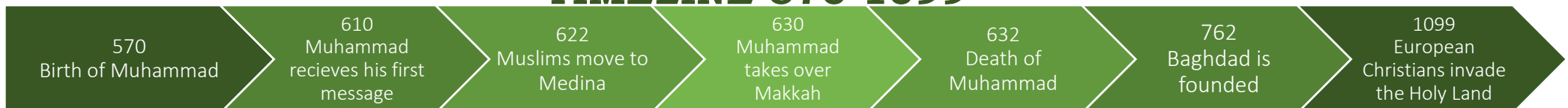
### BAGHDAD

- \* Caliph al-Mansur decided to build a new capital, Baghdad, between two rivers which would provide fertile soil to grow crops and supply the town
- \* Thousands of workers helped construct Baghdad, which was perfectly round
- \* There were a number of hospitals in Baghdad, and doctors added medical knowledge from their own studies
- \* In the 'House of Wisdom', scholars in Baghdad advanced Mathematics, Geography and Astronomy. They created the number zero, drew maps and used the stars to work out calendars
- \* Madrasas, Islamic colleges were created in Baghdad to teach future generations

### THE CRUSADERS

- \* From 395, the Holy Land was controlled by Greek Christians. In 638, Arab Muslims took control. In 1077, the Seljuks took over. In 1099, the Franks invaded to retake the Holy Land, after the Pope promised rewards in Heaven for joining the crusade
- \* The Muslims found the Crusaders rude, dumb, primitive and unreliable
- \* Between 1100 and 1291, it was Christians, not Muslims who ruled the Holy Land
- \* The rulers sometimes went to war, however ordinary Christians, Muslims and Jews continued to live as neighbours as before

### TIMELINE 570-1099





# WARS OF THE ROSES

## MEDIEVAL KINGS 1066-1422

King	Reign	Death	Wars
William I	1066-1087	Injured in battle	Conquered England
William II	1087-1100	Possibly murdered	Won wars against Welsh and Scots
Henry I	1100-1135	Indigestion	Won war against brother
Stephen	1135-1154	Heart attack	Won civil war against cousin
Henry II	1154-1189	Fever	Won land in Ireland and France
Richard I	1189-1199	Killed in war	Successful in Crusades
John	1199-1216	Dysentery	Lost civil war
Henry III	1216-1272	Old age	Wars against France. Lost civil war
Edward I	1272-1307	Old age	Won wars against Welsh and Scots
Edward II	1307-1327	Murdered	Lost wars against Scots and French
Edward III	1327-1377	Old age	Won wars in France
Richard II	1377-1399	Possibly murdered	Lost wars in France and civil war
Henry IV	1399-1413	Skin disease	Won civil war
Henry V	1413-1422	Dysentery	Won wars and land in France

## POWER OF MEDIEVAL KINGS

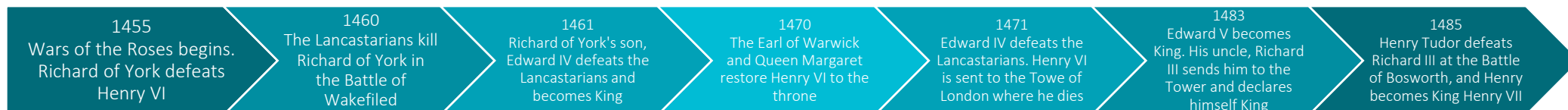
The power that Medieval Kings had depended on a number of factors:

1. Success or failure in war and conquest
2. Relationship with the Church, and with Barons and Nobles
3. Keeping peace in England
4. Money, age, luck and legitimacy

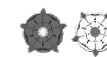
## DEATH OF EDWARD III

- \* Edward III died in 1377. His eldest son had died before he did, but his son, Richard, was crowned King Richard II instead of Edward's three surviving sons
- \* This skipping of an entire generation had meant there were multiple claims to the throne
- \* Henry Bolingbroke forced his cousin Richard II off the throne. Henry became Henry IV, which passed to his son, Henry V, and finally to Henry VI, who became King when he was 9 months old.

## TIMELINE OF THE WAR OF THE ROSES



## KNOWLEDGE ORGANISER



## HOUSES OF YORK AND LANCASTER

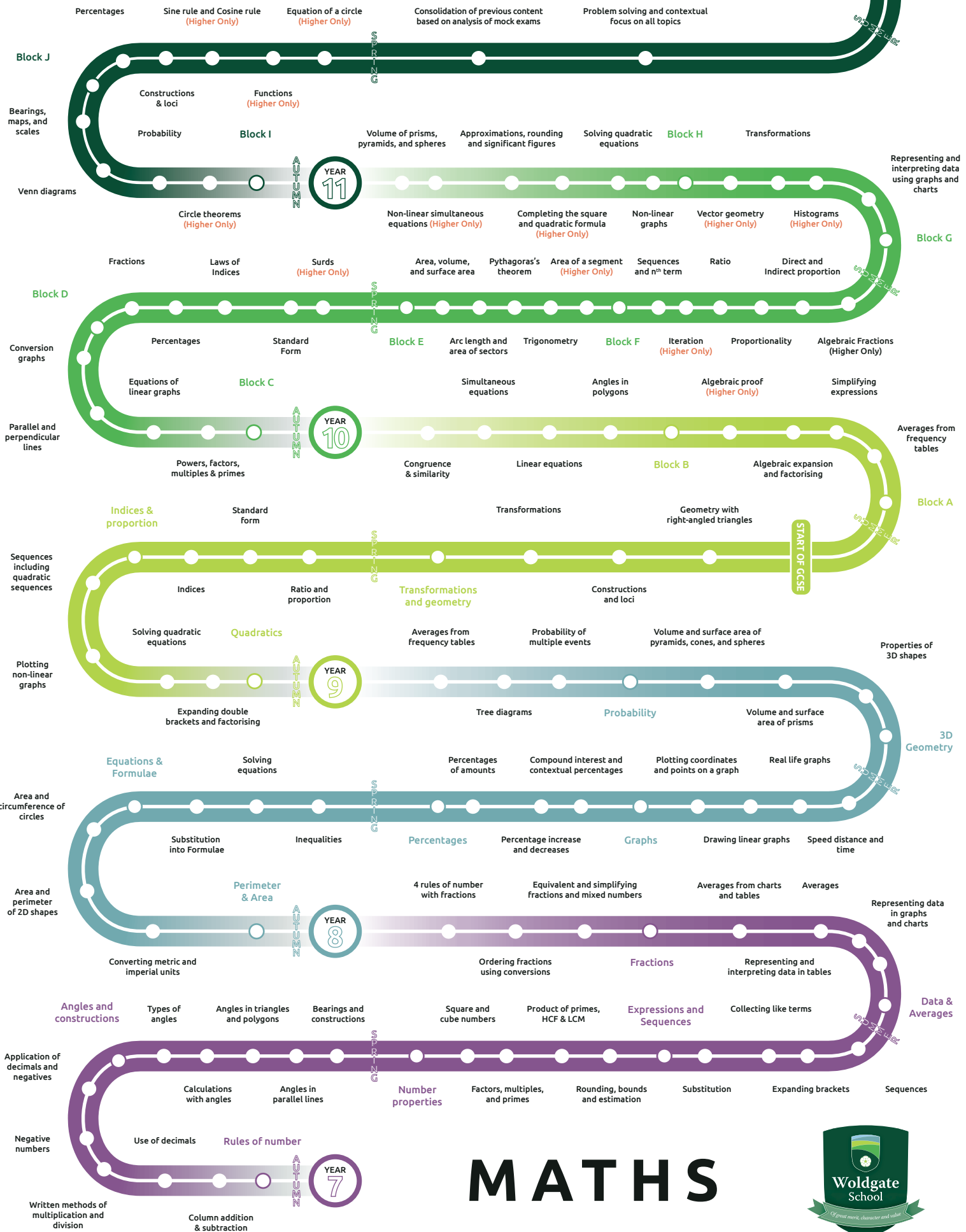
House of Lancaster	
Henry VI	King at the start of the war. Henry VI was mentally ill
Margaret of Anjou	Wife of Henry VI, who took control of the country and led the fight against Henry's enemies
Richard, Earl of Warwick	Began the war on the side of the Yorkists, he changed sides after disagreeing with the way Edward IV ruled
House of York	
Richard, Duke of York	Father of Edward IV and Richard III. He began the war by defeating the Lancastrians and putting Henry VI in prison
Edward IV	The first York to become King
Edward V	Son of Edward IV. Sent to the Tower of London by uncle Richard III
Richard III	Brother of Edward IV. Took the throne from his nephew Edward V

## RICHARD III

- \* Richard was born in 1452, his father was Richard, Duke of York
- \* The Duke of York fought against King Henry VI, but was killed in battle
- \* Richard's brother defeated Henry VI in battle, and was crowned King Edward IV
- \* King Edward IV died in 1483, and his son was to become King Edward V
- \* Richard convinced everyone that he should be King, not Edward
- \* Richard III was killed by Henry Tudor at the Battle of Bosworth in 1485
- \* Edward Tudor became King Henry VII in October 1485
- \* In 2012 Richard III's remains were found in a car park in Leicester

## WHAT HAPPENED TO EDWARD V?

- \* When King Edward IV died, Prince Edward was to be king at age 12
- \* Richard imprisoned Earl Rivers, the Queen's brother, and Lord Hastings, Edward IV's closest friend, killed
- \* Prince Edward lived in the Royal Apartments in the Tower of London until his coronation. Richard had the Archbishop of Canterbury ask to take the Prince's younger brother to the Tower too
- \* Richard convinced everyone that he should be King. The Princes were never seen again.



# MATHS



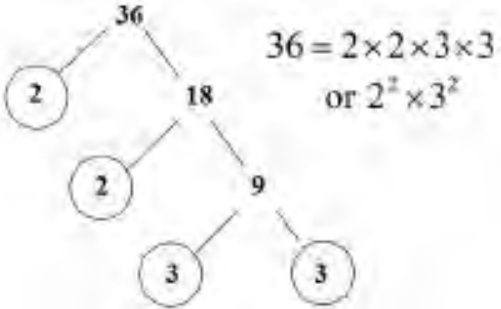
# Year 7 – Spring 1, Number Properties Knowledge Organiser



Topic/Skill	Definition/Tips	Example																																								
Time	<p>There are <b>60 seconds in a minute</b>.                      There are <b>60 minutes in an hour</b>.                      There are <b>24 hours in a day</b>.</p> <p>am is the time from midnight (12 am) until noon (12 pm)                      pm is the time from noon until midnight.</p> <p>24-hour clock does not need am or pm. 00:00 is midnight, 12:00 is noon. Afternoon times have hours from 12 until 23. For example, 4:30pm = 16:30</p>	<p>5:20 am = 05:20                      7:10 pm = 19:10                      12:30 pm = 12:30</p> <p>January – 31 days                      February – 28 days (or 29 in a leap year)                      March – 31 days                      April – 30 days                      May – 31 days                      November - 30                      June – 30 days                      December - 31                      July – 31 days                      August – 31 days                      September – 30 days                      October – 31 days</p>																																								
Timetables	<p>Bus and train timetables show us the times transport leaves each destination on a journey.</p>	<table border="1"> <tbody> <tr> <td>Worcester</td> <td>05:30</td> <td>07:05</td> <td>07:50</td> <td>10:13</td> </tr> <tr> <td>Fernhill</td> <td>05:40</td> <td>07:16</td> <td>08:07</td> <td>–</td> </tr> <tr> <td>Droitwich</td> <td>05:48</td> <td>07:29</td> <td>08:14</td> <td>10:31</td> </tr> <tr> <td>Wychbold</td> <td>05:55</td> <td>–</td> <td>08:25</td> <td>–</td> </tr> <tr> <td>Sidemoor</td> <td>–</td> <td>–</td> <td>08:32</td> <td>–</td> </tr> <tr> <td>Catshill</td> <td>06:11</td> <td>08:00</td> <td>08:40</td> <td>–</td> </tr> <tr> <td>Marlbrook</td> <td>06:14</td> <td>08:05</td> <td>–</td> <td>–</td> </tr> <tr> <td>Rubery</td> <td>06:21</td> <td>08:11</td> <td>09:02</td> <td>11:02</td> </tr> </tbody> </table>	Worcester	05:30	07:05	07:50	10:13	Fernhill	05:40	07:16	08:07	–	Droitwich	05:48	07:29	08:14	10:31	Wychbold	05:55	–	08:25	–	Sidemoor	–	–	08:32	–	Catshill	06:11	08:00	08:40	–	Marlbrook	06:14	08:05	–	–	Rubery	06:21	08:11	09:02	11:02
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Square number	<p>The number you get when you <b>multiply a number by itself</b>.</p>	<p><b>1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225...</b></p> <p><math>9^2 = 9 \times 9 = 81</math></p>																																								
Square root	<p>The <b>number you multiply by itself</b> to get another number.</p> <p>The <b>inverse</b> of squaring a number.</p>	<p><math>\sqrt{36} = 6</math></p> <p>because <math>6 \times 6 = 36</math></p>																																								
Cube number	<p>The number you get when you <b>multiply a number by itself and itself again</b>.</p>	<p>1, 8, 27, 64, 125...</p> <p><math>2^3 = 2 \times 2 \times 2 = 8</math>  <math>10^3 = 10 \times 10 \times 10 = 1000</math></p>																																								
Cube root	<p>The <b>number you multiply by itself and itself again</b> to get another number.</p> <p>The inverse process of cubing a number.</p>	<p><math>\sqrt[3]{125} = 5</math></p> <p>because <math>5 \times 5 \times 5 = 125</math></p>																																								
Index notation	<p>Indices (powers/exponents) are the small numbers written above and to the right of a (base) number. They tell us how many of the base number need multiplying together.</p>	<p><math>3^4 = 3 \times 3 \times 3 \times 3 = 81</math></p> <p> </p>																																								

# Year 7 – Spring 1, Number Properties Knowledge Organiser



<p>Factors</p>	<p>A number that <b>divides exactly</b> into another number without a remainder. It is useful to write factors in pairs</p>	<p>The factors of 18 are: 1, 2, 3, 6, 9, 18 The factor pairs of 18 are: 1, 18 2, 9 3, 6</p>
<p>Prime numbers</p>	<p>A number with <b>exactly two factors</b>. A number that can only be divided by itself and one.  The number <b>1 is not prime</b>, as it only has one factor, not two.</p>	<p>The first eight prime numbers are:  2, 3, 5, 7, 11, 13, 17, 19</p>
<p>Product of Primes</p>	<p>Finding out which <b>prime numbers multiply</b> together to make the <b>original</b> number.  Use a <b>prime factor tree</b>.  A <b>product of primes</b> is a multiplication containing only prime numbers.</p>	
<p>Multiples</p>	<p>The result of multiplying a number by an integer. The <b>times tables</b> of a number.</p>	<p>The first five multiples of 7 are:  7, 14, 21, 28, 35</p>
<p>HCF</p>	<p>The <b>biggest</b> number that <b>divides exactly</b> into two or more numbers.</p>	<p>The HCF of 6 and 9 is 3 because it is the biggest number that divides into 6 and 9 exactly.</p>
<p>LCM</p>	<p>The <b>smallest</b> number that is in the <b>times tables</b> of each of the numbers given.</p>	<p>The LCM of 3, 4 and 5 is 60 because it is the smallest number in the 3, 4 and 5 times tables.</p>
<p>Rounding</p>	<p><b>Rounding</b> means making a number simpler but keeping its value close to what it was. Rounding to the nearest 10 means choosing which multiple of 10 it is closest to.  Rounding to the nearest integer means to the nearest whole number. Picturing a number line can help.</p>	<p>2158 to the nearest 10 is 2160 2159 to the nearest 100 is 2200 2159 to the nearest 1000 is 2000  78.2 to the nearest integer is 78 78.5 to the nearest integer is 79 78.254 to the nearest integer is 78</p>



# Year 7 – Spring 1, Number Properties Knowledge Organiser



<p>Rounding to decimal places</p>	<p>Rounding to <b>1 decimal place</b> (1 d.p.) means round the number to the nearest tenth, so that the number only has 1 digit after the decimal point. Rounding to 2 decimal places means to round to the nearest hundredth, so that there are 2 digits after the decimal point.</p>	<p>e.g. round 0.3482 to the</p> <p>1 decimal place</p> <p>0.3482</p> <p>0.3      0.35      0.4</p> <p>2 decimal places</p> <p>0.34      0.345      0.3482</p> <p>0.35</p>
<p>Rounding to significant figures</p>	<p>The first <b>significant figure</b> (1.s.f) is the first digit in a number which is not a 0. It is the digit with the most value. E.g. the 1st s.f. is underlined in each of these numbers: <u>3</u>456    <u>6</u>7    0.<u>4</u>03 To round to 1.s.f you need to identify which place value column that digit is in and round to that accuracy.</p>	<p>3476 to 1 s.f is 3000 because the 1<sup>st</sup> s.f. is in the thousands column.</p> <p>782 to 1 s.f. is 800 because the 1<sup>st</sup> s.f. is in the hundreds column.</p> <p>0.367 to 1s.f. is 0.4 because the 1<sup>st</sup> s.f. is in the tenths column.</p> <p>8945 to 2 s.f. is 8900 because the 2<sup>nd</sup> s.f. is in the hundreds column.</p>
<p>Estimations</p>	<p>Round each number in the calculation to <b>1 significant figure</b>.  ≈ means 'approximately equal to'</p>	$\frac{348 + 692}{2.103} \approx \frac{300 + 700}{2} = 500$
<p>Order of operations</p>	<p><b>Brackets</b> then <b>Powers</b> (BO/BI) comes first. <b>Multiplication</b> and <b>Division</b> (DM) comes next. <b>Addition</b> and <b>Subtraction</b> (AS) comes last.</p>	<p><math>3 + 4 \times 2 = 11</math> (do the multiplication first) <math>3 + (4 + 1)^2</math> Brackets: <math>(5)^2 = 25</math> and then add <math>3 = 28</math> <math>12 \div 2 - 3 = 3</math> (division first!)</p>

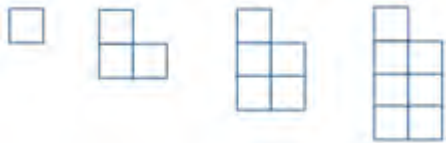
## Year 7 – Spring 2, Expressions Knowledge Organiser



Topic/Skill	Definition/Tips	Example
Notation	<p><b>Variable</b> – A letter in an algebraic expression is called a variable because its value can change (vary).</p> <p><b>Constant</b> – A constant term is one that does not change. It is either a single number or a symbol that represents a known number.</p> <p><b>Term</b> – A term is a single mathematical expression. It may be a single number or a single variable.</p> <p><b>Expression</b> – A mathematical statement written using symbols, numbers or letters. Expressions do not contain an equals sign.</p> <p><b>Equation</b> – A statement showing that two expressions are equal.</p> <p><b>Coefficient</b> – How many of the variable you have/a number multiplied by the variable.</p> <p><b>Power</b> – How many times the variable is multiplied by itself.</p> <p><b>Brackets</b> – Brackets are used to enclose a group of terms.</p>	<p><math>3x + 2y</math> contains the variables <math>x</math> and <math>y</math>.</p> <p><math>3x + 2 = 4</math> contains the constants 2 and 4.</p> <p><math>3x + 2y</math> The two terms are <math>3x</math> and <math>2y</math>.</p> <p><math>3x + 2</math> <math>5y^2</math></p> <p><math>2y - 17 = 15</math></p> <p><math>3x^2 + 2y</math> The coefficient of <math>x^2</math> is 3. The coefficient of <math>y</math> is 2.</p> <p><math>x^3</math> expanded means <math>x \times x \times x</math>.</p> <p><math>3(x + 2)</math></p>
Substitution	<p>Substitute means to replace variables with numbers and then work out the value of the calculation. Remember to follow <b>BIDMAS</b>.</p>	<p>Evaluate <math>3a + 2b - c</math> when <math>a = 2, b = 3</math> and <math>c = 4</math></p> $  \begin{aligned}  &3a + 2b - c \\  &= 3 \times 2 + 2 \times 3 - 4 \\  &= 6 + 6 - 4 \\  &= 8  \end{aligned}  $
Collecting like terms	<p>Collecting like terms allows expressions to be simplified. They are only like terms if they have the same letter. If they are not like terms you cannot simplify.</p>	$  \begin{aligned}  &a + 2a + 3b - b + c \\  &= 3a + 2b + c  \end{aligned}  $

## Year 7 – Spring 2, Expressions Knowledge Organiser



	<p>The sign is part of the term that follows it. Be careful with negatives. Note:</p> $x \times x = x^2$ $x + x = 2x$	
Multiplying and dividing terms	<p>Multiplying: Put the numbers and each letter together.</p> <p>Dividing: Divide the number and cancel out the variables.</p>	$2a \times 3b \text{ means } 2 \times 3 \times a \times b = 6ab$ $12a^2 \div 4a$ $\frac{12a^2}{4a} = 3a$
Expanding brackets	<p>To expand a bracket, multiply each term in the bracket by the expression outside the bracket. Careful with negatives!</p>	$2(x + 6) = 18$ $2x + 12 = 18$
Factorising expressions	<p>The reverse of expanding.</p> <p>Factorising is writing an expression as a product of terms by 'taking out' a common factor. An expression can factorise into one bracket if the terms have a common factor. Divide an expression by its <b>highest common factor</b> and put it into brackets.</p>	$8x + 4$ <p>HCF of <math>8x</math> and <math>4</math> is <math>4</math>.</p> $4(2x + 1)$
Writing expressions	<p>Substitute words for letters. Note: <math>\times</math> (multiply) should not appear in expressions. Also, writing terms such as <math>1x</math> should be avoided.</p>	<p><math>k</math> is a number. Write an expression for the number that is, five more than <math>k</math>.</p> $k + 5$
Sequences using patterns	<p>Patterns can be used to illustrate sequences.</p>	 <p>The term-to-term rule for this sequence would be <math>+2</math>.</p>

## Year 7 – Spring 2, Expressions Knowledge Organiser



<p>Term-to-term rule of number sequences</p>	<p>A rule which allows you to find the next term in a sequence if you know the previous term. The term-to-term rule is the rule in which the next term is obtained from the previous term. For example, in an <b>arithmetic (linear) sequence</b> each term is obtained by adding or subtracting a constant value from the preceding term.</p>	<p>First term is 2. Term-to-term rule is +3. Sequence is: 2, 5, 8, 11, 14, ...</p>
<p>Continuing number sequences</p>	<p>Using the <b>term-to-term rule</b> allows you to continue number sequences.</p>	<p style="text-align: center;">60, 74, 88, ...</p> <p>The next three terms in the sequence would be:</p> <p style="text-align: center;">102, 116, 130, ...</p>
<p>nth term rule</p>	<p>A rule which allows you to <b>calculate the term</b> that is in the <b>nth position</b> of the sequence. Also known as the 'position-to-term' rule. <b>n</b> refers to the <b>position</b> of a term in a sequence.</p>	<p>Work out the first five terms of the sequence <math>4n</math>.</p> <p style="text-align: center;"><math>4 \times 1 = 4</math> <math>4 \times 2 = 8</math> ... and so on. 4, 8, 12, 16, 20, ...</p> <p>What is the nth term of the sequence 6, 10, 14, ...</p> <p style="text-align: center;">The first difference is +4. <math>4 \times 1 = 4</math></p> <p>Therefore, we need to add 2 to get to our first term of 6. So, the nth term is: <math>4n + 2</math>.</p> <p>The 100<sup>th</sup> term is <math>4 \times 100 + 2 = 402</math>.</p>





Famous number sequences

**Fibonacci:** A sequence where the next number is found by **adding up the previous two terms**.

**Geometric:** A sequence of numbers where each term is found by **multiplying the previous one** by a number called the **common ratio, r**.

**Triangular numbers:** The sequence which comes from a pattern of dots that form a triangle.

**Square numbers:** A square number is the result when a number has been multiplied by itself.

**Cube numbers:** A cube number is the result when a number has been multiplied by itself three times.

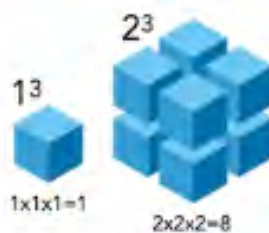
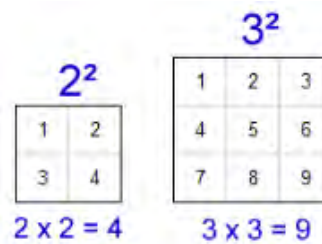
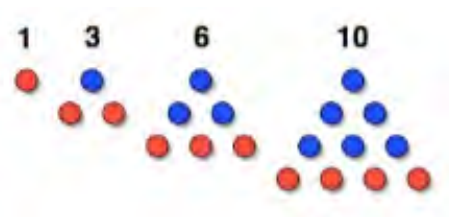
An example of a Fibonacci-type sequence is:

0, 1, 1, 2, 3, ...

An example of a geometric sequence is:

2, 4, 8, 16, 32, ...

The common ratio is 2.





Topic/Skill	Definition/Tips	Example
Fraction	<p>A mathematical expression representing the <b>division</b> of one integer by another.</p> <p>Fractions are written as <b>two numbers separated by a horizontal line</b>.</p>	<p><math>\frac{2}{7}</math> is a 'proper' fraction.</p> <p><math>\frac{9}{4}</math> is an 'improper' or 'top-heavy' fraction.</p>
Numerator	The <b>top</b> number of a fraction.	In the fraction $\frac{3}{5}$ , 3 is the numerator.
Denominator	The <b>bottom</b> number of a fraction.	In the fraction $\frac{3}{5}$ , 5 is the denominator.
Unit Fraction	A fraction where the <b>numerator is one</b> and the denominator is a positive integer.	$\frac{1}{2}, \frac{1}{3}, \frac{1}{4}$ etc. are examples of unit fractions.
Reciprocal	<p>The reciprocal of a number is <b>1 divided by the number</b>.</p> <p>The reciprocal of <math>x</math> is <math>\frac{1}{x}</math></p> <p><b>When we multiply a number by its reciprocal we get 1.</b> This is called the 'multiplicative inverse'.</p>	<p>The reciprocal of 5 is <math>\frac{1}{5}</math></p> <p>The reciprocal of <math>\frac{2}{3}</math> is <math>\frac{3}{2}</math>, because</p> $\frac{2}{3} \times \frac{3}{2} = 1$
Mixed Number	A number formed of both an <b>integer part</b> and a <b>fraction part</b> .	$3\frac{2}{5}$ is an example of a mixed number.
Simplifying Fractions	<b>Divide the numerator and denominator by the highest common factor.</b>	$\frac{20}{45} = \frac{4}{9}$
Equivalent Fractions	Fractions which represent the <b>same value</b> .	$\frac{2}{5} = \frac{4}{10} = \frac{20}{50} = \frac{60}{150}$ etc.
Comparing Fractions	<p>To compare fractions, they each need to be rewritten so that they have a <b>common denominator</b>.</p> <p><b>Ascending</b> means <b>smallest to biggest</b>.</p> <p><b>Descending</b> means <b>biggest to smallest</b>.</p>	<p>Put in to ascending order: <math>\frac{3}{4}, \frac{2}{3}, \frac{5}{6}, \frac{1}{2}</math>.</p> <p>Equivalent: <math>\frac{9}{12}, \frac{8}{12}, \frac{10}{12}, \frac{6}{12}</math></p> <p>Correct order: <math>\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{5}{6}</math></p>
Fraction of an Amount	<b>Divide</b> by the <b>denominator</b> , <b>times</b> by the <b>numerator</b>	<p>Find <math>\frac{2}{5}</math> of £60</p> $60 \div 5 = 12$ $12 \times 2 = 24$

## Year 7 – Summer 1, Fractions



Adding or Subtracting Fractions	Find the <b>LCM of the denominators</b> to find a common denominator. Use equivalent fractions to change each fraction to the <b>common denominator</b> . Then just <b>add or subtract the numerators</b> and keep the <b>denominator the same</b> .	$\frac{2}{3} + \frac{4}{5}$ Multiples of 3: 3, 6, 9, 12, <b>15</b> . Multiples of 5: 5, 10, <b>15</b> . LCM of 3 and 5 = 15 $\frac{2}{3} = \frac{10}{15}$ $\frac{4}{5} = \frac{12}{15}$ $\frac{10}{15} + \frac{12}{15} = \frac{22}{15} = 1\frac{7}{15}$
Multiplying Fractions	<b>Multiply</b> the <b>numerators</b> together and <b>multiply</b> the <b>denominators</b> together.	$\frac{3}{8} \times \frac{2}{9} = \frac{6}{72} = \frac{1}{12}$
Dividing Fractions	Keep the first fraction the same Find the <b>reciprocal</b> of the second fraction Change the divide to a multiply  Multiply the fractions as above instead.	$\frac{3}{4} \div \frac{5}{6} = \frac{3}{4} \times \frac{6}{5} = \frac{18}{20} = \frac{9}{10}$
Fractions to decimals	<b>Numerator ÷ Denominator</b>	$\frac{1}{4} = 1 \div 4 = 0.25$
Decimals to fractions	-Write decimal as a fraction over 1 - Multiply numerator and denominator by 10 for each decimal digit -Simplify	$0.25 = \frac{0.25}{1}$ $\frac{0.25}{1} = \frac{25}{100}$ $\frac{25}{100} = \frac{1}{4}$

# Year 7 – Summer 1, Data Handling Knowledge Organiser








Topic/Skill	Definition/Tips	Example
Data Collection	<p><b>Qualitative</b> – non-numerical data.</p> <p><b>Quantitative</b> – numerical data.</p> <p>Quantitative data can be discrete or continuous.</p> <p><b>Discrete</b> – Data that can take <b>only specific values</b> within a given range.</p> <p><b>Continuous</b> – Data that can take <b>any numerical value</b> within a given range.</p> <p><b>Primary</b> – Data that has been generated by the researcher. Data <b>collected yourself</b> for a specific purpose.</p> <p><b>Secondary</b> – Data that has previously been gathered and can be accessed by researchers. Data <b>collected by someone else</b> for another purpose.</p>	<p>Qualitative data – eye colour, gender etc.</p> <p>Quantitative data –</p> <p>Discrete – number of children, shoe size etc.</p> <p>Continuous – weight, height etc.</p> <p>Primary – Data collected by a student for their own research project.</p> <p>Secondary – Census data.</p>
Questionnaires	<p>When looking at the <b>suitability and effectiveness</b> of questionnaires, consider the following:</p> <ul style="list-style-type: none"> <li>-Have you included any <b>leading questions</b>?</li> <li>-Are there <b>overlapping response boxes</b>?</li> <li>-Are there missing questions which would be beneficial to ask?</li> <li>-Have you included too many <b>open questions</b>?</li> <li>-Is your questionnaire free from <b>bias</b>?</li> <li>-Are your questions <b>appropriate</b>?</li> </ul>	<div style="border: 1px solid orange; padding: 5px;"> <p>1) How old are you?  <input type="checkbox"/> 10 – 12    <input type="checkbox"/> 12 – 14    <input type="checkbox"/> 14 - 16</p> <p>2) How much pocket money do you get each week?  <input type="checkbox"/> £1 – £2    <input type="checkbox"/> £3 – £4    <input type="checkbox"/> £5 – £10</p> </div> <p>Consider the issues with this questionnaire.</p>



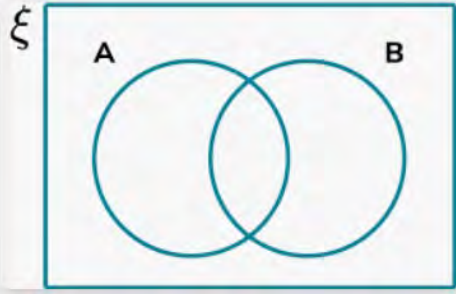
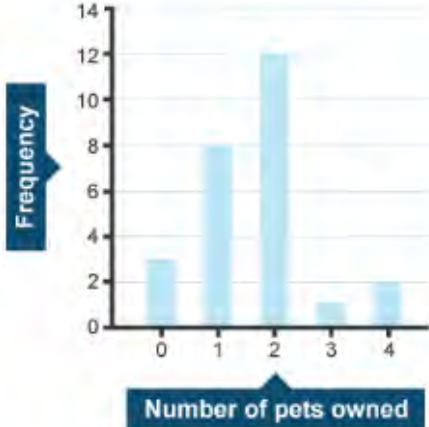
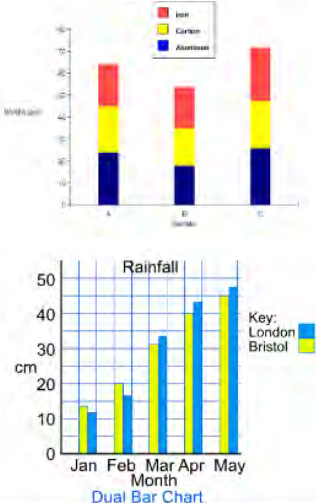
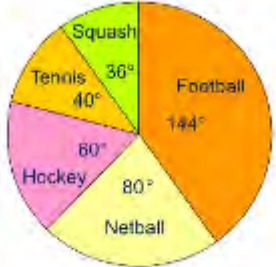
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<p>Frequency Table</p>	<p>A record of <b>how often each value</b> in a set of data <b>occurs</b>.</p> <p><b>Grouped data</b> – is data that has been gathered and then sorted into categories in the form of class intervals.</p> <p>You will see grouped data in grouped frequency tables for example.</p> <table border="1" data-bbox="371 869 790 974"> <thead> <tr> <th>Foot length, <math>l</math>, (cm)</th> <th>Number of children</th> </tr> </thead> <tbody> <tr> <td><math>10 \leq l &lt; 12</math></td> <td>5</td> </tr> <tr> <td><math>12 \leq l &lt; 17</math></td> <td>53</td> </tr> </tbody> </table>	Foot length, $l$ , (cm)	Number of children	$10 \leq l < 12$	5	$12 \leq l < 17$	53	<table border="1" data-bbox="906 197 1453 504"> <thead> <tr> <th>Number of marks</th> <th>Tally marks</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>       </td> <td>7</td> </tr> <tr> <td>2</td> <td>    </td> <td>5</td> </tr> <tr> <td>3</td> <td>      </td> <td>6</td> </tr> <tr> <td>4</td> <td>    </td> <td>5</td> </tr> <tr> <td>5</td> <td>   </td> <td>3</td> </tr> <tr> <td><b>Total</b></td> <td></td> <td><b>26</b></td> </tr> </tbody> </table>	Number of marks	Tally marks	Frequency	1		7	2		5	3		6	4		5	5		3	<b>Total</b>		<b>26</b>																					
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<p>Two-way Tables</p>	<p>A table that <b>organises data</b> around <b>two categories</b>.</p> <p>Fill in the information step by step using the information given.</p> <p><b>Make sure all the totals add up for all columns and rows.</b></p>	<p><b>Question: Complete the 2 way table below.</b></p> <table border="1" data-bbox="911 1019 1442 1124"> <thead> <tr> <th></th> <th>Left Handed</th> <th>Right Handed</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Boys</td> <td>10</td> <td></td> <td>58</td> </tr> <tr> <td>Girls</td> <td></td> <td></td> <td></td> </tr> <tr> <td><b>Total</b></td> <td></td> <td>84</td> <td>100</td> </tr> </tbody> </table> <p><b>Answer: Step 1, fill out the easy parts (the totals)</b></p> <table border="1" data-bbox="911 1144 1442 1249"> <thead> <tr> <th></th> <th>Left Handed</th> <th>Right Handed</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Boys</td> <td>10</td> <td>48</td> <td>58</td> </tr> <tr> <td>Girls</td> <td></td> <td></td> <td>42</td> </tr> <tr> <td><b>Total</b></td> <td>10</td> <td>84</td> <td>100</td> </tr> </tbody> </table> <p><b>Answer: Step 2, fill out the remaining parts</b></p> <table border="1" data-bbox="911 1270 1442 1375"> <thead> <tr> <th></th> <th>Left Handed</th> <th>Right Handed</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Boys</td> <td>10</td> <td>48</td> <td>58</td> </tr> <tr> <td>Girls</td> <td>6</td> <td>36</td> <td>42</td> </tr> <tr> <td><b>Total</b></td> <td>10</td> <td>84</td> <td>100</td> </tr> </tbody> </table>		Left Handed	Right Handed	Total	Boys	10		58	Girls				<b>Total</b>		84	100		Left Handed	Right Handed	Total	Boys	10	48	58	Girls			42	<b>Total</b>	10	84	100		Left Handed	Right Handed	Total	Boys	10	48	58	Girls	6	36	42	<b>Total</b>	10	84	100
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<p>Pictograms</p>	<p>Uses <b>pictures</b> or symbols to <b>show the value</b> of the data.</p> <p>A pictogram must have a <b>key</b>.</p>	<p>Black </p> <p>Red </p> <p>Green   = 4 cars</p> <p>Others </p>																																																
<p>Carroll Diagrams</p>	<p>A way of <b>sorting information</b> into categories.</p>	<p>1. Place these numbers into the Carroll diagram.</p> <p>2, 3, 7, 9, 11, 13, 17, 19, 21, 24, 29</p> <table border="1" data-bbox="906 1825 1469 1960"> <thead> <tr> <th></th> <th>A prime number</th> <th>Not a prime number</th> </tr> </thead> <tbody> <tr> <td>An even number</td> <td></td> <td></td> </tr> <tr> <td>Not an even number</td> <td></td> <td></td> </tr> </tbody> </table>		A prime number	Not a prime number	An even number			Not an even number																																									
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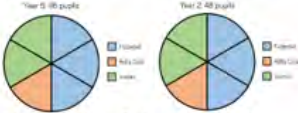
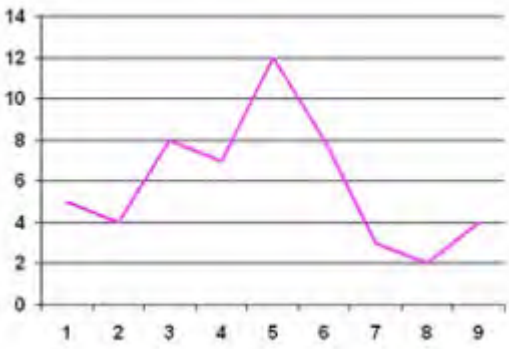
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<p>Venn Diagrams</p>	<p>A <b>diagram</b> that uses <b>overlapping circles</b> to show collections of mathematical elements (sets) and what they have in common. The diagrams illustrate the similarities and differences between things.</p>	
<p>Bar Chart</p>	<p>Represents data as vertical blocks.</p> <p>Bar charts show the <b>type</b> of data and the <b>frequency</b> for each type of data. Each bar should be the <b>same width</b>. There should be <b>gaps</b> between each bar. Remember to <b>label</b> each axis.</p> <p>Remember: <b>BLAST</b> – Bars, Labels, Axes, Scale, Title.</p>	
<p>Dual &amp; Composite Bar Charts</p>	<p>Dual &amp; composite are types of bar chart.</p> <p><b>Compound/Composite</b> Bar Charts - show data stacked on top of each other.</p> <p><b>Comparative/Dual</b> Bar Charts - show data side by side.</p>	
<p>Drawing Pie Charts</p>	<p>Used for showing <b>how data breaks down into</b> its constituent <b>parts</b>.</p> <p>When drawing a pie chart, <b>divide 360° by the total frequency</b>. This will tell you how many degrees to use for the frequency of each category.</p>	

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	<p>Remember to <b>label</b> the category that each sector in the pie chart represents.</p>	<p>If there are 40 people in a survey, then each person will be worth <math>360 \div 40 = 9^\circ</math> of the pie chart.</p>
<p>Interpreting Pie Charts</p>	<p><b>What's the same and what's different</b> about the favourite drinks pie charts?</p> <p>Sometimes you will be asked to interpret pie charts.</p>	<p>Classes in Year 2 and Year 5 were asked what their favourite drink was. Here are the results:</p>  <p>What fraction of pupils in Year 5 chose Fizzeraid?          How many children in Year 2 chose Rolla Cola?          How many more children chose Vomto than Rolla Cola in Year 2?          What other questions could you ask?</p>
<p>Line Graph</p>	<p>A graph that uses <b>points connected by straight lines</b> to show how data changes in values.</p> <p>This can be used for <b>time series data</b>, which is a series of data points spaced over uniform time intervals in time order.</p>	
<p>Averages</p>	<p><b>Mean, Median &amp; Mode</b> are all <b>types of average</b>.</p> <p><b>Mean</b> – Add up the values and divide by how many values there are.</p> <p><b>Median</b> – The middle value.</p> <p>Put the data in ascending order and find the middle value.</p> <p>If there are two middle values, find the number halfway between them by adding them together and dividing by 2.</p>	<p>4,5,2,3,6,7,8</p> $\frac{4 + 5 + 2 + 3 + 6 + 7 + 8}{7} = 5$ <p>Find the median of: 4, 5, 2, 3, 6, 7, 6</p> <p>Ordered: 2, 3, 4, 5, 6, 6, 7</p> <p>Median = 5</p>

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	<p><b>Mode</b> – Most frequent/common value.</p> <p>There <b>can be more than one mode</b> (bi-modal or multi-modal) or <b>no mode</b> (if all values appear once for example). You can find the mode from both qualitative and quantitative data.</p> <p><b>Range</b> – A <b>measure of spread</b>. The smaller the range the more consistent the data. <b>Subtract the smallest value from the highest value.</b></p>	<p>Find the mode: 4, 5, 2, 3, 6, 4, 7, 8, 4</p> <p>Mode = 4</p> <p>Find the range: 3, 31, 26, 102, 37, 97.</p> <p>Range = <math>102 - 3 = 99</math></p>
<p>Averages and range from bar &amp; pie charts</p>	<p>You might be asked to find the averages and range from a bar and/or pie chart. Make sure you are using the scales correctly.</p>	<p>Compare the bar charts.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Bar chart 1</p> </div> <div style="text-align: center;"> <p>Bar chart 2</p> </div> <div style="text-align: center;"> <p>Bar chart 3</p> </div> </div> <ul style="list-style-type: none"> <li>■ What is the same and what is different about the data sets?</li> <li>■ Which data set has the highest range? Which has the lowest range?</li> </ul>
<p>Comparing data</p>	<p>Consider which average is most appropriate for certain questions. When comparing data sets, you should also consider the spread of the data.</p>	<p>Dora wants to use a diagram to represent the number of students that attended each after school sports club.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> </div> <div style="text-align: center;"> </div> <div style="text-align: center;"> </div> </div> <p>Which diagram best represents the information? Why?</p>